

ISSUE OF SEXUAL AND REPRODUCTIVE HEALTH KNOWLEDGE THAT ADOLESCENT NEED TO KNOW

Udomporn Yingpaiboonsuk*, Krisana Chotechuen**, Phakaphon Taewrob***

& Sunee Aungsupasakorn****

*Faculty of Nursing and Health College, Suan Sunandha Rajabhat University, Bangkok, Thailand,

E-Mail: *Udomporn.Yi@ssru.ac.th, **Krisana.Ch@ssru.ac.th, ***Phakaphon.Ta@ssru.ac.th,

****Sunee.aungsupasakorn@gmail.com

ABSTRACT

The purpose of this study are gaining more knowledge about sex and reproductive health The result was analyzing based on questionnaire toward the knowledge of topic. The volunteer, total 316 people, were chose from both male and female students from one university in Thailand. From the result shown that most of the volunteers, 334 people (92.52%), originally from other provinces or rural area. It was female 251 people or 69.53%, whereas most of them are around 21-22 years old. From here, under the topic of sexual preference, 83.3% are heterosexual, 9.42% are bisexual. While the knowledge about sex health 240 people (66.48%) are in moderate level, 94 people (26.04%) are below average, and 27 people (7.48%) are above average, suggested clinic should open daily and be able to consult by phone 24/7. Or else, should held some activities to gain more knowledge about sex health, maybe do some presentation. From the questionnaire, can be conclude that undergraduate students needed a knowledge of sex health via SNS. Also, should be able to consult 24/7 by phone. In addition, co-space should provides internet and computer, or some magazine that context related to this topic. This research and result will help us improve our service to meet the limit of demand.

Keywords- Adolescent, Sexual Health, Reproductive Health, Family Planning

INTRODUCTION

The problem of teenage pregnancy is paid attention to by many countries and organizations. The study found that the teenage pregnancy in the United States did not decline in the year 2007, in Thailand, mothers aged 16-20 years is the highest in Asia, and second rank in the world after South Africa, the overall adolescent birth rate is 70 per 100,000 women (about 140 cases/day). [1,11,12,13] Teenage pregnancy has many causes, including a lack of comprehensive sex education, an inappropriate sexual health, young people engaging in sex without understanding the consequences, teenagers' lack of knowledge or access to reproductive health services, as well as authorities' lack of awareness about their need for knowledge, services and social support. The consequent of teenage pregnancy, opportunities are lost for the teenager. a number of pregnant teenagers drop out of school, while some quit their job, [13] 30 percent of teen pregnancy will end up with abortion, 10 percent of teen leave their child at the hospital.

When the teen has a sexual activity, there could have many different purposes such as for pleasure or to show reciprocity, seeking sex experience, to show themselves as adults, to reward or punish themselves, to escape from loneliness or away from the pressures [6]. The effects of premature sex could causing many problems as follows: 1) unwanted pregnancy the issue of pregnancy or pregnancy undesirable 2) A sexually transmitted disease and AIDS 3) unsafe abortion which lead to the common complications such as bleeding, infection, disability and infant mortality, and so on. 4) adolescent parents face increased barriers to educational achievement - which ultimately impede professional success - and social stigma in their lives 5) some adolescent mothers end up separated from their partner and left to face problems alone, which can lead to emotional insecurity, stress and depression, lack of skills in the role of parenthood [1,4,5]

Preventing and solving sexual problems seem to be the appropriate knowledge of sex education and information in the schools and in the media. Additionally, the ease to access to family planning services and youth development programs could improve the life options of impoverished teens. According to the National Reproductive Health No. 1 (2553 -2557 BE), the government has announced a policy and strategic development that focuses on adolescent and youth health behavior to protect themselves from unwanted pregnancy, sexually transmitted diseases, AIDS and abortion. By the reason, this research was interested in the Sexual Health Education and sexual health care needs of college students for the information to be provided to health care, reproductive health and sexual health in higher education institutions. Contribution to this research would provide the awareness for the students to take care of themselves and to advise the others. It also provides the policy recommendations on the development of reproductive health and sexual health services for the university.

METHODOLOGY

1. Objective

To study the risk of sexual health in adolescent student.

2. Study design

This research was the survey research

The Samples

From a sampling of students at University collected data from 361 questionnaires. Student population is in the university in Bangkok Thailand of 29,702 people. The samples were students by Daniel sample size was 361 people, the number of samples by simple sampling and distribution of all of all ages and both male and female.

3. Participants

Population in this research was 29,702 students at Suan Sunandha Rajabhat University.

Sample was selected from the simple sampling technique. There were 361 participants, both male and female from all faculty in the university. All participants willing to take part of the research.

4. Procedures

Questionnaire has been used to collect data which consists of three parts:

Part 1 Demographic information: hometown, sex, age, sexual orientation, marital status, expense, and residence

Part 2 Knowledge about sexual and reproductive health care, including perineum care, prevent pregnancy and contraception. questions were multiple choice. The respondents could choose three options: yes, no, and not know.

5. Measurement

Questionnaire has been used to collect data which consists of three parts:

Part 1 Demographic information: hometown, sex, age, sexual orientation, marital status, expense, and residence

Part 2 Knowledge about sexual health care, including perineum care, prevent pregnancy and contraception. questions were multiple choice. The respondents could choose three options: yes, no, and not know.

Part 3 The needs of reproductive health services and sexual health. This part was fill in question.

DATA ANALYSIS

This research were analyzed by descriptive statistics.

1. Personal Information: frequency, percentage, average, and standard deviation.

2. Information about the sexual health knowledge: descriptive statistics such as frequency and percentage

RESULTS

Table 1
Overview of the sample demographic

Demographic	Choices	Frequency (n = 361)	Percent
1. Home town	Bangkok	27	7.48
	Other Province	334	92.52
2. Sex	Male	108	29.92
	Female	251	69.53
	N/A	2	0.55
3. Age	Less than 18 years	62	17.17
	19 years- 20 years	126	34.90
	21 years-22 years	162	44.88
4. Sexual orientation	Hetero sexual	301	83.38
	Monosexual	26	7.20
	bisexual	34	9.42
5. Status	Single	346	95.57
	Live together (with marriage certificate)	0	0
	Live together (without marriage certificate)	7	1.94
	Other (not mention)	7	1.94
6. Year of Education	Year 1	131	36.29
	Year 2	139	38.50
	Year 3	56	15.51
	Year 4	34	9.42
	Year 5	1	0.28
7. Expense average/month	below 5000 baht	110	36.11
	5001.0 - 6000.0 baht	81	21.87
	6001.0 - 7000.0 baht	20	5.40
	7001.0 - 9000.0 baht	7	1.89
	8001.0 - 9000.0 baht	22	5.94
	9.000.1 - 10000.0 baht	34	9.18
8. Residence	over 10000.0 baht	87	24.36
	Parent	119	32.96
	Either father or Mother	23	5.06
	Relatives	39	8.58
	Friends or acquaintances	92	20.24
	Girl/boyfriend or Lover	7	1.54
	Alone	71	15.62
Other eg. brother/sister	10	2.20	

Table 1 showed the overview of the sample demographic that there were 27 Bangkokians (7.48 percent), and 334 people came from other province (92.52 percent). When considering on gender, there were 108 males (29.92 per cent), 251 females (69.53 percent), and 2 people (0.55 percent) did not answer. Most samples were between 21 - 22 years old (162 people, or 44.88 percent), followed by 19 years - 20 years old (126 people, or 34.90 percent). The samples also reported that they were heterosexual 301 people (83.38 percent), and bisexual 34 people (9.42 percent). Table also showed that there were single 346 people (95.57 percent), living

together without marriage certificate 7 people (1.94 percent), and not mention 7 people (1.94 percent). The most samples were the second year students (139 people, or 38.50 percent), followed by the first year student (131 people, or 36.29 percent). The students in this study received money from parent or other dependent, the most was below 5,000 baht/ month (110 people, or 36.11 percent), followed by over 10,000 baht/ month (87 people, or 24.36 percent). Students also reported that they live mostly with parents (119 people, or 32.96 percent), followed by friends or acquaintances (92 people, or 20.24 percent). Finally, students reported that they mostly live at home/ condominium (169 people, or 37.18 percent), followed by private residences (151 people, or 33.22 percent).

Table 2
Knowledge about sexual and reproductive health

Level	Frequency	Percent
	(N = 361)	
Good (10 - 12 points)	27	7.48
Moderate (6 - 9 points)	240	66.48
Below moderate (5-0 points)	94	26.04
Average = 6.54		
SD = 2.275		

Table 2 shows the majority of the students with knowledge about sexual health at moderate level (6-9 points), 240 people, or 66.48 percent, follow by below at moderate level (5-0 points), 94 people, or 26.04 percent, and the less at good level (10-12 points), 27 people, or 7.48 percent, at the standard deviation of 2.275

CONCLUSION AND FUTURE WORK

Results showed that:

Students' knowledge on sexual and reproductive health care. Finding revealed that the students' knowledge about sexual health at moderate level (6-9 points), 240 people, or 66.48 percent, average 6.54, standard deviation at 2.275.

CONCLUSION

Conclusion

Additional suggestion from the students about the reproductive health and sexual health clinic:

- The Place

Conveniently located near the university, is easy to find uncrowded not entirely explicit privacy.

- The decor/ style place

Living with privacy with the curtain closed, clean feel relaxed, safe and quiet.

Spacious, well ventilated, crowded with colorful modern decor with clean-air leisure facilities.

- Services

With international standards, modern equipment, fast service, the service providers have the knowledge and capabilities. The expert advice is easy to recognize good service; polite, well spoken, friendly smile, can talk like a family without the pressure, keep customer information in secret, and free of charge.

SUGGESTION OF RESEARCH RESULTS APPLICATION

1. Provides knowledge of sexual health for students in university follows the research results that most of the students having moderate knowledge of sexual health by using various means which modern and appropriate to teenage interesting as well as ease of access, convenient, fast and 24-hours a day service.
2. Provide subject related to sexual health in general education section in order to allow student who interested as an option.
3. Provide policy regarding sexual health service and designated responsible organization within the university. Arrange clinic format comply with those recommended by the students in such a way that students can get the service easier and motivate them to participate more.
4. As the results of research, the researcher believe that providing of additional sexual health care in university using social media as the tools would be helpful. Because of the new media play are important role in adolescents. [14]

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to Suan Sunandha Rajabhat University for invaluable help throughout this research.

REFERENCES

- [1] Anlaya. Smuseneeto. (2013). Perspective of Reproductive Health from Muslims in Southern Border of Thailand. URL: <http://rupattani.myreadyweb.com/article/topic-42801.html>
- [2] Boonsri Kittichottipanich, Udornporn Yingpaiboonsuk, Pongsri Somsauy, Suntaree Kositwon. (2016). Model of Health Promotion Model of Health Promotion for Reducing Risk Behaviors of Preterm Birth In Teenage Pregnancy. Oral presentation, 4 th. International Conference on Business, Economics, Social Science and Humanities, Tokyo, May 26-27, 2016.
- [3] Lowdermilk, Deitra Leonard and e.t. (2014). **Maternity & Women's Health Care**. St. Louis: Mosby
- [4] Ministry of Social Development and Human Security. (2013). **Teenage Obstetric Status in Thailand 2013**. Bangkok: Khrurusapha Publishing.
- [5] Patcharee, Tonsiri and other. (2013). Western University/Nursingkan/Sexuality Risk Behaviors in Secondary School Students. URL: <http://www.western.ac.th/wertrennew/admin/uploadwd/nursingkan/files.pdf>
- [6] Prapaiwan Danpradit, Boonsri Kittichotipanich, Pongsri Suntaree Kositwon. (2016). Effects of Group Nutritional Health Promotion on Birth Weight In Pregnant Women with Gestational Diabetes Mellitus 4 th International Conference on Business, Economics, Social Science and Humanities, Tokyo, Japan, May.
- [7] Ricci, S.S., (2013) *Essentials of Maternity, Newborn, & Women's Health Nursing* (3rd ed.). New York: Wolters Kluwer Health.
- [8] Viroj, Areekul. (2010). *Health care and How to Give Advice to Teenager*. Bangkok.
- [9] Udornporn, Yingpaiboonsuk. & Premwadee, Karuhadej. (2011). *Sexual Orientation of College Students in Rattanakosin Area*. Suan Sunandha Rajabhat University, Bangkok, Thailand.
- [10] UNFPA 2013. Available from http://countryoffice.unfpa.org/Thailand/drive/CONTENT_ENG_draft_6.pdf
- [11] The National Campaign to Prevent Teen and Unplanned Pregnancy. (2008). *Sex and tech: Results from a survey of teens and young adults*. Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy. Retrieved from <http://thenationalcampaign.org/resource/sex-and-teen> Last updated: January 04, 2017

ANALYSIS OF THE RELATIONSHIP BETWEEN THE LOCATION OF HOSPITALS AND POPULATION DISTRIBUTION IN THAILAND

Professor Dr. Wichai Srikam* & Supparas Oatsawaphonthanaphat**

**Professor Dr. of Allied Health Sciences, Suan Sunandha Rajabhat University, Bangkok, Thailand and*

Former Dean of the Faculty of Arts, Silpakorn University, Nakornpatom 73000, Thailand

***Instructor of College of Allied Health Sciences, Suan Sunandha Rajabhat University, Bangkok, Thailand*

*E-mail: *wichai.sr@ssru.ac.th, **supparas.oa@ssru.ac.th*

ABSTRACT

The location of hospitals plays a major role in health care of population. As the foundation of peoples' health and life safety, hospitals are the most important public service facilities, their spatial allocation rationality guarantees an equal opportunity for people to have necessary medical treatments. Urban population can access to hospitals more easily than rural population. This is because the hospitals are located close to them while rural population live in remote areas where hospitals are few and poor. The low accessibility becomes an obstacle for the rural population to get health-care services from hospitals, especially high quality hospitals. Thus, the urban population tends to have good health, compared to the rural population. Based on location theory, people will travel to get services at a place that is located close to them according to the principle of minimum amount of effort. The purposes of this study are to analyze the location of hospitals and the relationship between the location of hospitals and population distribution in Thailand. The study area as a spatial framework is seventy-seven provinces located in six geographical regions of Thailand. The provinces are the spatial units. For methodology, the data used are the secondary data collected from Local Directory Year 2010. The quantitative and statistical techniques used to analyze are mean (\bar{X}), density index, rank, and percentage. For analyzing spatial patterns of hospitals, the cartographic technique is applied. The research findings are that the province whose hospitals were located the most was Bangkok (13.03%), followed by Chonburi Province (3.75 %) and Chiangmai Province (2.81%) as ranked second and third, respectively. The province whose hospitals were located the least was Samut Songkhram Province (0.24 %). In terms of analyzing the locational pattern by geographical region, it is found that the region which most contained hospitals was the Central Region (12.38%). The Northeast Region (12.38 %) and the South Region (12.38 %) ranked the second and the third, respectively. With respect to analyzing the relationship between the location of hospitals and population distribution in Thailand, it is found that the location of the hospitals was significantly positively correlated with the population distribution factor at $\alpha = 0.05$ ($r = 0.910$). This indicates that when the population increases, the hospitals will also increase. On the contrary, if the population decreases, the hospitals will also decrease.

Key Words: Location of hospitals, Locational Pattern, Geographical region,

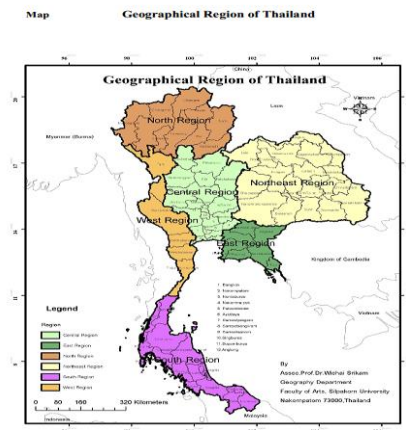
INTRODUCTION

The location of hospitals plays a major role in health care of population. In medical geography, hospitals will be located at a central place whose prime function is the provision of a wide range of goods and services to a dispersed population around it [1]. As the foundation of peoples' health and life safety, hospitals are the most important public service facilities; their spatial allocation rationality guarantees an equal opportunity for people to have necessary medical treatments [2]. Urban population can access to hospitals more easily than rural population. This is because the hospitals are located close to them while rural population lives in remote areas where hospitals are few and poor. The low accessibility becomes an obstacle for the rural population to get health-care services from hospitals, especially high quality hospitals. Thus, the urban population tends to have good health, compared to the rural population. Based on location theory,

people will travel to get services at a place that is located close to them according to the principle of minimum amount of effort [3]. The purposes of this study are to analyze the location of hospitals and the relationship between the location of hospitals and population distribution in Thailand.

THE STUDY AREA

The study area as a spatial framework is seventy-seven provinces located in six geographical regions of Thailand. The provinces are the spatial units.



THE METHODOLOGY

The data used are the secondary data collected from Local Directory Year 2010^[4]. The quantitative and statistical techniques used to analyze are mean (\bar{X}), rank, and percentage. For analyzing spatial patterns of hospitals, the cartographic technique is applied.

The Research Findings

The research findings are that the province whose hospitals were located the most was Bangkok (13.03%), followed by Chonburee Province (3.75 %) and Chiangmai Province (2.81 %) as ranked second and third, respectively (See Table 1). The province whose hospitals were located the least was Samootsongkram Province (0.24 %). In terms of analyzing the locational pattern by geographical region, it is found that the region which most contained hospitals was the Central Region (12.38 %). The Northeast Region (12.38 %) and the South Region (12.38 %) ranked the second and the third respectively. The region whose hospitals were located the least was the West Region (0.24 %).

With respect to analyzing the relationship between the location of hospitals and population distribution in Thailand, it is found that the location of the hospitals was significantly positively correlated with the population distribution factor at $\alpha = 0.05$ ($r = 0.910$). This indicates that when the population increases, the hospitals will also increase. On the contrary, if the population decreases, the hospitals will also decrease.

TABLE 1

The Location of Hospitals and Population Distribution in Thailand by Province and Region: Year 2012

Region/Province	No. of Hospital	Rank	No. of Population	Rank
North Region				
Chiangmai	33	1	1197092	1
Chiangrai	18	2	1063866	2
Lumpang	18	3	761949	3
Narn	13	4	486598	4
Pra	11	5	477048	5
Uttaradit	9	6	461221	6
Mahongsorn	8	7	459535	7
Payao	7	8	403612	8
Lumpoon	7	9	243313	9
Total	124		5554234	
Northeast Region				
Chiangmai	33	1	1197092	1
Chiangrai	18	2	1063866	2
Lumpang	18	3	761949	3
Narn	13	4	486598	4
Pra	11	5	477048	5
Uttaradit	9	6	461221	6
Mahongsorn	8	7	459535	7
Payao	7	8	403612	8
Lumpoon	7	9	243313	9
Total	124		5554234	
Northeast Region				
Nakornratchaseema	29	1	2590290	1
Kongan	28	2	1658275	3
Udonrtanee	26	3	1508765	5
Ubonratchatane	26	4	1819809	2
Bureerum	23	5	1561996	4
Galasin	17	6	684295	13
Roi-et	17	7	1306406	8
Sagonnakorn	17	8	1125348	10
Seesagate	16	9	1437776	6
Surin	16	10	1382591	7
Chaiyapoom	13	11	1129572	9
Loei	12	12	622944	14
Mahasarakarm	11	13	941718	11
Yasotorn	11	14	539443	15
Nakornpanom	10	15	706345	12
Nongkai	9	16	510838	16
Nongbualumpoo	9	17	503666	17
Buenggarn	8	18	409994	18
Mookdaharn	7	19	341492	20
Umnartjarern	7	20	372707	19
Total	312		21154270	
East Region				
Chonburee	44	1	1109631	1
Prajeenburee	17	2	471222	6
Jarntaburee	9	3	518386	5
Chacherngsao	9	4	681778	2
Trad	8	5	224341	7
Sagaew	8	6	546707	4
Rayong	7	7	631527	3
Total	102		4183592	

Region/Province	No. of Hospital	Rank	No. of Population	Rank
Central Region				
Bangkok	153	1	5692284	1
Samootpragarn	22	2	953932	3
Nakornsawon	20	3	1071764	2
Suparnburee	19	4	845496	6
Ayuttaya	17	5	790248	8
Nakornpatom	16	6	868375	4
Saraburee	15	7	611574	12
Pitsanulok	15	8	849992	5
Petchaboon	15	9	782187	9
Nontaburee	12	10	492038	15
Patoomtanee	12	11	795254	7
Pijit	12	12	521343	14
Singburee	11	13	219362	21
Lopburee	10	14	755634	10
Gumpangpet	9	15	726650	11
Chainart	9	16	333200	17
Sukothai	9	17	602131	13
Angtong	9	18	283941	19
Utaitanee	9	19	328335	18
Nakornnai-yok	5	20	227052	20
Samootsakorn	5	21	435588	16
Samootsongkram	3	22	194057	22
Total	407		18380437	
West Region				
Garnjanaburee	16	1	639346	2
Petchaburee	14	2	466967	4
Ratchaburee	11	3	834783	1
Tark	9	4	453298	5
Prajuabkeereekun	8	5	475522	3
Total	58		2869916	
south Region				
Nakornseetarmmarat	22	1	1529552	1
Songkla	22	2	1372754	2
Surattanee	20	3	907612	3
Choomporn	13	4	493029	8
Trang	13	5	521086	6
Parttanee	13	6	655259	4
Naratiwat	11	7	586754	5
Parn-nga	11	8	256038	13
Parttaloong	11	9	504195	7
Grabee	7	10	376924	10
Pooget	7	11	261386	12
Yala	7	12	468508	9
Ranong	7	13	181331	14
Satooon	7	14	303462	11
Total	171		8417890	

CONCLUSION

From the research findings, it is found that the province whose hospitals were located the most was Bangkok (13.03 %), followed by Chonburee Province (3.75 %) and Chiangmai Province (2.81%) as ranked second and third, respectively. The reason why Bangkok has still become the most important location of hospitals is that it is the most densely populated province. Based on location of tertiary activities, it is generally in agreement with population: the more people there are in an area, the greater the number of tertiary activities offered^[5]. Moreover, Bangkok is the capital city of Thailand. All its areas have become urbanized. With regard to Oatsawaphonthanaphat, Srikam and Chokevivat's research study, it is found that the postpartum mothers in rural areas received more social support on Yoofai than the postpartum mothers in urban areas^[6]. Furthermore, almost all postpartum mothers lived in rural areas. The postpartum mothers had positive attitude toward rehabilitation of postpartum mothers based on Thai traditional medicine at the highest level^[7]. In addition, Bangkok plays a crucial role in the center of land, water and air transportations, education, commerce, industry, and services. According to the principle of spatial interaction, transportation is necessary because all economic activity does not occur at one point. In general, it is recognized that for nearly all kinds of movement, the interaction between places is inversely dependent on the distance between places. Thus, places located near to each other will tend to have a high degree of interaction and places remote from each other will likely have little interaction^[8]. Thus, these may be factors influencing the magnitude of hospital location. With regard to Chonburee Province, Chiangmai Province, Nakornratchaseema Province and Kongan Province as ranked second, third and fourth, respectively in terms of the importance of hospital location, it may be because these provinces are large provinces located in their regions. Chonburee Province is the largest province in the East Region while Chiangmai Province ranks the highest in the North Region. Nakornratchaseema Province and Kongan Province are the largest and the second largest provinces, respectively in the Northeast Region. With respect to the locational pattern by geographical region, the largest number of population maybe a factor affecting location of hospitals in the Central Region. Furthermore, the Northeast Region which had the second highest rank of hospitals has the second largest number of population of Thailand. Therefore, the further research study should be examined factors influencing the locational pattern of hospitals in Thailand in order. The findings will be useful for planning to locate hospitals and health-care services for people to be healthy.

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to Suan Sunandha Rajabhat University for invaluable help throughout this research.

REFERENCES

- [1] Lloyd, Peter E. and Dicken, Peter. (1972) *Location in Space: A Theoretical Approach to Economic Geography*. New York: Harper & Row, Publishers, pp. 11.
- [2] Gang Cheng, Xiankai Zeng, Lian Duan, Xiaoping Lu, & Yuli Li (2016, April). Spatial difference analysis for accessibility to high level hospitals based on travel time in Shenzhen, China. *Habitat International*, 53, 485-494, Retrieved from <https://www.sciencedirect.com/science/article/pii/S0197397516000023As>
- [3] Srikam, W. (2012) *Urban Geography and Planning*. Nakornpatom: Silpakorn University Printing House, pp.38.
- [4] Office of Local Administration, Ministry of Interior, Thailand. (2013) *Local Directory: Year 2012, Vol.1-2*. Bangkok: Arsarrucksardindan Printing House.
- [5] Fielding, Gordon J. (1974) *Geography as Social Science*. New York: Harper & Row, Publishers, pp. 119.

- [6] Oatsawaphonthanaphat, Supparas;Srikam, Wichai; Chokevivat, Vichai.Social Support of Postpartum Mothers Based on Folk Medicine in Nakornpatom Province, Thailand.*Proceedings. 2017.*
- [7] Oatsawaphonthanaphat, Supparas., WichaiSrikam, and VichaiChokevivat, "Rehabilitation of Postpartum Mothers Based on Thai Traditional Medicine in Nakornpatom Province, Thailand," *Proceedings of the International Conference on "Social Sciences Humanities and Education.*Milan, Italy November 6 - 11, 2016.
- [8] Wheeler, James O. and Muller, Peter O. (1981)*Economic Geography.*New York: John Wiley & Sons. pp. 72 - 75.

THE USE OF HERBAL FERMENTED WATER TO RELIEVE MENSTRUAL PAIN: A CASE STUDY OF WOMEN IN PATHUMTHANI UNIVERSITY

Phatphong Kamoldilok,**Orawan Sinpaiboonlert,Mukda Tosang**

****Instructor of College of Allied Health Sciences,SuanSunandha Rajabhat University, Bangkok, Thailand*

*E-mail: `phatphong.ka@ssru.ac.th, **orwan.si@ssru.ac.th, ***mukda.to@ssru.ac.th*

ABSTRACT

The women of reproductive age have problems that interfere with their daily lives. Every month of the month. Which is the problem of women around the world. Although the progress of medical advances is growing. It can not solve this problem fully. This research is to find a way to solve the menstrual pain of women. The purpose is to study were (a) To know that Thailand has the wisdom of Thai fermented water to maintain the health of the body. (b) The use of fermented water to relieve menstrual pain of women. Can be done and work well. This research has selected women aged under 32 years of age who are studying and working on campus in the university come join the research by using the fermented water provided by the researcher for 12 months. The results showed that. Most women recover from the menstrual pain they had before. Some parts are missing sometimes, and the other part has a slight relief. It is concluded that the use of fermented water to relieve menstrual cramps are quite good. There are also other by-products that are beneficial to health. Many people who participate in the research feel healthier. Some illnesses that have been lost.

Keywords: Herbal fermented water, herbal, menstrual pain

INTRODUCTION

The problem of reproductive age women is a big problem in life. It hinders learning work, travel and daily living. There is pain in the stomach during the month. Some of them last for several days. Make it short or leave may cause damage to employer's work. Menstrual pain of women usually occurs every month. Frequent absenteeism for several months as mentioned above can be annoying to co-workers or employers, and eventually may be terminated. If a student has to stop, studying do not understand, may result in reduced grades. Women who have a month to go to work or study without a break. Doing work does not work as well as it should,because they have to endure the pain and worrying about the uncleanness of the body almost all day.Modern medicine to relieve menstrual pain. Abdominal cramps can not solve just a little relief.

At the Pathumthani community, people have brought traditional Thai wisdom to maintain a healthy body in a variety of ways. Regardless of whether the diet is a drug. Health care Traditional Thai Medicine including complementary medicine and alternative medicine. There is also another popular method of community is the use of fermented water to maintain the health of the body. When used, it makes for better health, body healthy for some people are cured of chronic diseases that have long been. Both have been hospitalized by the current medical doctor and treated in other ways. People with health problems are women. They took the fermented water. Then the menstrual pain was gone and not come back again.The use of fermented water to maintain health. Especially relieve menstrual pain. It is interesting to study both the use of fermented water used. What is there to do? When the fermented water. How to use it? Who is available? When to use it to blame? It is good to study if it is good to maintain healthy body. It is helpful to take care of your own health, family, people around you. And it will be useful in the medical field of Thailand.

METHODOLOGY

1. It is a qualitative research. By collecting information from people with abdominal pain during the month. A random sample of 60 students, office staff and housewives from Pathum Thani University.

2. Data gathering To get the information that is holistic and reliable. In-depth interview and participant observation. Have a physical examination see symptoms before treatment and follow up after treatment. Throughout the research period of 12 months.

RESULTS

Ancient Thai wisdom Herbs used in the treatment and maintenance of health. By using medicinal properties that treat their own needs to boil, pickled liquor distilled to powdered powder. Make a bolt and there are many other ways. All this is a drug extract that has properties to treat the disease out, and for ease of use in the treatment of disease. But there is another way of being used in the Thai community. Be trusted and widespread popularity. Is the fermented water to maintain their own health. Some fermented water is done manually. Some people buy from trusted sources. Taking into account the cleanliness and the correct fermentation process. All fermented water uses a very different formula. Most of the medicinal plants will come from 5 to 6 kinds of herbs that have properties in the treatment and health. Bring it to combine with clean water, and red cane sugar. Using a ratio of 1 piece of reddish water, 3 parts of herbs and 5 parts of water were taken in the plastic tank for 8 months or more and then filtered the water to benefit the body. To maintain hygiene. For this research is to take care of menstrual pain in the reproductive system of women. So chose a fermented juice with herbal formula, which has this particular properties. The main body is the uterus. As a medicinal plant Scientific name: *Curcuma Zanthorrhiza* Roxb, Zingiberaceae. Well known for its uterine pain properties. Cure the uterus to solve the rash. The uterus of the womb soon after delivery. Add some hormones that your body needs. These herbal fermented herbs are selected from trusted producers. From neighboring provinces. There is a standard factory. Get GMP certified when taken with no side effects. Premenstrual syndrome (PMS) is a symptom that affects almost all young women. In addition to abdominal cramps. There may be other symptoms as well: mood swings anger, irritability, insomnia, fatigue, headache or migraine. Sometimes they want to cry, emotional depression, chest pain, edema. Usually 2 to 7 days before the menstrual cycle, it usually affects the mental disorders. PMS is a mild syndrome. Can disappear if chronic, it is usually caused by belief, expectation, mental tension. Not to pretend ill or feel it.

This study selected 60 subjects who had monthly menstrual pain every month or every month. Some people have pain a month before a few days. Some people pain in the menstrual period. And pain throughout the day until menstruation stops. Mostly 3-5 days. So these patients come in. Research project on the use of fermented water to relieve menstrual pain. Before starting to use fermented water. Have a history of pain in the past, family history, symptoms related and physical examination in Thai traditional medicine. Then eat the fermented water before menstruation about 7 days. Then appointment to check again after the menopause or menstrual period has passed. Along with this information every month until 12 months.

According to studies, it has been found that the samples were missing at the time of 12 research. There were only 48 samples in the total number of women (41 students, 5 office staff and 2 housewives.) When the results of the record all year. There are 34 women who are experiencing menstrual cramps all year, 70.83% missing, sometimes 6 people, 12.5%. Symptoms relieved but not completely resolved. 8 people accounted for 16.67%. When analyzing the cause of people who do not recover from menstrual pain, it was

found. Some are weak body ranges. Some eat food that is slang. Some people eat ice or cold water from the refrigerator. And many people do not eat enough fermentation. So the treatment is not working as it should.

This research has found unexpected events from the results of eating fermented water. Is besides fermented water, it helps in relieving menstrual pain. It has also been found that many women who have recovered from allergies themselves. Some people recover from migraine headaches. Healed from pain cured from colds and coughs, sore throat. Many people lose weight, And many feel physically stronger. The skin is bright and watery, which is all. May be the result of eating fermented water, or other causes should be researched further.

Table 1

The diagnosis of the women with the use of fermented water in the sample of 48 cases

Diagnosis	Case (n = 48)	%
Cured of menstrual cramps	34	70.83
Sometimes missing	6	12.50
Not lost but less symptoms	8	16.67

Figure 1

Uterine uterus and fermented water samples



CONCLUTION AND FUTURE WORK

Menstrual pain of women it is a matter of nature. It may be caused by several other related causes, such as infection with a virus, Immune, hormone levels, such as hormonal deficiency of the adrenal glands(hypercortisolism),some malnutrition toxics. Even the brain and nervous system. Stress is also linked. Eating supplemental fermentation and solving these shortcomings. It is a drug that helps cure the menstrual pain. In addition to receiving the substance to treat it. Based on the research of book documents. Textbooks and research papers. It was found that the fermented water was fairly old. There is a substance called enzymes and probiotics, which are beneficial to the body.

Enzymes are protein molecules that catalyze biological reactions. And control almost all biochemical processes of all organisms. By the side is involved in the digestion process of nutrients. It accelerates the growth and repair of the wear of organisms. Biotech derived from bio-fermentation is directly beneficial for health. When eaten, it improves metabolism and helps digestion. Help restore the digestive system and excretory. Helps to build immunity and restore respiratory system. Help restore the skin. Dermatitis is acne, freckles, bones, musculoskeletal pain, body aches. Enzymes help restore endocrine system, reproductive system diabetes. Dysmenorrhea rehabilitation of sexual function, blood system, anemia, and rehabilitation after postoperative women. Chronic patients people who are tired, anorexia increases energy levels, lose excess weight, and help build immunity for low profile. Make healthy physical strength. Enzymes have many health benefits. To have a say "enzymes will be the healing way of the future"

Probiotics are microorganisms produced by fermentation that are beneficial for the intestinal microbial balance. As is known in the medical world. Thailand by the Food and Drug Administration (FDA) in 2008 has set guidelines and criteria for assessing the effectiveness of health and safety, and health claims of probiotics in food products. Which gives the definition of probiotics that. "Probiotics are living microorganisms, which, when the body is in sufficient quantity. Will produce beneficial effects on health. By probiotics It helps in the prevention and balance of microorganisms in the intestinal tract. Digestive tract the digestion and digestive system work better. The result is To relieve diarrhea Cancer prevention Reduce lactose intolerance. Reduce cholesterol levels in the blood. Control the immune response in the body. And antioxidant. (Free radicals) cause aging.

From the above mentioned, it is seen that the herbal fermented herbs. In addition to the properties of herbs to help maintain and maintain health. There are also enzymes and probiotics microorganisms. The ultimate value for the body. As a supplement to make fermented juice has the ability to maintain more health. It is effective in relieving many health problems. This research is beneficial to the medical community. Benefit the people to self-care in a cost-effective and non-expensive way, and to relieve the burden of the state in the treatment of illness in the hospital. There are usually not enough doctors for the number of patients. And it costs a lot.

ACKNOWLEDGEMENTS

I would like to express my sincere to Saun Sunandha Rajabhat University for invaluable help throughout this research.

REFERENCES

- [1] Oatsawaphonthanaphat Supparas (2016) REHABILITATION OF POSTPARTUM MOTHERS BASED ON THAI TRADITIONAL MEDICINE IN NAKHON PATHOM PROVINCE, THAILAND.
- [2] Archanuphap S. 1988 General treatment textbook, Principles of diagnosis Bangkok, Thailand H.N. Printing
- [3] Bouyam S. Keep healthy with enzymes. Bangkok, Thailand Warawut Printing
- [4] Bouyam S. Fermented water for consumption, eat it yourself, use it yourself. Bangkok, Thailand Warawut Printing.
- [5] Chaisut TH. 2010 Healthy with probiotics. Bangkok, Thailand. Thai Effect Studio Co., Ltd.

- [6] Intusai TH.2001 Plant - The Great Auspicious, Matichon Publishing Bangkok,Thailand
Matichon Printing
- [7] JOHANNES W. ROHEN & CHIHIRO YOKOCHI Color Atlas of Anatomy, Jurong town,
Singapore. Toppan Company (S) Pte.Ltd.
- [8] McIntyre A. 1992 Herbs for common ailments.London,UK.Gaia Book Limited.
- [9] Phacharamathi K. 2014 self -diagnosis and treatment guide book, Bangkok, Thailand.
Europa Press Company Limited
- [10] Phecharaburanin N. 2005 The Healing Power of Enzymes, Bangkok,Thailand. Great
printing, printing limited
- [11] R.M.H. McMINN, R.T. HUTCHINGS 1993 A Colour Atlas of Human Anatomy. London,
England Wolfe Publishing Ltd
- [12] Swaminathan S.,Lakshmana sarma 1993 Speaking of Nature Cure New Delhi, India.
Amarin Printing & Publishing
- [13] Sutthajit S. 2007 Health and Nature, Bangkok, Thailand, The knowledge center.
- [14] Sornwan CH. Campaign to reduce heat by fermentation. Bangkok,Thailand. Supercheng
satelite company limited.
- [15] Sitaluksna N. 2011 Intigrated Healthcare, Bangkok, Thailand. SinudomPrinting Co., Ltd.
- [16] Sripran khobayashi R. 2013 Enzymes and Applications, Bangkok, Thailand. Thai Effect
Studio Co., Ltd.
- [17] Thammawanich S. 1991 Spirit of media analysis for health. Bangkok, Thailand Aksorn
Graphic Publishing
- [18] Thiengburanthurm W. 2013 Medical Sciences Dictionary. Bangkok,Thailand. Duangkamol
Publishin Printing
- [19] The Technical side of Prae pittaya MEDICALDICTIONARY Bangkok,
Thailan

AN ANALYSIS OF THE FACTORS ASSOCIATING CHARACTERISTICS AND METHODS OF USING ALTERNATIVE MEDICINE OF THE ELDERLY IN SAMUTSONGKRAM PROVINCE, THAILAND

Supparas Oatsawaphonthanaphat*, Wichai Srikam**, Duangporn Nacapunchai***, & Siriluck Jittabiab****

***Instructor of College of Allied Health Sciences, Suan Sunandha Rajabhat University, Thailand,
E-mail: supparas.oa@ssru.ac.th, duangporn.na@ssru.ac.th, siriluck.ji@ssru.ac.th

**Professor Dr. and Former Dean of the Faculty of Arts, Silpakorn University, Nakornpatom, Thailand,
E-mail: wichaisrikam@gmail.com

ABSTRACT

The purposes of this research, titled “An Analysis of the Factors Associating Characteristics and Methods of Using Alternative Medicine of the Elderly in Samut Songkram Province, Thailand” were to study the characteristics and methods of using alternative medicine of the elderly in Samut Songkram Province, and to analyze the relationship between the factors and the methods of using alternative medicine of the elderly in Samut Songkram Province. The sample used to study was drawn by using the simple random sampling from aging people who live in Samut Songkram Province. The data were gathered between March and April, 2017 by using a questionnaire built by the researchers. The statistical techniques used for analyzing were frequency, percentage, mean (\bar{X}) and standard deviation (S.D), and (Chi-square: χ^2).

The research findings are that the Biologically Bases Therapy (mainly by herbs and healthy food) was used the most, followed by the Energy Therapy (by pray). The Alternative Medical System (by acupuncture) was least used. With regard to statistical testing, the age factor was statistically significantly correlated with the alternative medicine in terms of eating healthy food of the elderly in Samut Songkram Province at $\alpha = 0.05$. The adequate income factor was also statistically significantly correlated with the alternative medicine in terms of Qigong and Chiropractic at $\alpha = 0.05$. Moreover, the factor of perception about health care based on the alternative medicine was statistically significantly correlated with the characteristics and methods of alternative medicine in terms of traditional Chinese medicine of the elderly in Samut Songkram Province at $\alpha = 0.05$.

Keywords: Alternative Medicine, the Elderly, Perception about Health Care

INTRODUCTION

Alternative medicine is healthcare and treatment practices, including traditional Chinese medicine, chiropractic, folk medicine, and naturopathy, that minimize or eschew the use of surgery and drugs¹. A variety of health care practices, such as homeopathy, naturopathy, and Reiki, whose tenets often differ from those of mainstream medicine and are not generally taught in conventional medical schools¹. Thus, alternative medicine is the science for diagnosing, treating, promoting health and preventing health from diseases. It is alternative to take care and rehabilitate people's health in order to fulfill a weakness of modern medicine, especially incurable diseases². At present, several public health and services are provided with both alternative and modern medicines which are in accordance with lifestyles and ways of the elderly life³.

Population ageing is one of the greatest social and economic challenges facing Thailand. This is because Thailand has become a perfect population ageing society. The number of older people is growing. Thailand is currently ranked the third most rapidly ageing population in the world. The number of people aged 60 and over in Thailand now stands at about eight million, accounting for 13 percent of the population. Population ageing is a relatively new occurrence for Thailand. It was just in 2001 that Thailand became an ageing population with more than 7% of the population over 65. By 2040, Thailand's aging population is expected to increase to 17 million, accounting for 25 percent of the population. This means that out of every four Thais, one will be a senior citizen⁴.

Samutsongkram Province has begun to be an aging society. This is because in 2016 this province had the elderly with the number of 35,157 or 21.16 % of the whole population of the country. Samutsongkram Province ranked the first in Health Region 5 and ranked the second of Thailand in terms of the number of the elderly. The trend has increased steadily⁵. The aging society has high dependency which affects health, economy and society of the elderly. They must be taken-care by health agencies, local societies, and families. Thus, factors associating characteristics and methods of using alternative medicine of the elderly in Samutsongkram Province need to be analyzed.

THE RESEARCH PURPOSES

1. To study the characteristics and methods of using alternative medicine of the elderly in Samutsongkram Province.
2. To analyze the relationship between the factors and the methods of using alternative medicine of the elderly in Samutsongkram Province.

METHODOLOGY

An analysis of the factors associating characteristics and methods of using alternative medicine of the elderly in Samutsongkram Province is a mixed method research between a quantitative research and a qualitative research. The sample used to study was drawn by using the simple random sampling from aging people (60 years and over) who live in Maglong Subdistrict, Muang District, Samutsongkram Province based on Cohen's Large Effect Size (Cohen, 1992 p.155-159). The data were gathered between March and April, 2017 by using a questionnaire built by the researcher, as well as an in-depth interview. The statistical techniques used for analyzing were frequency, percentage, mean (\bar{X}), standard deviation (S.D), and Chi-square: χ^2 .

RESULTS

1. Characteristics and methods of using alternative medicine of the elderly in Samutsongkram Province

The elderly in Samutsongkram Province most used alternative medicine in the type of Biologically Based Therapy (80.0%). That is, the herbs were used the most (33.3%), followed by healthy food (30.0%). The type of Energy Therapy (prayer) was used as the second rank (53.3%). The type of Alternative Medical System (acupuncture) was used the least (26.7%). (Table 1)

Table 1

Characteristics and Methods of Using Alternative Medicine of the Elderly in Samutsongkram Province (n = 30)

Characteristics and methods of using alternative medicine	N	%
Alternative Medical System	8	26.7
Acupuncture	8	26.7
Mind-Body Interventions	13	43.3
Pray	7	23.0
Yoga	5	16.7
Qigong and Chiropractic	1	3.3
Biologically Bases Therapy	24	80.0
Herbs	10	33.3
Healthy food	9	30.0
Taking vitamin	3	10.0
Taking traditional Chinese medicine	2	6.7
Manipulative and Body-Based Methods	12	40.0
Massage	11	36.7
Chiropractic	1	3.3
Energy Therapy	16	53.3
Pray	16	53.3
Total	30	100.0

2. Analysis of the relationship between the factors (age, adequate income, perception about health care) and the methods of using alternative medicine of the elderly in Samutsongkram Province

With regard to statistical testing, it is found that the age factor was statistically significantly correlated with the alternative medicine in terms of eating healthy food of the elderly in Samutsongkram Province at $\alpha = 0.05$. The adequate income factor was also statistically significantly correlated with the alternative medicine in terms of Qigong and Chiropractic at $\alpha = 0.05$. Moreover, the factor of perception about health care based on the alternative medicine was statistically significantly correlated with the characteristics and methods of alternative medicine in terms of traditional Chinese medicine of the elderly in Samutsongkram Province at $\alpha = 0.05$.

Table2

The Relationship between the Age Factor and the Methods of Using Alternative Medicine of the Elderly in Samutsongkram Province (n = 30)

Age	Eating healthy food	Not eating healthy food	χ^2
60-69years	5	6	6.268*
70-79years	12	1	
80years and over	4	2	

* $\alpha = 0.05$

Table3

The Relationship between the Adequate Income Factor and the Methods of Using Alternative Medicine (Qigong and Chiropractic) of the Elderly in Samutsongkram Province (n = 30)

Characteristics and Methods of Using Alternative Medicine		Adequate Income Factor			χ^2
		inadequate income	Adequate income(no saving)	Adequate income(saving)	
Qigong	used	12	15	2	9.31*
	Not used	0	0	1	
Chiropractic	used	12	15	2	9.31*
	Not used	0	0	1	

* $\alpha = 0.05$

3. The Relationship between the Health-Care-Perception Factor and the Methods of Using Alternative Medicine (Taking Traditional Chinese Medicine) of the Elderly in Samutsongkram Province (n = 30)

Table 4

Health-Care-Perception Factor/ Alternative Medicine	Taking Traditional Chinese Medicine	Non-taking Traditional Chinese Medicine	χ^2
Low	0	0	30.00*
Moderate	14	0	
High	14	2	

* $\alpha = 0.05$

CONCLUSION AND FUTURE WORK

The research findings are that the Biologically Bases Therapy (mainly by herbs and healthy food) was used the most, followed by the Energy Therapy (by pray) as the second. The Alternative Medical System (by acupuncture) was least used. With regard to statistical testing, the age factor was statistically significantly correlated with the alternative medicine in terms of eating healthy food of the elderly in Samutsongkram Province at $\alpha = 0.05$. The adequate income factor was also statistically significantly correlated with the alternative medicine in terms of Qigong and Chiropractic at $\alpha = 0.05$. Moreover, the factor of perception about health-care based on the alternative medicine was statistically significantly correlated with the characteristics and methods of alternative medicine in terms of traditional Chinese medicine of the elderly in Samutsongkram Province at $\alpha = 0.05$.

The reason why the age factor was correlated with the alternative medicine in terms of eating healthy food of the elderly is that most ageing people are unhealthy. If they do not eat healthy food, it may cause them to be sick, such as diabetes, hypertension, heart disease, stroke, paralysis and so on. So, they have to be aware of food that promotes their health, particularly vegetables and fruit⁶.

For the relationship between the adequate income factor and the alternative medicine in terms of Qigong and Chiropractic, it can be explained that many elderly people have non-chronic diseases. They cannot be treated effectively by modern medicine even though they have enough money to pay for rehabilitating their health. The alternative medicine in terms of Qigong and Chiropractic is used to fulfill a weakness of modern medicine, especially incurable diseases⁷. The alternative medicine in terms of Qigong and Chiropractic is appropriate for the elderly who have adequate income, such as retired persons who has a pension or saving money. Old people who are poor must work hard all their life. They do not have a free time to exercise by using Qigong and Chiropractic at all.

With respect to relationship between the factor of health-care perception and the characteristics and methods of alternative medicine in terms of traditional Chinese medicine, it may be because some elderly people believe that traditional Chinese medicine can help them to be strong if they take Chinese herbs continuously. Moreover, both old men and old women perceive that taking traditional Chinese medicine will help them to feel fresh and be able to have sex intercourse more efficiently. According to Chinese clinical studies, herbs, and others that have been added to the list of useful items over the centuries,

can greatly increase the effectiveness of modern drug treatments, reduce their side-effects, and sometimes replace them completely⁸. Furthermore, many research studies revealed that two treatments which most often utilize in traditional Chinese medicine (TCM) clinical practice are acupuncture and herbal medicine⁹. This is the reason why the factor of perception about health care based on the alternative medicine was statistically significantly correlated with the characteristics and methods of alternative medicine in terms of traditional Chinese medicine of the elderly in Samutsongkram Province.

For future work, the research on “the analysis of the factors associating characteristics and methods of using alternative medicine of the elderly” should be examined in other provinces and regions of Thailand in order to prove and confirm the results. The powerful research findings will contribute the field of alternative medicine to be strongly accepted and utilized more and more by ageing population and modern medical doctors.

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to Suan Sunandha Rajabhat University for invaluable help throughout this research.

REFERENCES

- [1] Alternative medicine | Define Alternative medicine at Dictionary.com. *The AmericanHeritage® Medical Dictionary (2007, 2004)*. Retrieved from <http://www.dictionary.com/browse/alternative-medicine>
- [2] Ministry of Public Health.(2013).Situation of alternative medicine in Thailand..*Journal of Thai Traditional Medicine and Alternative Medicine*, 6(1), n.d.
- [3] Chockwiwat, Vichai. et. et. al (2010). *Report of Thai Traditional Medicine, Folk Medicine and Alternative Medicine: Year 2009 – 2010*. Bangkok: Academic Office, Department of Thai Traditional Medicine and Alternative Medicine, Ministry of Public Health.
- [4] Ageing population in Thailand | HelpAge - AgeingAsia.org. Retrieved from <https://www.google.co.th>
- [5] Office of Samutsongkram Province, (2016).*Report of Annual Performance: Year 2015*. Retrieved from <http://samutsongkhram.nso.go.th/>
- [6] Srikam, Wichai et. al (2017). Eating Behavior Affecting Oral Health of Early Adolescents in Nakornpatom Province, Thailand..*Journal of Allied Health Sciences, Suan Sunandha University*, 2(1), 1-14..
- [7] Ministry of Public Health.(2013).Situation of alternative medicine in Thailand..*Journal of Thai Traditional Medicine and Alternative Medicine*, 6(1), n.d.
- [8] Dharmananda, Subhuti. (1996). An introduction to Chinese herbs. Retrieved from <http://www.itmonline.org/arts/herbintro.htm>
- [9] Is TCM evidence-based and safe? | Taking charge of your health. Retrieved from <https://www.takingcharge.csh.umn.edu/explore-healing-practices/traditional-chinese-medicine/-tcm-evidence-based-and-safe>.

DEVELOPING THE FILM SHAMPOO FROM SODIUM ALGINATE AND INGREDIENTS OF THE CLITORIA TERNATEA EXTRACTED FOR CARRIED ON

Chanyapat Sangsuwon* & Thanat Krobthong**

*Department of chemistry, Faculty of Science and Technology, Suan Sunandha Rajabhat University, Thailand,

** Department of Applied Physics, Faculty of Science and Technology, Suan Sunandha Rajabhat University, Thailand,

E-Mail: *Chanyapat.sa@ssru.ac.th, **thanat.kr@ssru.ac.th

ABSTRACT

Clitoria ternatea L. (CT) including butterfly pea or blue pea, is a plant species belonging to the Fabaceae family. CT flowers are used in Thailand as a component of cosmetics and the chemical composition of the flowers suggest that they may have antioxidant activity. In this study the potential antioxidant activity of *C. ternatea* extracts with ether chloroform butanol and aqueous were shown antioxidant activity 125.8, 105.6, 75.5 and 48.4 µg/ml (as measured by DPPH scavenging activity). Curded extract of CT were mixed with the sodium alginated in 10% and used phosphate buffer pH7 and added with Sodium laureth sulfate (Texapon N70) were setting the film shampoo in 48 hr. Fifty of questionnaires for survey for using the film shampoo showee the satisfy in the factors of comfort for carry on, soften hair and suitable for hair were 3.55, 3.25 and 2.25, respectively.

Keywords: Antioxidant, Carry on, *Clitoria ternatea*, Film shampoo, Sodium alginate.

INTRODUCTION

Clitoria ternatea L. (CT) (Family: Fabaceae) commonly known as 'Butterfly pea', a traditional Ayurvedic medicine, has been used for centuries as a memory enhancer, nootropic, antistress, anxiolytic, antidepressant, anticonvulsant, tranquilizing and sedative agent. Ternatins are blue anthocyanins found in the petals of CT [1]. They are acylated anthocyanins based on delphinidin [2].

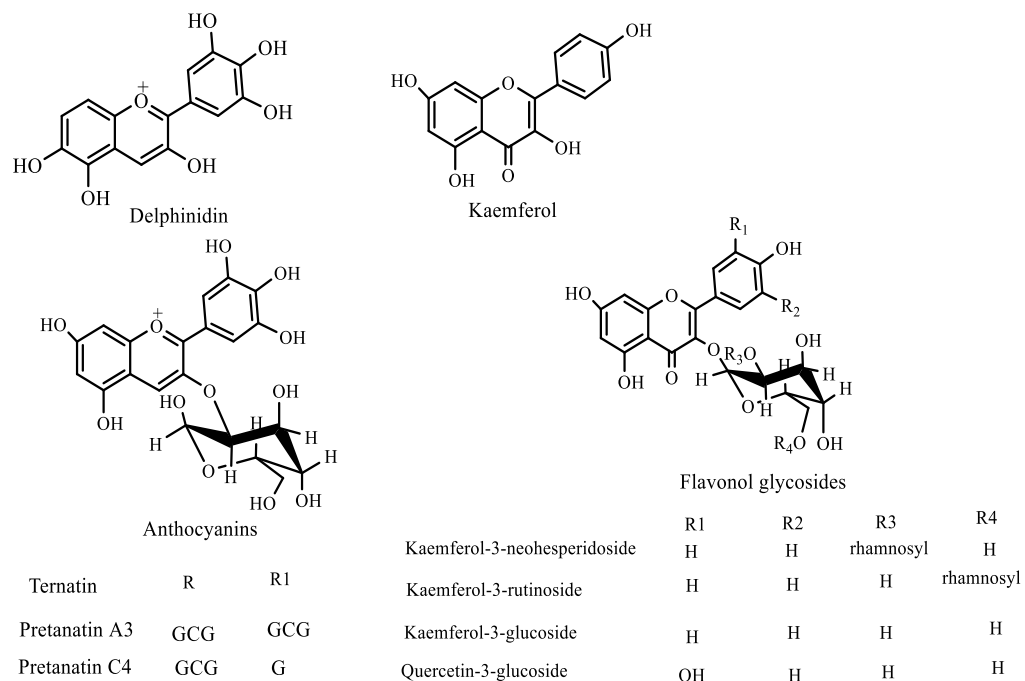


Figure 1 chemical compounds isolated from *C. ternatea*

The six major anthocyanins ternatins A1, A2, B1, B2, D1, and D2, were isolated, and these structures were characterized as malonylated delphinidin and *p*-coumaric acid units and isolation identification from the flowers of CT flavonoids as kaempferol, and kaempferol glycosides[3] kaempferol 3-neohesperidoside, kaempferol 3-rutinoside, kaempferol 3-glucoside, quercetin, quercetin glycoside[4]. CT flowers are used for cosmetics as anthocyanin was smear on brows for black and shinny. The phenolic compounds of the flowers suggest that they may have antioxidant activity [5].

METHODOLOGY

Plant material

CT flowers bought at Bangkok province, Thailand in December 2017. The dried flower plant of CT was powdered in a blender and then 100g, it extracted individually with ether, chloroform, butanol and water gave F1, F2, F3 and F4 respectively. The solvents were removed by rotary evaporate at 50°C.

Phytochemical screening by TLC

F1 to F4 fractions are monitored the chemical constituent by Si gel TLC Kieselgel 60F₂₅₄ (Merck). The solvent system was used chloroform:methanol: H₂O: acetic acid (75: 10: 14: 1), TLC screening was examined the terpenoids by 10% H₂SO₄-ethanol spray reagent, flavonoids by NP/PEG (mixed between diphenylboric acid and polyethyleneglycol) spray reagent under UV 366 nm and phenolic compounds by 10% FeCl₃ in ethanol spray reagent. Authentic standard were scopoletin, stigmasterol, and phytosterylglucoside.

DPPH radical assay [6]

Determination of antioxidant activity using 2, 2-diphenyl-1-picrylhydrazyl (DPPH) radical scavenging method by prepared 0.2 mM of DPPH in MeOH. F1 was crude extracted by ether of CT flowers was prepared of serial concentration as 10, 20, 30, 40, 50, 100, 250, 500 and 1000 ppm. Pipettes 1ml each of concentration of sample and added 1ml of DPPH to each well. Mixtures were variously shaken and left for 30 min in the dark. Absorbance was measured at 515 nm using MeOH as blank. Percentage of radical scavenging was calculated using the equation: $S(\%) = (A_0 - A_s) / A_0 \times 100$, which A_0 is the absorbance of the control (0.2mM of DPPH, 2 ml), and A_s is the absorbance of the tested sample. The half maximal inhibitory concentration (IC₅₀) value represented the concentration of the samples which have the antioxidant activity. Results were compared with of L-ascorbic acid. The results were expressed in percentage of inhibition as mean of three replicates. Repeated were testing with the crudes fraction F2-F4.

Developing the film shampoo by sodium alginate [7]

The dried crude extracted with water CT flowers 10 g and dissolved it in phosphate buffer solution pH7 100 ml and added the sodium alginate 10 g, heat at 80-90°C and keep at room temperature for 30 minute. Adding Sodium laureth sulfate (Texapon N70) 100 g in gradient of sodium alginate and stirred up. Pouring 3 ml of the liquid film shampoo in the petri dish. CT film shampoo and sodium alginate were setting in 48 hr at room temperature.

Toxicity test [8]

A patch test is a method used to determine whether a specific substance causes allergic inflammation of skins. Open patch assay was testing with the film sodium alginate shampoo. Dissolved the film shampoo in the distilled water (1:3), applied the film shampoo on the skins of back or inside part of arm or back of ear of the volunteers for 1x1 cm for 12 hr.

Questionnaires for survey for using the film shampoo of CT flowers

The questionnaires 50 papers are used as an instrument for collecting the data. The questioning information was sent to the women were aged 25-35 years old. Three topics of questionnaire were 10 closed questions and concerned with: survey for satisfaction of the quality after using the film shampoo of CT flowers:

The satisfy of the: 1) suitable for hair 2)soften hair 3)hair growth 4) Fragrance 5) no rough hair6) Removing oil dirt 7). Price 8) comfort for carry onBy studying the content of the channel media in 5 satisfactions in the rating scale of 1-5 score:

- 1 =the least satisfy,
- 2 = low satisfy,
- 3=middle satisfy,
- 4=satisfy,
- 5=very satisfy.

The score is based on Likert scale and calculated in formula:

$$\frac{\text{highest score} - \text{lest score}}{\text{number level of score}}$$

Evaluation of criteria showed the satisfaction in the range of 4.21-5.00 = very satisfy, 3.41-4.20 = satisfy, 2.61 -3.40 = middle satisfy, 1.81 -2.60 = low satisfy and 1.00 -1.80 = the least satisfy [9]

RESULTS AND DISCUSSION

Phytochemical scanning by TLC

The dried flower of CT were extracted with ether, chloroform, butanol and water gave F1(0.3g), F2(1.5g), F3(4.5g), and F4(18.2g), respectively. F1-F4 were showed the phytochemical components on the TLC screening. The molibe phase of solvent system of were chloroform: methanol: H₂O: acetic acid (75: 10: 14: 1). TLC showed the phytochemical components of terpenoids by 10% H₂SO₄ in ethanol using spray reagent and heat at 110°C were violet sport, NP/PEG spray reagent was activated flavonoids under uv 366 nm and phenolic compound were detected by 10% FeCl₃ in ethanol were dark spots. The authentic standard were stigmasterol, quacetin and gallic acid were reference. TLC screening the chemical constituents of CT flowers in F1-F4 were summarized in Table 1.

Table 1

Components of phytochemical of flower of CT in F1-F4 detected by TLC screening.

Extracted fraction	Weigh of dried crude (g)	% yields	Components on TLC screening
F1 : Ether	0.3	1.22	terpenoids.
F2 : Chloroform	1.5	6.12	Phenolic compounds,
F3 : Butanol	4.5	17.14	phenolicglycosides,
F4 : H ₂ O	18.2	74.29	phenolicglycosides, flavonoid glycocides

Antioxidant activity

The polar solvent as H₂O and ethanol extracted the polar compounds of phytochemical constituents as flavonoidglycosides terpenoidsglycoside and phenolic compounds in F1-F4. These results are in agreement of F1-F4 were tested antioxidant activity used DPPH reagent, and were IC₅₀ of F1-F4 were 125.8, 105.6 75.5 and 48.4 µg/ml, respectively (Table 2).

Table 2
IC₅₀ of inhibited DPPH radical scavenging on F1-F4 of CT flower.

Extracted	50% Inhibited of DPPH radical scavenging (µg/ml)			Average	S.D.	ID ₅₀ (µg/ml)
	1	2	3			
F1 :Ether	125.9	125.6	125.3	125.8	0.3	125.8±0.3
F2 :Chloroform	105.9	105.6	105.3	105.6	0.3	105.6±0.3
F3 :Butanol	74.9	76.1	75.6	75.5	0.6	75.5±0.6
F4 :H ₂ O	47.9	48.9	48.5	48.4	0.5	48.4±0.5

Open patch assay

The volunteer 10 person were smear sample of film shampoo on the skins of back or inside part of arm or back of ear for 12 hr which they contacted dermatitis which were not allergic.

The satisfy of the quality and comfortable for carry on in anywhere

Prepared the film shampoo CT flower were 5.2x2.2 cm amount 200 films for testing with 50 women and questionnaires 50 papers are used as an instrument for collecting the data for satisfaction of quality of the film shampoo CT flowers.

The score is based on Likert scale showed the satisfaction of the 50 women in the age of 25-35 year old. Factor of comfort for carry on, soften hair and suitable for hair were 3.55, 3.25 and 2.25, respectively. Factors of the satisfaction of the film shampoo were summarized the low satisfaction of women in Table 3.

Table 3
The satisfy of the women for the quality of the film shampoo of 50 questionnaires

No.	Factors	Satisfy of quality and comfort for carry on of the film shampoo			
		1	2	3	4
1	suitable for hair	0.4	0.95	1.4	2.25
2	soften hair	0.4	0.6	0.75	3.25
3	hair growth	0.15	1.5	1.85	1.5
4	Fragrance	0.5	2.5	2	0.45
5	no rough hair	0.3	1.75	2.05	0.9
6	Removing oil dirt	0.25	2.5	2	0.25
7	price	0.4	3.25	0.75	0.6
8	Comfort for carry on	0.1	0.6	0.75	3.55
Average satisfy for using the film shampoo		2.5	13.65	11.55	12.75

CONCLUSION

Clitoria ternatea L. commonly known as Butterfly pea has useful for tradition medicinal. The blue color of anthocyanin used as a natural food colorant and healthy beverages around the world. Chemical constituents of *C. ternatea* has flavonoids, quacetin, triterpens which anticancer. The data from this study support the use of *C. ternatea* extracts as antioxidant inclusions in cosmetic products. The study aims developed the film shampoo for carry on everywhere and *C. ternatea* has anthocyanin are useful for hair.

Conflicts of interest

The authors declare that they do not have conflict of interest.

ACKNOWLEDGEMENT

This work was generously supported by Suansunandha Rajabhat University, Bangkok, Thailand. I am thankful for Assoc.Prof.Dr. Luedech Girdwichai my president for supported the grants of this study.

REFERENCES

- [1] Srivastava, B.K., Pande, E.S., (1977). Anthocyanins from the flowers of *Clitoria ternatea*. *Planta Medica* 32, 138-140.
- [2] Terahara, N., Oda, M., Matsui, T., Osajima, Y., Saito, N., Toki, K., et al.(1996). Five new anthocyanins, ternatins A3, B4, B3, B2, and D2, from *Clitoria ternatea* flowers. *Journal of Natural Products*, 59, 139-144.
- [3] Saito N., Honda AK, Timberlake T., Bridle CF. (1985). Acylated delphinidin glucosides and flavonols from *Clitoria ternatea*. *Phytochemistry* 24, 1583-1586.
- [4] Pulok K., Venkatesan M., Kumara. N. Kumara S., Heinrich M.. (2008) The Ayurvedic medicine *Clitoria ternatea* From traditional use to scientific. Assessment. *Journal of Ethnopharmacology* 120; 291-301
- [5] Kamkaen N¹, Wilkinson JM. (2009). The antioxidant activity of *Clitoria ternatea* flower petal extracts and eye gel. *Phytother Res.*; 23(11):1624-5. doi: 10.1002/ptr.2832
- [6] Reinoso BD., Couto D., Moure A., Fernandes E. (2012). Optimization of antioxidants Extraction from *Castanea sativa* leaves. *Chemical Engineering Journal* 203:101-109.
- [7] Chaovanalikit A., Apichayaluk S., Kongthong S., Chuprathum S. (2009). Effect of pH and temperature on the stability and visual color of Rosella and butterfly pea extracts. *Articulture Sci J.* 2009;40: 5-8.
- [8] Lazzarini R, Duarte I, Ferreira AL. (2013). Patch tests. *An Bras Dermatol*; 88(6):879- 88, doi: 10.1590/abd1806-4841.20132323
- [9] Gail MS., Sullin., M., Anthony R., Artino, JR, (2013). Analyzing and Interpreting Data From Likert-Type Scales. *J Grad Med Educ.*; 5(4); 541-542.

EFFICACY OF WASTEWATER TREATMENT SUAN SUNANDHA RAJABHAT UNIVERSITY

Assoc. Prof. Sivapan Choo-in* & Siwimol Chuarung**

***Faculty of Science and Technology, Suan Sunandha Rajabhat University, Bangkok, Thailand*

*E-Mail: *sivapan.ch@ssru.ac.th, **siwimol.ch@ssru.ac.th*

ABSTRACT

Study on efficiency of wastewater treatment system at Suan Sunandha Rajabhat University. The purpose of this study was to investigate the effluent quality drainage from the wastewater treatment system of Suan Sunandha Rajabhat University and study on efficiency of wastewater treatment system of Suan Sunandha Rajabhat University to reducing dirtiness in wastewater (BOD).

The results showed that the pH analysis in the wastewater treatment system of Suan Sunandha Rajabhat University it was found that the average pH of wastewater treatment system phase 1 the wastewater Pond No. 1 was 7.23 and wastewater treatment system phase 2 Pond no.1 was 7. Pond no.2 was 7.22 and Pond no.3 was 6.59. When compared with the standard of the Ministry of Natural Resources and Environment on the "Define controlling standard to drainage wastewater from certain buildings and some sizes is 5-9". It was found that the wastewater treatment system phase 1, Pond no. 1 and the wastewater treatment system phase 2 Pond no.1, Pond no.2 and Pond no.3 were in the standard values.

BOD analysis in wastewater treatment system of Suan Sunandha Rajabhat University. It was found the BOD average of the wastewater treatment system phase 1, Pond no.1 was 11.17 mg/l. and the wastewater treatment system phase 2 Pond no.1 was 12.76 mg/l, Pond no.2 was 12.28 mg/l and Pond no.3 was 11.92 mg/l. When compared with the standard of the Ministry of Natural Resources and Environment, on the "Define controlling standard to drainage wastewater from certain buildings and some sizes ≤ 20 mg/l". It was found that wastewater treatment system phase 1, Pond no.1 and wastewater treatment system phase 2, Pond no.1, Pond no.2 and Pond no.3 were in the standard values.

TDS analysis in wastewater treatment system of Suan Sunandha Rajabhat University. It was found that the TDS average of the wastewater treatment system phase 1, Pond no.1 was 323.37 mg/l. and wastewater treatment system phase 2 Pond no.1 was 343.43 mg/l. Pond no.2 was 355.77 mg/l. and Pond no.3 was 390.07 mg/l. When compared with the standard of the Ministry of Natural Resources and Environment on the "Define controlling standard to drainage wastewater from certain buildings and some sizes ≤ 500 mg/l". It was found that wastewater treatment system phase 1 Pond no. 1 and wastewater treatment system phase 2, Pond no.1, Pond no.2 and Pond no.3 were in the standard.

FOG analysis in wastewater treatment system of Suan Sunandha Rajabhat University. It was found that the FOG average of the wastewater treatment system phase 1 Pond no. 1 was 14.68 mg/l. and wastewater treatment system phase 2 Pond no.1 was 16 mg/l, Pond no.2 was 14 mg/l. and the Pond no.3 was 15.95 mg/l. When compared with the standard of the Ministry of Natural Resources and Environment on the "Define the standard to control the drainage of effluent from certain types of buildings and some sizes ≤ 20 mg/l". It was found that wastewater treatment system phase 1 Pond no.1 and wastewater treatment system phase 2 Pond no.1, Pond no.2 and Pond no.3 were in the standard values.

The results of the study on the efficiency of wastewater treatment system of Suan Sunandha Rajabhat University to reduction dirtiness in wastewater (BOD) shown the average efficiency of wastewater treatment system of Suan Sunandha Rajabhat University, the wastewater treatment system phase1 Pond no.1 and the wastewater treatment system phase 2 Pond no.1, Pond no.2 and Pond no.3 have had the efficiency of 76.43%, 73.32%, 73.55% and 74.66% respectively.

Keywords: wastewater treatment, effluent quality, efficiency

INTRODUCTION

In the past, Suan Sunandha Rajabhat University has emitted pollution water from various sources. For example, waste water from toilets, cafeterias, scientific laboratories into water source of university, and the drainage of wastewater into the external water source for long periods of time. In 2008, the university had a policy to build a wastewater treatment system. And The wastewater treatment construction was completed in 2011 as well has been certified for environmental management (ISO 14001: 2004). In 2008. The wastewater treatment system was divided into two parts. Use the Biological Wastewater Treatment System. So, the water quality has been measured drainage to external water sources has been measured by the construction company but there is no monitoring to determine the effectiveness of the wastewater treatment system. Therefore, it is concept to study the effectiveness of wastewater treatment systems in the treatment of various water pollution to be use as information to control in wastewater treatment system to effectively treat water pollution, for the good quality of the environment of the university and surrounding communities.

METHODOLOGY

Research Implementation

1. Study the documents of the wastewater treatment system of the university on the basic information and survey area.
2. Define water sampling point.
- 3 . Collecting of sampler wastewater before entering wastewater treatment system and drainage wastewater discharged from wastewater treatment system. By collecting water samples. And collect water samples at least 30 times.
- 4 . Water Quality Analysis in Environmental Science Laboratory of Suan Sunandha Rajabhat University The water quality has been shown in the table.

Table 2
Water quality analysis.

No.	Parameter	Analysis method
1	Acid-base	Use a pH meter
2	Total Dissolve Solid (TDS)	Dry evaporation at 180 ° C
3	Fat, Oil and Grease (FOG)	Extraction by solvent and weighing
4	BOD	Azide modification method or oxygen meter that oxygen dissolved at 20 ° C for 5 consecutive days.

5. Study the wastewater quality that drainage discharged from the wastewater treatment system compared with the effluent standard wastewater quality type of building A.

6. Study on efficiency of the wastewater treatment system to reduce dirtiness (BOD).

7. Summary of the results and do page making for a book.

RESULTS

pH Analysis Results

Table 3
Result of pH analyzed in waste water treatment system.

Sampling point	pH (Unit)		
	Min-Max	Average	Standard
1. Waste water treatment system phase 1 - Pond 1	5.1-7.9	7.23	5-9
2. Waste water treatment system phase2 - Pond no.1	6.1-7.8	7.00	5-9
- Pond no.2	6.39-8.1	7.22	5-9
- Pond no 3	5.12-8	6.95	5-9

From Table no. 3 shown the pH mean of wastewater treatment system phase 1, pond no.1 and wastewater treatment system phase 2, Pond no.1, Pond no.2 and Pond no.3 are 7.23, 7.22 and 6.59 respectively. Compared with the standard of the Ministry of Natural Resources and Environment, "Standard for the controlling of wastewater from certain buildings and some sizes" is 5-9 It was found that wastewater treatment system phase1, Pond no.1 and wastewater treatment system phase2, the Pond no.1, Pond no.2 and Pond no.3 the values were in the standard.

BOD analysis results

Table 4
BOD analysis results in wastewater treatment system of research.

Sampling point	BOD (Mg/l)		
	Min-Max	Average	Standard
1. Waste water treatment system phase 1 - Pond no. 1	2.3-18	11.17	≤20
2. Waste water treatment system phase 2 ระยะที่ 2 - Pond no. 1	4.5-33	12.76	≤20
- Pond no. 2	2.6-28.5	12.28	≤20
- Pond no. 3	1.3-20	11.92	≤20

From table no. 4 shown the average BOD of wastewater treatment system phase 1, Pond no.1 and wastewater treatment phase 2, Pond no. 1, Pond no. 2 and Pond no. 3 have the BOD values are 11.17 mg /l, 12.76 mg /L, 12.28 mg /L and 11.92 mg /L. respectively. When to compared with the standard of Ministry of Natural Resources and Environment on the "Define controlling standard to drainage wastewater from certain buildings and some sizes" is ≤20 mg/l. that found waste water treatment system phase 1 Pound no.1 and waste water treatment system phase 2 Pound no.1, Pound no.2 and Pound no.3 were in the standard values.

TDS Analysis results

Table 5
TDS Analysis results in waste water treatment system of research

Sampling point	TDS (Mg/l)		
	Min-Max	Average	Standard
1. Waste water treatment phase 1 - Pond no. 1	101-706	323.37	≤500
2. Waste water treatment phase 2 - Pond no. 1	40-584	343.43	≤500
- Pond no. 2	210-472	355.77	≤500
- Pond no. 3	96-542	390.07	≤500

From table no.5 shown the average TDS of wastewater treatment system phase 1 Pond no. 1 and wastewater treatment phase 2 Ponds no.1, Pond no. 2 and Pond no. 3 have had the TDS values are 323.37 mg /l TDS 343.43 mg /L, 355.77 mg /L and 390.07 mg /L. respectively. When to compared with the standard of Ministry of Natural Resources and Environment on the "Define controlling standard to drainage wastewater from certain buildings and some sizes ≤500 mg/l". That found waste water treatment system phase 1 Pond no.1 and waste water treatment system phase 2 Pond no.1, Pond no.2 and Pond no.3 were in the standard values.

FOG Analysis results

Table 6

FOG Analysis results in waste water treatment system of research.

Sampling point	FOG (Mg/l)		
	Min-Max	Average	Standard
1. Waste water treatment system phase 1 - Pond no. 1	4-36	14.68	≤20
2. Waste water treatment system phase 2 - Pond no. 1	1-47	16	≤20
- Pond no. 2	1-38.1	14	≤20
- Pond no. 3	6-45.5	15.95	≤20

From table no. 6 shown the average FOG of wastewater treatment system phase 1, Pond no.1 and wastewater treatment phase 2 Pond no.1, Pond no.2 and Pond no.3 have had the FOG values are 14.68 mg /l, 16 mg /Liter 14 mg /liter and 15.59 mg / liter, respectively. When compared with the standard of the Ministry of Natural Resources and Environment on the "Define controlling standard to drainage wastewater from certain buildings and some sizes ≤20 mg/l". That found waste water treatment system phase 1 Pound no.1 and waste water treatment system phase 2 Pond no.1, Pond no.2 and Pond no.3 were in the standard values.

Study on efficiency of wastewater treatment system of Suan Sunandha Rajabhat University to reducing dirtiness in wastewater (BOD.)

Table 7

Efficiency values of waste water treatment system.

Sampling point	Efficiency values of waste water treatment system (%)	
	Min-Max	Average
1. Waste water treatment system phase 1 - Pond no. 1	54.20-89.66	76.43
2. Waste water treatment system phase 2 - Pond no. 1	44.41-89.53	73.32
- Pond no. 2	52.42-87.62	73.55
- Pond no. 3	54.55-89.34	74.66

From the table, it was found the average of wastewater treatment efficiency of Suan Sunandha Rajabhat University on the waste water treatment phase1 Pond no.1 and waste water treatment phase 2 Pond no.1, Pond no.2 and Pond no.3 have the efficiency values are 76.43%, 73.32%, 73.55% and 74.66% respectively.

CONCLUSION

Based on the objectives and the research process, the results of the research were summarized in two parts are the quality waste water to drainage from the wastewater treatment system of Suan Sunandha Rajabhat University and the efficiency of the wastewater treatment system of Suan Sunandha Rajabhat University to reduction dirtiness in wastewater (BOD) as following:

1. To study the quality waste water to drainage from the wastewater treatment system of Suan Sunandha Rajabhat University

(1) pH analysis in waste water treatment system of Suan Sunandha Rajabhat University it was found the pH average of waste water treatment system phase 1 Pond no.1 was 7.23 and waste water treatment system phase 2 Pond no.1 was 7, Pond no.2 was 7.22 and Pond no.3 was 6.59. When compared with the standard of the Ministry of Natural Resources and Environment on the “Define controlling standard to drainage wastewater from certain buildings and some sizes” is 5-9. It was found waste water treatment system phase 1 Pond 1 and waste water treatment system phase 2 Pond no.1, Pond no.2 and Pond no.3 were in the standard values.

(2) BOD analysis in waste water treatment system of Suan Sunandha Rajabhat University it was found the pH average of waste water treatment system phase 1 Pond no.1 was 11.17 and waste water treatment system phase 2 Pond no.1 was 12.76, Pond no.2 was 12.28 and Pond no.3 was 11.92. When compared with the standard of the Ministry of Natural Resources and Environment on the “Define controlling standard to drainage wastewater from certain buildings and some sizes” is ≤ 20 mg/l. It was found waste water treatment system phase 1 Pond 1 and waste water treatment system phase 2 Pond no.1, Pond no.2 and Pond no.3 were in the standard values.

(3) TDS analysis in waste water treatment system of Suan Sunandha Rajabhat University it was found the pH average of waste water treatment system phase 1 Pond no.1 was 323.37 mg/l and waste water treatment system phase 2 Pond no.1 was 343.43 mg/l, Pond no.2 was 355.77 mg/l and Pond no.3 was 390.07 mg/l. When compared with the standard of the Ministry of Natural Resources and Environment on the “Define controlling standard to drainage wastewater from certain buildings and some sizes” is ≤ 500 mg/l. It was found waste water treatment system phase 1 Pond 1 and waste water treatment system phase 2 Pond no.1, Pond no.2 and Pond no.3 were in the standard values.

(4) FOG analysis in waste water treatment system of Suan Sunandha Rajabhat University it was found the pH average of waste water treatment system phase 1 Pond no.1 was 14.68 mg/l and waste water treatment system phase 2 Pond no.1 was 16 mg/l, Pond no.2 was 14 mg/l and Pond no.3 was 15.95 mg/l. When compared with the standard of the Ministry of Natural Resources and Environment on the “Define controlling standard to drainage wastewater from certain buildings and some sizes” is ≤ 20 mg/l. It was found waste water treatment system phase 1 Pond 1 and waste water treatment system phase 2 Pond no.1, Pond no.2 and Pond no.3 were in the standard values.

2. Study on efficiency of wastewater treatment system at Suan Sunandha Rajabhat University to reduction dirtiness in wastewater (BOD)

Study on efficiency of wastewater treatment system at Suan Sunandha Rajabhat University to reduction dirtiness in wastewater (BOD). It was found average values of efficiency of wastewater treatment system of Suan Sunandha Rajabhat University, it was found waste water treatment system phase 1 Pond 1 and waste water treatment system phase 2 Pond no.1, Pond no.2 and Pond no.3 have efficiency values are 76.43 % 73.32% 73.55% and 74.66 % respectively.

ACKNOWLEDGMENT

I would like to express my sincere thanks to Suan Sunandha Rajabhat University for invaluable help throughout this research.

REFERENCE

- [1] Kasem Chankaew (1998). Environmental Technology. Bangkok: Interdisciplinary Graduate Environmental Science Program Kasetsart University.
- [2] Jutamanee Srisuth (2008) Efficiency Study of Wastewater Treatment System of 750-bed Psychiatric Hospital. Ubon Ratchathani: Master of Engineering Environmental Engineering Ubon Ratchathani University.
- [3] Mansin Tannathunlawes. (1999). Industrial wastewater treatment technology No. 1. 1st edition. Bangkok. Publisher Chulalongkorn University.
- [4] Siwapan Choo-in. (2008). Teaching materials for surveying and monitoring of environmental quality. Bangkok: Suan Sunandha Rajabhat University.

A STUDY ON ELECTRICITY ENERGY CONSUMPTION IN OFFICE OF THE PRESIDENT'S BUILDING, SUAN SUNANDHA RAJABHAT UNIVERSITY

Asst. Prof. Dr. Komon Paisal* & Amornvadee Klinjan**

***Faculty of Science and Technology, Suan Sunandha Rajabhat University, Bangkok, Thailand*

*E-Mail: *komon.pa@ssru.ac.th, **amornvadee.kl@ssru.ac.th*

ABSTRACT

The purpose of this research was to examine electricity energy consumption in Office of the President's building, Suan Sunandha Rajabhat University. This study considered of amount of electricity energy consumption and energy conservation measures. The findings indicated that Office of the President's building consumed electrical energy totaling 77,818 kWh, equivalent to 317,251 Baht. In January, the most electricity energy consumed was 7,540 kWh, equivalent to 317,251 Baht and in February, the least electricity energy consumed was 6,061 kWh, equivalent to 22,848.74 Baht. The measures were proposed to conserve the electricity energy in the building which was divided into 2 stages, short and longterm measures. It was found that the measures can be helped reduce the amount of energy utilization.

Keywords: Electricity Energy

INTRODUCTION

Energy is importance factor for living that effect to human's living from family to nation. Energy is used for driving the economy and developing quality of people's life for each country around the world. It leads to continuing increased demand of energy utilization in country that causes shortage of energy problem. Therefore, saving and efficiency using of energy are important issues for countries around the world, including Thailand, a developing country which has increased energy steadily as well.

The government raises the policy of energy saving for encouraging people to save and use energy efficiency; assigned the Department of Alternative Energy Development and Efficiency to be responsible for implementation such as seeking energy conservation measures, method of energy saving and providing training course for energy conservation technology transfer. Moreover, the Energy Conservation Promotion Act BE 2535 (1992) has been enacted as an important tool for public and private agencies to conserve energy. Its goal is for the governing organization use as a measure of reducing energy consumption to be at least 10% in short and then long term. It was found that the buildings in public universities are designated as controlled buildings for evaluating the status of electricity energy consumption of buildings. This is a step of energy management. In case of Office of the President's building, Suan Sunandha Rajabhat University is a part of controlled building, type of education institution. It is possible to be increased energy consumption continuously, so it is necessary to evaluate the status of energy use in the building as well.

This research has studied the data of electricity energy consumption, specific energy consumption index, energy efficiency indicator index and amount of standard electricity energy consumption of Office of the President's building, Suan Sunandha Rajabhat University, including offering methods of energy management.

OBJECTIVE

1. To examine electricity energy consumption of Office of the President's building, Suan Sunandha Rajabhat University
2. To seek an approach to electricity energy management

3. To purpose an appropriate electricity energy conservation measure to Office of the President's building, Suan Sunandha Rajabhat University.

RESEARCH AREA

Suan Sunandha Rajabhat University, Dusit, Bangkok

METHODOLOGY

Research Implementation

1. Collect data of electricity energy usage and related data
2. Examine and analyze data of electricity energy and related data
3. Conclusion and suggestion

DATA ANALYSIS

Amount of electricity energy consumption of Office of the President's building

The findings showed that the usage of electricity energy depends on the activities and areas in the building. The amount of electricity consumption in the building in 2016 is shown in Table 1.

Table 1

The amount of electricity consumption of Office of the President's building in 2016

Month	Year 2016	
	Electricity energy (kWh)	Electricity cost (Baht)
January	7,540	28,459.22
February	6,061	22,848.74
March	6,497	24,455.91
April	6,497	24,455.91
May	6,270	23,663.33
June	6,479	25,052.71
July	6,479	25,887.47
August	6,479	25,887.47
September	6,270	26,260.31
October	6,497	30,422.35
November	6,270	29,434.78
December	6,479	30,422.35
Total	77,818	317,251.00

The results showed that amount of electricity energy consumption of Office of the President's building, Suan Sunandha Rajabhat University in 2016 was 77,818 kWh which equals to 317,251 Baht. In January, the most electricity energy consumed was 7,540 kWh which equals to 317,251 Baht and in February, the least electricity energy consumed was 6,061 kWh which equals to 22,848.74 Baht.

Electricity energy saving measure of the building's system and materials

Air conditioning system

The air conditioning system consumed electricity a lot and the highest rate of energy consumption in almost of systems in the building due to a constantly running system. Therefore, energy saving of this system is important and will help reducing the cost of energy.

Electricity energy saving measure of air conditioner can be implemented both short-term and long-term measures as follow:

Existing measures

- Adjust the temperature to an appropriate level of 25-26°C in general work areas and central area because setting the temperature too low will waste the energy.
- Reduce working hours of air conditioner by setting the time between 9 am – 11 am and 1 pm – 4 pm.
- Turn on the ventilator only when needed.
- Maintain air conditioners regularly as by following methods:
 - Clean the air filter regularly, every month. Not only it will save the energy, but it is also good for employee's health.
 - Clean the heatsink outside the building every 6 months.



Figure 1. Labeling campaign for setting temperature of air conditioner to be an optimum level

The measures should be taken, divided into 2 measures as below:

Short term measure

- Switch off electrical appliances and light bulbs that are not necessary to reduce the amount of heat inside the building, which will cause the air conditioning system to work overload.
- Reduce workload of air conditioner as follows:
 - Open/close the doors only when needed. Be careful not to leave the windows open.

Long term measures

- Turn on freezer only the actual work areas of conference and seminar rooms which use partial area
- Install air conditioner rather higher from the floor to let the air flow throughout area.
- Reduce amount of heat entering into the building, especially the area which get sun rays and sunlight directly
 - Reduce air conditioner workload:
 - Prevent amount of heat entering into the building by installing awning or grow trees to be shades around the building
 - Check and repair leaks regularly.
 - Remove unnecessary items from the air conditioning room.
 - Avoid installing and using electrical appliances that can generate heat source in air-conditioning rooms such as refrigerators, water coolers, thermos, microwave, photocopy machines, etc.
 - Improve facade of buildings to reduce amount of heat transferring from outside such as installing ceiling insulation and sunlit walls, double-glaze with higher heat resistance than float glass.
 - Install an air supply controller to control the temperature.
 - Install solar reflectors
 - Install on/off automatic electricity system
 - Choose high-performance freezers and air conditioners

- Improve the environment around the building to be cool and pleasant by growing trees or doing yard instead of concrete floor.

Lighting system

Lighting is essential for activities in building both in terms of brightness and decorating purposes. Therefore, it is necessary to manage the lighting system appropriately in order to achieve maximum efficiency and to conserve energy as well.

Energy saving measures of lighting system can be processed both short term and long term as follows:

Existing measures

- Switch on at 8 am (working areas) and turn off at 4:30 pm
- Switch off the light at lunch time and turn on only necessary lights at night



Figure 2. Labeling campaign of electricity energy saving and lighting system promotion

The measures should be taken, divided into 2 measures as below:

Short term measure

- Remove unnecessary light bulbs of any areas such as a hallway, or use natural light outside by opening a curtain or window blinds to reduce use of bulbs.

Long term measures

- Design lighting system and others in order to maximum use of natural light, especially the buildings are used during daytime.
 - Install a light meter to control on/off or dimmer automatically
 - Design the aperture in the appropriate position, direction and time to get some more light, but without or lowest heat
 - An appropriate direction and timing to get natural light are in the morning of the North or the West before 8 am or in the evening after 4 pm
- Design a suitable lighting system for two periods of electricity saving use of the buildings that used all day and night with separated two switches installation, on and off
- Choose the method of getting lighting, and brightness level that suits working; and comfort with the eyes, and convenient to install and maintenance.

Equipment selection

- Task lighting can save cost of electricity to 50 percent. Choosing suit light bulbs is using a fluorescent lamp at a low-ceiling location, using a mercury-vapor lamp or high pressure sodium lamp at a high-ceiling location, and high efficiency lighting bulbs which consumes much power at the necessary areas and turn on in work hours only
 - Choose high performance equipment such as using a compact-fluorescent bulb instead of incandescent bulbs, using electronic ballast or low-watt loss ballast instead of choke coils ballast and using high efficiency electrical lamp.
 - Separate controlling switches of electrical equipment to be turned on and off appropriately and relate to work, especially in partial areas and times such as meeting room, bathroom, balcony, etc.

Usability

- Collect data of energy consumption of the lighting system to monitor the efficiency and electricity energy consumption
- Create table of comparing the efficiency luminous of various lamps to design and improve use of electricity energy
- Reduce the unnecessary use such as reducing the number of light bulbs at the areas that too more light such as the hallway or use natural light outside
- Turn off the lights in unused areas or times
- Reduce brightness or dimness in areas where brightness is not needed

Maintenance

- Clean lamp covers, light bulbs and reflectors every 3-6 months.

Elevator

Short-term electricity energy saving measures for elevator use can be done as follows:

Existing measures

- Refrain from using elevator for going up and down of one story.
- Set specific floors for elevators to stop such as odd-numbered floors
- Set elevator's door to open and close automatically at least 10 seconds. This will reduce electricity use of motor
- Promote and campaign activities of walk up and down instead of elevator use
- Display a chart of departments' location in the building with clear floor number so that they can be seen easily such as in front of the elevator entrance and inside



Figure 3. Labeling campaign of electricity energy saving promotion of elevator system

Computer

Electricity energy saving measures of computer using can be processed by short term as follows:

Existing measures

- Turn off the monitor at lunch time or more than 15 minutes when not in use
- Set programme to be standby mode automatically when not in use more than 15 minutes
- After work, turn off computer and unplug

Photocopy machines

Electricity energy saving measures of photocopy machines using can be processed by short term as follows:

Existing measures

- Controlling photocopy machine use only as necessary
- After work, turn off and unplug photocopy machines

The measures should be taken

- Do not place the photocopy machines in an air conditioning room
- After work, press standby mode. If the photocopy machines has an automatic power off, it should be set a delay of 30 minutes before entering the energy saving. The photocopy machines will take a few minutes to warm up before operating again. If it is set a short delay, it will be waste time to warm up when using again

CONCLUSION

The study of electricity consumption situation of Office of the President's building, Suan Sunandha Rajabhat University in 2016, can be concluded that the amount of electricity energy consumption of Office of the President's building, Suan Sunandha Rajabhat University in 2016 totaled 77,818 kWh, equivalent to 317,251 Baht. In January, the most electricity energy consumed was 7,540 kWh, equivalent to 317,251 Baht and in February, the least electricity energy consumed was 6,061 kWh, equivalent to 22,848.74 Baht. Therefore, the energy saving and conservation measures have been proposed. The energy conservation measure should be taken, and can be divided into 2 stages i.e. short-term and long-term. If energy conservation measures are applied, the amount of energy utilization can be saved.

ACKNOWLEDGMENT

The authors wish to thank the Research and Development Institute Suan Sunandha Rajabhat University, for the research fund.

REFERENCE

- [1] Thanit Chindavanig, 2003, **Energy Conservation in the building Engineering Today** [Online], Available: <http://www.engineeringtoday.net/magazine/articleDetail.asp?arid=537&pid=74> [2013, July 18].
- [2] Office of the Public Sector Development Commission, 2013, **Indicators of the success of the governmental energy saving measures. 2013**[Online], Available:<http://kromchol.rid.th/reform/2556/doc/4.pdf> [2013, September 15].
- [3] Jakkrit Rakpanit, 2004, **Efficient Electricity Management for Building: Study of Fifteen Floors Building of Buriram Rajabhat University**, Master of Engineering (Engineering Management), Vongchavalitkul University.
- [4] Chuchat Pharanat, Jakkrit Junsiri and Sujitra Pharanat, 2009, **Efficient Utilization of Electricity Energy in Faculty of Science and Technology, Rajabhat Maha Sarakharm University, Rajabhat Maha Sarakharm University Journal; RMU.J. 4(2) : May - August 2010**

THE STAFF PERFORMANCE EFFICIENCY OF THE OFFICE OF THE PRESIDENT, SUAN SUNANDHA RAJABHAT UNIVERSITY

Saowanee Kumneadrat** & Asst. Prof. Dr. Komon Paisal.**

***the Office of the President Science, Suan Sunandha Rajabhat University, Bangkok, Thailand*

*E-Mail: *saowanee.ku@ssru.ac.th, **komon.pa@ssru.ac.th*

ABSTRACT

The objective of the research was to study factors affecting working efficiency and the relationship between working environment, satisfaction to human resources management and operation employees' working efficiency of the Office of the President, Suan Sunandha Rajabhat University. The sample size of the research was based on 127 employees of the Office of the President. Individual sample was randomized by using Simple Random Sampling. Data was collected through the instrument. The Statistical Package for the Windows was utilized for data processing. statistical analysis of the frequency, percentage, average, standard deviation. Statistical analysis and multiple regression (Multiple Regression). . The result found the Factors Operational Overview averaged 3.40 on a massive scale. When considering each found The satisfaction of working with an average of 3.74, the most advanced operational averaged 3.45. The morale of the average worker. 3.34 environmental work an average of 3.07, respectively

The efficiency of employees overall average is 3.99 on a massive scale. When considering each found The worker can achieve goals with an average of 4.18, with an average maximum of 3.55, followed by cooperation in the performance willingly and fully competent averaged 3.80 respectively.

The hypothesis testing found that the performance of the four aspects affecting the performance of employees at a high level, with a coefficient of multiple correlation is .981 and could predict the success in efficiency in the performance of employees the Office of the President 70.8% statistically significant 0.01 with a standard error of prediction .29

Keywords: Employees' working efficiency, The Office of the President, Suan Sunandha Rajabhat University, working environment.

INTRODUCTION

Act of Government Administration (No. 5), 2002, Section 3/1, paragraph 3 In the case of a government agency, the government must use good governance. In particular, take into account the responsibilities of the worker. Public participation Disclosure Monitoring and evaluation of the performance, as appropriate, of the Royal Decree on Rules and Procedures for the Management of Good Corporate Affairs, BE 2546 (2003), Section 9 (3). The results of the implementation of the plan in accordance with the rules and procedures prescribed by the government agencies. It must be in line with the standards prescribed by the Office of the National Economic and Social Development Board and Section 12, which stipulates that for the benefit of public servants, the Office of the National Economic and Social Development Board may propose to the Council of Ministers to impose measures to supervise the operation. By way of arrangement in writing or by any other means. Section 45 stipulates that, in addition to the evaluation under Section 9 (3), the government agency shall arrange for an independent evaluation team to conduct an evaluation of the performance of the government agency concerned. Achievement of quality service mission, service satisfaction of people, service recipients. The Cabinet has resolved on 30 September 2003 to approve the principles and details of the guidelines and procedures for the establishment of the Council of Ministers. Motivation to strengthen the administration of good business as the Office of the Office of the Public Service, which provides all government agencies to develop the service and work agreement with the supervisors. And the Negotiation and Evaluation Committee The incentives will be based on the level of performance as agreed in the certification. To be consistent with the fiscal year plan. Both the budget and the revenue budget of the higher education institutions, as well as the monitoring and evaluation of the performance of the government. The performance of higher education institutions is in accordance with the intent of Section 3/1 of the Public

Administration Act (No. 5) BE 2545 and the Royal Decree on Rules and Procedures for the Management of Good Corporate Affairs. 2003 The Office of the Permanent Secretary has set up a system and mechanisms for the University to develop a system for evaluating the performance of the university. It must provide a system to convey the goals, metrics, mission and strategies, of the university to the responsible agency. Established as a measure of performance and goals at the organizational level to the individual level. By negotiating an agreement and evaluating the Fiscal Year endorsement. To monitor and evaluate the performance of targets in the fiscal year. The university has adopted this approach to develop and improve to suit the role. And the mission of the university.

In addition, the university has developed a university action plan and set out an overall strategy. To use as a guideline for the organization's annual action plan. The indicators have been set up to monitor and evaluate the success of the strategy. By the measure, the university has integrated the indicators of the Office of Higher Education. The Office of the National Education Commission (NESDB) The faculty / unit has set up an action plan that is consistent with the university's action plan. It is expected that this will be a tool for measuring and evaluating the annual performance of administrators supervising university departments. And monitoring and evaluating individual performance levels according to job responsibilities at each level. The implementation of the evaluation is used to improve and develop the unit to be more effective. Currently, the operation is the public sector, the private sector seeking revenue. Or business that does not seek revenue. We are working on the competition, whether it is a product, a product or a service. Variety of products And many investments are ready to throw into the business field. The government. Organizations need to adapt themselves to survive and thrive in rapidly changing and rapidly changing environments. Many organizations find that their competitive advantage is based on efficiency. The effectiveness of the organization can be learned in the situation, technical concepts, operations. And technology from the outside and learn from experience. And from the exchange within the organization. "Staff" is the key to bringing the organization to success. And goals set by the organization. Human Resource Management is the organization's primary mission to achieve its objectives and effectiveness. The agency needs to have qualified personnel at the right amount for the job. HUMAN RESOURCES MANAGEMENT It is an important factor in the management. Personnel supply and use other administrative resources. Whether it be money Equipment and management. If the organization starts with good personnel, the other factors are good. Therefore, human resource management is vital to the development of human resource management organizations. It is the process of dealing with people who are considered as the most valuable resource of the organization so that they can perform their tasks according to the objectives of the organization. To maintain and improve the quality of human resources in the workplace. The main tasks are human resources planning. Job design or design Analysis of recruitment, selection, evaluation, staffing Training and Development of Health and Safety Payments It is the responsibility of all levels of management to be responsible for the management of human resources in order to achieve the objectives of the work effectively. Organizations are trying to use the capacity as a factor in the management of the organization. In areas such as human resources management. Service development Or leadership development of management

In the past year, the Office of the President has carried out its work in each project. To achieve the objectives of each project. However, the development of operational efficiency generally takes place in the development of personnel.

Therefore, the performance of the personnel of the Office of the President is important because any organization that achieves its goals effectively and effectively is partly due to the staff's morale. Have a good working environment. To be satisfied with the work of the Office of the President. Suan Sunandha Rajabhat University will play an important role. Support and coordinate the agency. Establish a good management system. Develop and empower personnel to perform well. From this approach, the study To study the efficiency of the work of the Office of the President. Suan Sunandha Rajabhat University To use the information to adapt to the internal management and to promote the development of factors related to the performance of personnel. Make the personnel more efficient in working. This will result in the goal of the Office of the President. Suan Sunandha Rajabhat University has done well.

However the write that if education is related to professionalism, educated police professionals should have: more support for a service function; independence from supervision and more discretion; autonomy in decision making; greater value on ethical conduct; greater support for lateral entry; less support for maintaining organizational secrets; value placed on efficiency. The found that educated police do, in fact, place a higher value on the importance of ethics and that higher education enhances personal responsibility for their professional actions. [7]

METHODOLOGY

The employees of the Office of the President from Rajabhat Suan Sunandha University anonymously responded to a questionnaire which contained 127 employee. The performance indicators appeared in the form of a Likert scale on which the respondents were asked to rate themselves on each indicator, as: significantly above average; moderately above average; standard; marginally below standard; and significantly below standard. The employees of the Office of the President responding to the questionnaire provided a mix of background characteristics including age, rank and more importantly, for this study, is the independent variable of education and contains a profile of the independent variables analyzed in this study. [6]

Research Framework

The study of theories, concepts and related research. The researcher has taken personal factors. The two factors were independent variables. And the performance of two employees to the variable. The concept is as follows.

The research conceptual framework is shown in Fig. 1.

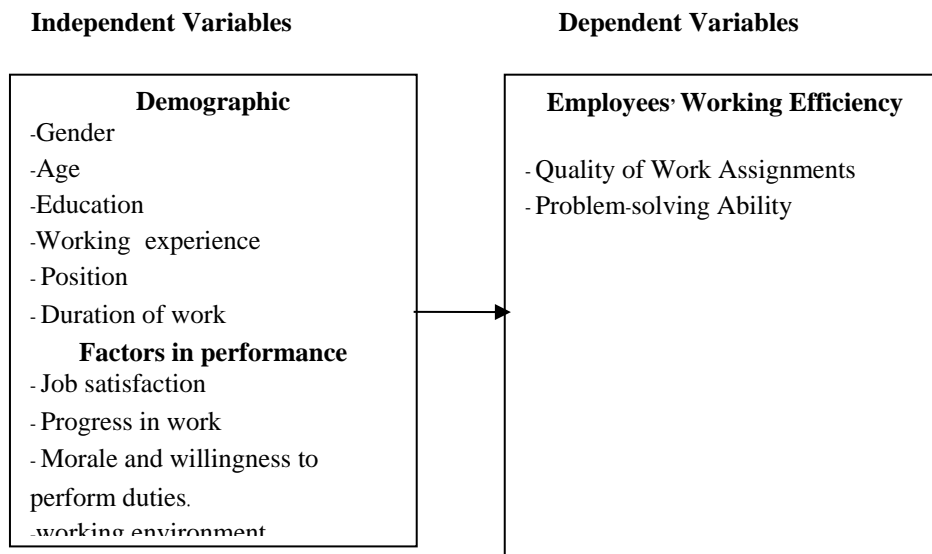


Fig. 1 Research Conceptual Framework

Educational assumptions 1. Factors affecting the performance of the personnel of the Office of the President.

1. Research methods

Use quantitative research model. Quantitative Research. It is generally proven. Create hypotheses to test hypotheses. The data were collected from the questionnaire. By asking questions, one of the respondents answered their own facts and opinions.

2. Population and sample

The samples used in this study were 127 staff of the Office of the President.

3. Research tools

The tool used was a questionnaire. The questionnaire was divided into 3 parts.

Part 1: Questions about the personal characteristics of the sample. Question style is optional.

Part 2: Factor Factors Affecting Job Performance

Part 3: Performance questions. The second and third questions were questioned in a five-level assessment based on the Likert method.

The data were analyzed using the following statistical methods: 1) Use frequency distribution table. 2) Analyze the level of opinions about the factors affecting the performance. Using an average 3) Test the relationship of performance factors affecting performance. Using multiple regression analysis, [12]

LITERATURE REVIEW

A. Employees' Working Efficiency

These problems with employees of the Office of the President performance evaluations are elaborated on by Walsh and Donovan. In their book, they claim that employee performance evaluations are commonly either too lenient, tend to be scored centrally, contain halo errors or are biased because of occupational stereotypes. Thus, the self-reported performance questionnaires in this study were used to overcome the aforementioned problems. [10]

Barnard (cited in [15]) discusses the motives used by the agency. The motivation for job satisfaction is: 1) Object incentives 2) Motivational incentives 3) Motivations related to desirable physical condition. 4) Motivations related to ideal interests. 5) Motivational incentives in society 6) Job incentives 7) Opportunities incentives 8) Motivations related to living conditions with friends.

RESULTS

Research suggests that higher education for employees of the Office of the President provides a number of benefits. The claim that benefits of a college education for employees of the Office of the President genders the ability to handle difficult or ambiguous situations with greater creativity or innovation.

First, this study found differences in performance ratings between employees of the Office of the President possessing a bachelor's degree or higher and those officers possessing lower level qualifications. This finding may indicate that educated officers are better performing officers, or it may indicate differences in perceptions about their duties. Whichever is the case, the educated officers appear to have advantages over their non-degreed counterparts. It makes sense, for example, that college-educated officers would report better written and oral communication skills. [13]

Table I
Significant For Performance Indicators

	Mean	Sd.
Knowledge of Departmental Rules	4.71	0.611
Use of Safety Practices	4.46	0.640
Ability to Accept Change	4.20	0.941
Utilize Employee Contacts	4.06	0.828
Quality of work Assignments	4.27	0.630
Problem-solving Ability	4.27	0.549
Confidence with Supervisors	3.62	1.13
Quality of Written Work	4.34	0.842
Quality of Presentations	4.11	0.833
Self-image	4.16	0.721

*Significant at 0.05 level

Factors in overall performance were at a high level. When considering each side, found that. Job satisfaction was the highest. In terms of work progress, the mean morale was low. The working environment is average. Performance of Office of the President The ability to accomplish the goal. Very high Collaboration in working with willingness and full knowledge. Very high. Factors affecting the performance of the Office of

the President. The coefficient of correlation was .841 and it was able to predict the efficiency of the workforce by 70.8 percent, statistically significant 0.01

Another insight this study provides is the efficacy of self-administered questionnaires as a data collection strategy for policy makers. The Office of the President maker can employ such an instrument and gain insight as to where remediation is needed. The use of self-administered questionnaires can serve as a device to collect baseline information not otherwise available. If the Office of the President departments are serious about personnel evaluations, efforts could be initiated to establish accurate performance measures (agreed on by line and staff) and this issue could be further analyzed. [4]

DISCLUSION

The results of the study. The performance of the Office of the President's Office staff has important issues that can be discussed.

1. The results showed that the overall performance was at a high level. When considering each side, found that. The morale of the work was the highest, followed by progress in the work. Job satisfaction and working environment were the least. 1.1 Factor Morale and job satisfaction were at the high level. Show that Office of the President Have good morale and commitment in the workplace, with reward and welfare in front of the boss, and the bosses give priority to this. It may be because the government is currently paying attention to the benefits or benefits that employees receive. In order to give employees the full capabilities to benefit the organization as a whole. According to research conducted by Pradit Wirawan, the morale of teachers in elementary schools was studied. The results of the study revealed that: Morale and motivation of teachers in elementary schools. Under the jurisdiction of the Office of Ubon Ratchathani Provincial Primary Education, the overall picture was at a high level. This is probably due to the current Ministry of Education. The education reform as well as the teaching and management of new forms. The management is flexible. This is a good way to improve the quality of life.

1.2. The progress in the work. The overall mean was very high. show that Office of the President Promote in the field of continuing education and training of employees. This may be because the Office of the President. The development of human resources is essential. This is consistent with the theory of [13].

The performance of the personnel organization means the success of the implementation of the policy depends on three factors: the number or adequacy of personnel. Quality of personnel The level of personnel utilization, as well as skills and work experience.

1.3 Operational factors Job satisfaction was at the high level. When it comes to each side, it appears that your current job is a job that keeps you motivated to always work. Employees are enthusiastic about their job performance, because motivation, morale and good work performance are in line with Hersberg's theory. Motivational factors are motivational factors. The Job satisfaction in the organization. According to [14] research, the performance of Thai branch office employees, sales of Thai Airways International Public Company Limited showed that factors affecting the efficiency of The work of the staff found that the work experience. Responsibility role Knowledge in the job. Process of work Relationship with colleagues Job satisfaction And motivation to work.

1.4 Work Factors Workplace environment The overall mean was very high. It shows that the working environment of the employees is very good in terms of getting the cooperation in the work. Appropriate work allocation has a very high average. But when considering the issue. The work is located near the residence. Has the lowest mean The University is located near the residence, making the trip easier. It may result in operational factors. Workplace environment The overall average was at the highest level.

2. The results showed that the performance of employees The ability to accomplish the goals set. The average level was very high. When considering each side, found that. There is a constant effort to work successfully without hurting the barriers. Government employees are very diligent in their work. Want to be recognized by supervisors or colleagues, knowledgeable and well-versed in duty. When assigned to work, you will immediately do so. Can be planned properly. Collaborate and coordinate with each other at all times. Work with commitment to create and change for improvement. Can be implemented by the use of knowledge. Can work to complete the time. To solve the problems in the work well and work carefully. Performance of employees. Collaboration in working with willingness and full knowledge. The results show that employees are willing to work when assigned a responsible job. The highest average level indicates that the Office of the

Rector assigns the appropriate work to the knowledge that the employee is more productive, responsible, work-in-the-job, willing to help in the work of colleagues. Get requests and get help in the work and get advice from colleagues as well, and think of improvements. A change in how the system works better and date.

3. The study of the four factors affecting the performance of the employees. The coefficient of correlation was .841 and it was able to predict the efficiency of employees by 70.8 percent, statistically significant 0.01.

CONCLUSION AND FUTURE WORK

At the onset, this research sought to achieve two objectives. First, it was designed to anticipate performance measurement problems where no performance measures existed. Second, the research sought to acquire an organizational snapshot of the current state of affairs. The use of self-reported performance appraisals met these research objectives. Nevertheless, meeting the above research objectives did not necessarily negate problems with internal validity. The problem of inflating scores may be adequately compensated in ways addressed previously in this paper. Self-reported appraisals can be as accurate as any. That is to say, without any other form of appraisal, self-reported instruments can be considered accurate. Additionally, asking employees of the Office of the President to respond to a series of questions as "they see themselves" presents other potential validity problems. For example, who is to say that "level of confidence in supervisors" or "ability to accept direction" are accurate indicators of performance. Actually, scoring low on these indicators may be preferable in certain circumstances. [5],[15]

Based on the study of the performance of personnel, the Office of the President offers suggestions and recommendations for improvement in order to maximize operational efficiency. Work environment, gifts and carnations. Past performance is of paramount importance to the organization's performance. Employees are trained every year to improve their skills, knowledge, and workforce. The rector of the agency to create a view to create new ideas for the Office of the President to be able to lead and improve the performance of personnel. There is another way the personnel of the Office of the President.

Suggestions for the next research in this study, the patient has the following suggestions. This study also has many issues and more details about the barriers that arise, hiring or hiring employees. Is the problem a problem for the budgetary burden on government personnel.

ACKNOWLEDGEMENTS

The author would like to thank Assoc. Prof. Dr. Luedech Girdwichai, The President of Suan Sunandha Rajabhat University, Bangkok, Thailand for financial support. Also, the author would like to thank to Asst. Professor, Komon Paisal, Director of the Office of the President for the full support in this research.

REFERENCES

- [1] Bittner, E. (1970), *The Functions of Police in Modern Society*, Bethesda, MD: National Institute of Health.
- [2] Campbell, D. and Lee, C. (1988), "Self-appraisal in Performance Evaluation", *Academy of Management Review*, 13(2):302-314.
- [3] Carter, D., Sapp, A. and Stephens, D. (1989), *The State of Police Education: Policy Direction for the 21st Century*, Police Executive Forum.
- [4] Fogelson, R. (1977), *Big City Police*, Cambridge and Boston, MA: Harvard University Press.
- [5] Fosdick, R. (1969), *American Police Systems*, Montclair, NJ: Paterson-Smith.
- [6] Gianakis, G. (1994), "Patrol Officer Performance Appraisals: Problems and Prospects", *American Journal of Criminal Justice*, 8(2):199-217.
- [7] Houston, J. (1995), *Correctional Management*, Chicago, IL: Nelson Hall.
- [8] Radlet, L. and Carter, D. (1994), *The Police and the Community*, New York, NY: MacMillan.
- [9] Sherman, L. (1978), *The Quality of Police Education*, San Francisco, CA: Jossey-Bass.

- [10]Shernock, S. (1992), "The Effects of College Education on Professional Attitudes among Police", Journal of Criminal Justice Education, (Spring):71-92.Vollmer, A. (1971), The Police and Modern Society, Monclair, NJ:Patterson-Smith.
- [11]Walsh, W. and Donovan, E. (1990), The Supervision of Police Personnel,Dubuque, IA: Kendall-Hunt.
- [12]Woradej Chantarasorn (2000) Public Administration in the New Decade Bangkok: Companion Blog.
- [13]Chompoonuch WanKananapol. (2001). Performance of staff in Thailand branch. National Institute of Development Administration.
- [14]Asst.Prof.Dr. Pisit Potjanajaruwit (2017).The Integrated Marketing Communication Strategy Affecting to Student Decision Making Behavior to Study at Suan Sunandha Rajabhat University, Bangkok, Thailand.
- [15]Sureerat Tachapiwatpan. (1996). Job satisfaction of social workers. Master of Arts (Political Science), Ramkhamhaeng University

DOES A VENTING OUTLET EXIST VIA FAVORITE ONLINE GAMES? THE MODERATING ROLE OF THERAPEUTIC CATHARSIS SEEKING ON AGGRESSION

Hye Rim Lee, Eui Jun Jeong, Joo Woo Kim***

*Department of Digital Culture & Contents-Communications,
Konkuk University, Seoul, South Korea*

ABSTRACT

Evidence from empirical research on players' aggression suggests that playing violent games does not increase aggression. Therefore, we conducted a study on aggression tendencies among various types of online game players engaged in violent and non-violent games by including mental and psychological health aspects. We examined mental therapeutic care factors (therapeutic catharsis seeking) in combination with psychological factors (independent and interdependent self-construal) and problem factors (depression and loneliness) in relation to players' aggression. The results showed that therapeutic catharsis seeking was particularly important for the players not only because their aggressive tendencies greatly decreased but also because it revealed interaction effects between depression and loneliness, which can be extended beyond the game therapy area. This study thus makes novel contributions by revealing therapeutic mechanisms through online players' internal factors.

Keywords: aggression, therapeutic catharsis seeking, self-construal, depression, loneliness

I. INTRODUCTION

Aggression is typically defined as a behavior that is intended to harm others (Averill 1983; Baron & Richardson, 1994). Although the levels of aggression appear to vary in our daily lives, human aggression is an inevitable natural occurrence (Lorenz, 1963; McCall & Shields, 2008). Over the last decades, research about players' enhanced aggression based on the General Aggression Model (GAM) has dominated the literature (Anderson and Carnagey 2004), but recently, opposing opinions have begun to emerge. Many scholars argue that the GAM does not appropriately explain aggression and especially fails to explain players' aggressive tendencies in the violent game context (Bushman and Whitaker 2010); (Denzler, Hafner, and Forster 2011); (Ferguson and Kilburn 2010); (Ferguson and Dyck 2012) (Ferguson 2007).

Furthermore, even though aggression is regarded as a severe risk to our mental health (Krug, Mercy, Dahlberg, & Zwi, 2002) previous literature in media research regarding aggression has revealed that aggression does not predict violent behavior or physically or psychologically aggressive tendencies (Bushman & Whitaker, 2010; Ferguson & John, 2010; Ferguson et al., 2014; (Sherry 2007)). Numerous studies demonstrate that playing games can serve as a means of mood repair (Przybylski, Rigby, and Ryan 2010); Russoniello, O'Brien, & Parks, 2009) and alleviate aggression, particularly when playing violent games (Bushman & Whitaker, 2010; Denzler et al., 2011). Both aspects of playing games can foster therapeutic relaxation in the form of outburst experiences that can extend to daily lives. This assumption is generally associated with the catharsis effect. It is time to look at this issue from new and different angles (Ferguson & Dyck, 2012). Thus, we aim to study the potential of games as a therapeutic venting outlet based on the catharsis perspective of aggression.

Many people can play together online without boundaries between nations and languages. The virtual area around some of these online games is huge, equivalent to the size of a large city or even a small nation (Webber, 2014). Similar to the real world, the behavior in online games converges on a consensus about what the players want and what they do not want, that is, they construe their own behavioral norms. Players' practices

take place within the framework of these norms and may meet with other players. Players may express these norms privately within the game or through a more direct exercise of power, such as obstruction or combat, with the result that the players' aggression may be affected by the level of catharsis seeking, self-construal, depression, and loneliness.

To the best of our knowledge, no prior study has examined mental therapeutic care factors (therapeutic catharsis seeking) together with psychological factors (independent and interdependent self-construal) and problem factors (depression and loneliness) with respect to players' aggression. This study thus aims to make novel contributions by revealing therapeutic mechanisms through which online players might seek stress relief or vent aggressive energy via favorite game playing. Findings from this study will also help game-related researchers and practitioners to develop better strategies for addressing important therapeutic internal factors that contribute to aggression.

II. LITERATURE REVIEW

Therapeutic catharsis seeking as a mental health care predictor. The concept of catharsis has had a long history and created interest in philosophy, for example, in Aristotle's *Poetics VI* (Aristotle, trans. 1987) and behavioral sciences (Lorenz 1963). The catharsis hypothesis posits that acting aggressively, or even viewing aggression, is an effective way to vent aggressive feelings, anger, and frustrations. Catharsis is defined as "the verbal or non-verbal expression of intense affect associated with a coherent narrative of experience that provides relief of chronic anxiety states" (Chefet, 1997). This definition describes an emotional release from repressed negative feelings through vicarious experiences, which is reflected in game characteristics such as interactivity, narrative, social use, and provision of specific experiences (Klimmt 2009).

The uses and gratifications (U&G) theory posits that individuals use certain media to satisfy specific needs (Davis and Baran 2006). In line with this notion, playing a favorite game could be a useful tool to satisfy certain desires and needs of players. (McGonigal 2011) suggested that some of the most positive emotional experiences are induced in the context of playing games. Several studies have shown a relation between playing favorite games and enhanced mood, and how a negative emotion can be turned into to positive emotion. Colwell (2007) (Colwell 2007) identified popular reasons for playing games among adolescents, which included companionship, fun, and stress relief. These results emphasized players' needs and desires for ameliorating negative mood as reasons for playing games. (Przybylski, Rigby, and Ryan 2010) suggested that the motivations for game playing are associated with the potential to satisfy basic psychological needs. (Russoniello, O'Brien, and Parks 2009) found that playing games could enhance players' moods, boost relaxation, and alleviate anxiety. Therefore, gaming activities allow the players to express their current feelings and intervene with a negative mental or physiological situation.

Several recent studies have challenged the catharsis theory in regard to violent games. Kutner and Olson (2008) found that violent games help many players "get their anger out." Continuing research also reports that players respond less aggressively and feel calmer after playing violent video games. Likewise, Ferguson et al. (2014) found that violent video games are suitable for players that want to seek catharsis. Under experimental conditions, Bushman and Whitaker (2010) nevertheless reported that the catharsis theory was false, and that belief in catharsis partially supports players' experience of blowing off steam through violent games. Taken together, playing violent games may be understood as a means of stress reduction. From this perspective, it would be expected that individuals with mental health problems, which include aggression triggered by the stress in their daily lives, would be more inclined to use games to reduce stress. Likewise, (Reinecke 2009) identified that playing games after stressful events helps reduce stress because playing games is effective in alleviating stress by activating the nervous system and increasing positive mood (Russoniello et al., 2009). Furthermore, Allahverdipour et al. (2010) (Allahverdipour et al. 2010) suggested that individuals playing certain games improved mental health outcomes compared to non-gamers.

These findings suggest that the catharsis aspect needs to be examined more deeply and include not only violent games but various types of games. Moreover, previous studies suggest that the catharsis effects in game studies need to be examined in a broader game use context (Bandura 1973); Denzler et al., 2011; Ferguson et al., 2014). Therefore, we attempted to extend this assumption by adding accessible games irrespective of game form and genre (e.g., role-playing games, action or fighting games, adventure games, sport games, and shooting games) by including violent and non-violent games. We assumed that games, as a favorite leisure activity of people, would be influenced by catharsis seeking in the way of psychological healing. In line with this notion, we combine these therapeutic aspects and catharsis seeking with other mental health perspectives. Thus, we propose that playing favorite games encompassing a wide range of game genres affects therapeutic catharsis seeking.

Role of independent and interdependent self-construal. Self-construal can be defined as thoughts, feelings, and behaviors of heterogeneous individuals from a homogenous group (Markus and Kitayama 1991; Markus and Nurius 1986). People see themselves as similar or distinct to others depending on how they view themselves based on the embodied self-concept. Cultural norms, personal values, and attitude all have an effect on individuals' self-construal, as well as cognitive performances, social interactions, emotions, and motivations of individuals (Markus and Nurius 1986). In that games become part of the culture and cognitive leisure activity, players' aggression could be affected by their self-construal.

The self-construal is divided into two types: independent and interdependent. The concept of independent self-construal refers to an individual's higher level of autonomy, uniqueness, and self-expression. Individuals who use more independent self-construal are likely to describe themselves in relation to their distinctive values and preferences. In particular, these individuals are psychologically more stable despite a changing social context than individuals relying on interdependent self-construal. In contrast, the interdependent self-construal highlights the social role and relationship to others. These individuals tend to be more cooperative and supportive (van Baaren et al. 2003).

With regard to game playing, players face various options during the process of playing. In these contexts, the decision-making, problem solving, and reasoning inherent in the game are all affected by different self-construal mechanisms, depending on whether an individual uses independent or interdependent self-construal from the perspective of aggressive thinking. In other words, players' thoughts involved in in-game events or activities can be either independent or interdependent since people mentally construe such events differently in accordance with their own perspectives.

According to Markus and Kitayama (1991), self-construal could lead to different cognitive experiences and emotional responses. Since playing games can be affected by thoughts and feelings, self-construal of the players within a game might influence the degree of the players' aggression. Furthermore, gaming worlds require more active involvements with the players' own role and interpretation. Thus, we suspect that players' independent and interdependent self-construal will influence the degree of aggression in the context of the game environment.

Psychological problem factors: depression and loneliness. Mood management theory posits that people naturally persevere positive moods and avoid negative moods. When an event induces a negative mood, such as loneliness and depression, people are willing to reverse that feeling. Likewise, (Nabi et al. 2008) found that people with depressed mood seek out strategies that best allow them to enhance their feelings in a positive way. Thus, individuals may depend on playing favorite games to alleviate negative feelings or meet their needs for control that cannot be fulfilled in reality because gaming allows them to satisfy certain desires. In other words, some individuals might use these means to cope with loneliness and depression.

Loneliness refers to an unpleasant experience that is derived from the lack of a social network (Peplau et al. 1982). Feelings of loneliness may result from unfulfilled desires and gaps between one's actual and desired

social position. Thus, it is highly probable for these individuals to indulge in playing games to fill the deficiency in social ties. Particularly, playing online games is the best way to socialize and avoid feelings of loneliness for such individuals (Griffiths and Meredith 2009).

Depression is defined as “feelings of sadness, diminished interest in activities, fatigue and diminished ability to think or concentrate, indecisiveness, recurrent thoughts of death” according to the Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev, DSM-IV-TR; American Psychiatric Association, 2000, p. 366). (Dillman Carpentier et al. 2008) found that depressed adolescents tend to pursue violent content, and that such media may boost their depressed mood. This implies that depression also involves lethargy and aggression, and playing favorite games in particular may offer an environment for venting negative feelings.

In line with findings from previous studies, we predict that players' aggression will decrease along with depressive mood and loneliness because of mood change tendencies. Moreover, as aggression decreases, loneliness and depression should also decrease because of the ripple effect showing mood contagion (Barsade 2002). Furthermore, assuming that this effect exists, it would be interesting to examine if these psychological problem factors have moderating effects on therapeutic catharsis seeking.

III. METHOD

3.1. Data Collection

We conducted an online survey among Korean online game players over two weeks. The study was conducted by the Hankook Research Company (<http://www.hrc.co.kr/>), which is one of the major research companies in Korea. Participants were randomly recruited from Seoul, the capital city. The age of respondents varied between 16 and 59 years ($M = 35.5$, $SD = 11.5$). A total of 918 participants, including 532 (58%) males and 386 (42%) females, took part in this study. All the participants were asked by e-mail to complete an online questionnaire. To allow choice of the favorite game, various options about different types of games were presented, including arcade, console, solo play on computer, and online games. The respondents were informed beforehand that they had to be currently involved in game playing or had played a game within the past 6 months. After selecting the variables significantly correlated with aggression, we used a regression analysis to examine how each variable affected aggression. All analyses were conducted in SPSS version 18.

3.2. Research Instruments

To measure aggression, we used the Buss and Perry Aggression Questionnaire (AQ) (Buss and Perry 1992). The AQ is one of the most extensively used self-report measures of aggression. The 29-item scale is composed of four subscales: physical aggression, verbal aggression, anger, and hostility. A 5-point Likert scale is used for the questionnaire ranging from 1 (extremely uncharacteristic of me) to 5 (extremely characteristic of me) ($\alpha = .89$).

For therapeutic catharsis seeking, we created a scale by combining both Ferguson's catharsis seeking scale (Ferguson et al., 2014) and the Therapeutic Realizations Scale-Revised (TRS-R) (Kolden et al. 2000) to measure an individual's degree of therapeutic catharsis seeking by adding “gaming” and “therapeutic aspects” to the questions (Lee, Jeong, & Kim, 2016) (e.g., “I think that gaming helps me relieve my stress,” “I think that gaming helps me share my joys and sorrows,” and “I think that gaming helps me feel satisfied.”). The scale consists of 20 items in the form of a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) ($\alpha = .92$).

Self-construal was measured with the independent ($\alpha = .792$) and interdependent ($\alpha = .845$) subscales of the Self-Construal Scale developed by (Singelis 1994). Each subscale consists of six items. The response to each item uses a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Depression was measured with the Center for Epidemiologic Studies Depression Scale (CES-D). A screening version of the CES-D consists of a subset of the 11-item CES-D scale and has been used extensively in general populations (Hann, Winter, and Jacobsen 1999). The scale items ask about the degree of sadness, gloominess, and so forth ($\alpha = 0.74$) and are rated from 1 to 4 according to how often the symptoms are present (1 = never/rarely, 2 = sometimes, 3 = often, and 4 = very often) ($\alpha = 0.88$).

Loneliness was measured with the UCLA Loneliness Scale (Russell 1996). The scale consists of 20 items designed to measure one's subjective feelings of loneliness as well as feelings of social isolation. The items are rated on a 4-point scale ranging from 1 (strongly disagree) to 4 (strongly agree) ($\alpha = 0.92$).

In order to measure game genre, the participants were asked for details about what their favorite game of all time was (e.g., adventure games, sport games, social games, action or fighting games, shooting games, role playing games, simulation games, web board games, physics simulation games).

IV. RESULTS

4.1. Descriptive Analysis

The average duration of online gaming time each day was 86 minutes ($SD = 1.55$), with men playing for 91 minutes ($SD = 1.59$) and women for 79 minutes ($SD = 1.50$). Considering the ratio of each age group, 65 (7.1%) were teens, 246 (26.8%) were in their 20s, 246 (26.8%) were in their 30s, 228 (24.8%) were in their 40s, and 133 (14.5%) were in their 50s. The average aggression score was 3.38 ($SD = 0.53$). The average level of therapeutic catharsis seeking was 2.62 ($SD = 0.72$). The average level of independent self-construal was 3.10 ($SD = 0.69$) and interdependent self-construal was 3.56 ($SD = 0.53$). The average depression score was 1.83 ($SD = 0.42$). The average violent games score was 2.55 ($SD = 0.44$). The average loneliness score was 2.19 ($SD = 0.31$).

Regarding the ratio of each game type, violent games represented 48% while non-violent games represented 52% of reported games. Demographic factors, scoring of the different measures, and corresponding means and standard deviations are presented in Table 1.

Table 1 Measures and Descriptive Statistics

	Measure	<i>M</i>	<i>SD</i>
Gender	0 = female 1 = male		
Age group	1 = teens 2 = 20s 3 = 30s 4 = 40s 5 = 50s	3.12	1.16
Daily online gaming time	Minutes	86.50	1.39

Game type	<p>1 = Violent games (Lineage, StarCraft, The King of Fighters, Rainbow Six, Quake)</p> <p>2 = Non-violent games (Tetris, Anipang for Kakao, SimSE Online, SimCity, Korean chess)</p>	1.52	0.49
Aggression	1-5 (low-high)	3.38	0.53
Independent self-construal	1-5 (low-high)	3.10	0.69
Interdependent self-construal	1-5 (low-high)	3.56	0.53
Therapeutic catharsis seeking	1-5 (low-high)	2.62	0.72
Depression	1-4 (low-high)	1.58	0.52
Loneliness	1-4 (low-high)	2.55	0.44

Table 2 Correlations between Variables

	1	2	3	4	5	6	7	8	9	10
1. AG	1									
2. TCS	-.290**	1								
3. INDI	-.250**	.230**	1							
4. INTER	.113**	.027	.108**	1						
5. DEPRE	-.404**	.150**	.074*	-.033	1					
6. LONE	-.429**	.099**	.093**	-.117**	.407**	1				
7. OGT	-.200**	.328**	.096**	-.067	.171**	.154**	1			
8. GT	-.004	.027	.069	-.022	.056	.007	.015	1		
9. GEN	.082*	-.180**	-.073*	-.071*	.044	.105**	-.140**	-.087*	1	
10. AGE	.088**	-.152**	-.177**	.112**	-.149**	-.067*	-.277**	-.238**	.052	1

Note. AG = Aggression; TCS = therapeutic catharsis seeking; INDI = independent self-construal; INTER = interdependent self-construal; DEPRE = depression; LONE = loneliness; OGT = online gaming time; GT = game type; GEN = gender; AGE = age. * $p < .05$, ** $p < .01$.

4.2. Correlation Analysis

To examine the relationship between variables, we employed a Pearson correlation analysis using the SPSS statistical software (see Table 2). The analysis compared players' therapeutic factor (therapeutic catharsis seeking), two psychological factors (independent and interdependent self-construal), two psychological problem factors (depression, loneliness), and demographic variables (age, gender) and game type.

The analyses identified a significant negative relationship between therapeutic catharsis seeking and aggression ($r = -.290$, $p < .01$). Independent self-construal showed a negative association with players' aggression ($r = -.250$, $p < .01$), while interdependent self-construal showed a positive association with players' aggression ($r = .113$, $p < .01$). Psychological problem factors, such as depression ($r = -.404$, $p < .01$) and loneliness ($r = -.429$, $p < .01$), were also significantly and negatively correlated with players' aggression. Online gaming time showed a negative association with players' aggression ($r = -.200$, $p < .01$) while game type did not show any association with players' aggression. Both gender ($r = .082$, $p < .05$) and age showed a positive association with players' aggression ($r = -.076$, $p < .05$), while age showed a positive association with players' aggression ($r = .088$, $p < .01$).

4.3. Regression Analysis

Table 3 shows the results of the regression analysis for the different variables. Regarding therapeutic factors, the players' catharsis seeking was an important predictor for the degree of aggression. Players who reported higher levels of therapeutic catharsis seeking had a significantly decreased degree of aggression ($\beta = -.207$, $p < .001$). Independent self-construal showed a significantly negative effect on players' aggression ($\beta = -.140$, $p < .001$), while interdependent self-construal showed a positive effect on aggression ($\beta = .121$, $p < .01$). The stronger the independent self-construal of the players, the lower the degree of aggression; while the stronger the interdependent self-construal, the higher the degree of aggression.

For the factors of psychological problems, interestingly, both depression ($\beta = -.187$, $p < .001$) and loneliness ($\beta = -.279$, $p < .001$) were significant negative predictors for the degree of aggression. However, we could not find any significant relationships between online gaming time and game type and players' aggression. With

respect to demographic variables, gender showed a positive effect ($\beta = .076$, $p < .05$) while age did not show any significant effects on aggression.

Table 3. Regression Analysis and Interaction Effects

	Unstandardized coefficients	Standardized coefficients	t	p-value	Collinearity statistics	
	B	β			Tolerance	VIF
(Constant)	119.351		21.232	.000		
Therapeutic catharsis seeking	-.213***	-.207***	-5.259	.000	.847	1.180
Independent self-construal	-1.446***	-.140***	-3.648	.000	.896	1.116
Interdependent self-construal	.547**	.121**	3.234	.001	.932	1.072
Depression	-.571***	-.187***	-4.660	.000	.813	1.230
Loneliness	-.636***	-.279***	-6.857	.000	.795	1.258
Online gaming time	-.278	-.031	-.784	.433	.841	1.189
Game type	.138	.038	1.018	.309	.932	1.073
Gender	1.832*	.076*	2.027	.043	.925	1.081
Age	-.046	-.043	-1.094	.274	.842	1.188
Durbin-Watson = 2.193 R square = .272 ($p < .001$) * $p < .05$, ** $p < .01$, *** $p < .001$						
Interaction effects						
TCS \times depression	-3.194**	-.464**	-2.738	.006	.045	22.240
TCS \times loneliness	3.625*	.533*	2.274	.023	.024	42.429
Durbin-Watson = 2.164 R square = .284 ($p < .001$) * $p < .05$, ** $p < .01$, *** $p < .001$						

Note. TCS = therapeutic catharsis seeking; VIF = variance inflation factor.

4.4. Interaction Effects

As expected, we found two interaction effects on aggression. An interaction effect on aggression was observed between therapeutic catharsis seeking and depression, $F(1, 914) = 4.221$, $p < .01$ (see Figure 1) and between therapeutic catharsis seeking and loneliness, $F(1, 914) = 7.069$, $p < .05$ (see Figure 2). For depression, there were significant differences between low and high levels of therapeutic catharsis seeking and between low and high levels of depression. For loneliness, there were differences between low and high levels of therapeutic catharsis seeking, and between low and high levels of loneliness. These findings suggest that therapeutic catharsis seeking moderates the relationship between aggression and depression as well as

loneliness.

Figure 1. Interaction effect between therapeutic catharsis seeking (TCS) and depression

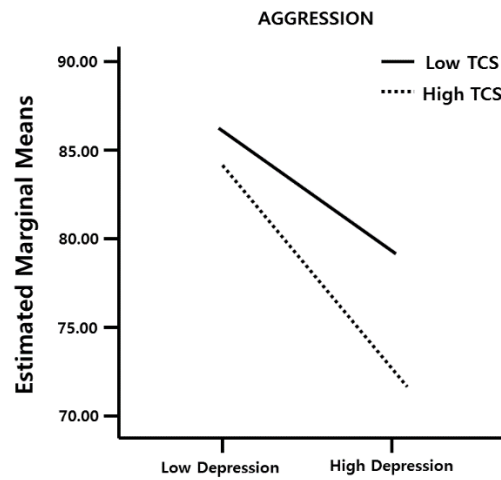
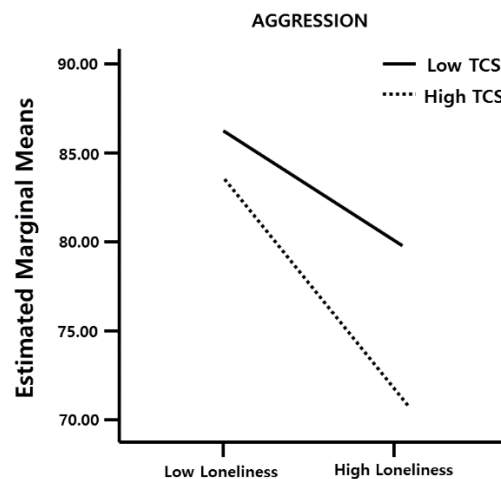


Figure 2. Interaction effect between therapeutic catharsis seeking (TCS) and loneliness



V. DISCUSSION

Although many issues regarding players' aggression remain in dispute and might not get resolved in the near future, it is worth revealing that games might lead to a reduction of aggressive thoughts in terms of mental health, because games could serve as effective tools to vent repressed negative feelings. This concept is generally associated with the catharsis concept, mood management theory, and uses and gratification theory. This study examined the relationships between therapeutic catharsis seeking, self-construal, psychological problem aspects, gaming duration, game type, and players' aggression. The results of this study provide empirical evidence that gaming activities are negatively related with the degree of players' aggression.

Therapeutic catharsis seeking is particularly important to players because it not only greatly decreases their aggressive tendencies but also interacts with depression and loneliness. This finding is in line with the results of previous studies stressing that playing games fulfills players' needs and desires far more effectively via infinite vicarious experiences that reflect the unique properties of games. This implies that games may be outlets for relieving aggressive energy, have mental healing powers, and provide a means to satisfy certain

desires. This perspective agrees with the uses and gratifications theory and is also associated with therapeutic catharsis seeking in the way of psychological healing.

More notably, therapeutic catharsis seeking could be regarded as moderator, which acts through either mood repair or mood management, and affects players' depression and loneliness related to aggression tendency; thus, playing a favorite game triggers a chain reaction for players suffering from negative emotions. Especially among players suffering from loneliness and depressive symptoms, therapeutic catharsis seeking can be a key element in inducing positive feelings as well as a tool for blowing off steam. From this perspective, it would be expected that individuals with mental health problems, which includes aggression triggered by stress in their daily lives, would be more inclined to use games to reduce stress.

It is possible that favorite online game playing allows "venting" aggression. Our empirical study presented in this paper clearly indicates that playing games is interpreted differently by individuals. This implies that gaming activity needs to be specified in order to understand its actual meaning for players. The present study on human aggression provides insights from therapeutic catharsis as a first step towards understanding mental health in a game context.

Regarding self-construal, this study yields useful insights for understanding mental health as an important aspect depending on players' level of independent and interdependent self-construal. We found that independent self-construal decreased the levels of players' aggression, while interdependent self-construal increased the levels of players' aggression. In studying the individual characteristics of self-construal, it should be noted that individuals with high independent self-construal tend to have more unique own principles and beliefs. Thus, we can reason that these individuals played more freely than players with interdependent self-construal because of the mastery of controls. Mastery of controls indeed plays an important role in satisfying psychological desires as it allows acting upon one's resolution. Therefore, players with higher independent self-construal could be more affected by venting aggression, which indicates therapeutic or healing power.

According to social interdependence theory, the achievement of each individual's goals is affected by thoughts and behaviors of others (Deutsch, 1949, 1962; Johnson, 1970; Johnson & Johnson, 1989). Players with higher interdependent self-construal are easily affected by social norms and others. Thus, they believe that social roles and relationships are more important than their own principles and values. This tendency could block their free playing, and as a result, a higher level of interdependent self-construal increased aggression in these players. Indeed, playing online games requires ample social cooperation, whereby individuals with interdependent self-construal encounter a number of interpersonal situations. This could drive players with interdependent self-construal into a state of being emotionally repressed as a consequence of their tendencies.

With regard to players' depression and loneliness, there is evidence from aggression-reducing studies to support these results. Previous studies addressed depression as a risk factor for aggression (Barsade, 2002; Dutton & Karakanta, 2013; Kovacs & Beck, 1977). Interestingly, our results indicate that depression can reduce aggression through gaming activity. In other words, players with a higher level of depression may alter their depressed mood to a more positive mood via game playing with the result that aggression is reduced.

According to the social compensation hypothesis, the media are more beneficial to very lonely or introverted individuals. Under this hypothesis, Internet-based media permit concealing one's identity and reduce the introvert's fear of rejection. Thus, it is possible that this compensatory strategy satisfies the needs of lonely players, thereby decreasing both feelings of loneliness and aggression by playing games. Taken together, both depression and loneliness could be affected by venting aggression. It seems likely that blowing off steam via game playing triggers a chain reaction for players suffering from depression and loneliness. Depression and loneliness are vulnerable conditions, which are known to cause considerable emotional suffering and which have social as well as psychological consequences (Andrews and Henderson 2000). The current results suggest that individuals play games to satisfy certain needs for altering their depressed mood

or avoiding social isolation, eventually generating mood repair and mood management.

Furthermore, in that therapeutic catharsis seeking moderates depression and loneliness, it could be extended to the area of game therapy. Not only the most severely affected patients need psychotherapy but also the general public, because contemporary society is inundated with stressful events at school, in the company, and so forth. These pressures cause people to experience psychological discomfort while creating increased expectations and desires. The characteristics of various games seem to especially converge on drama therapy, which is an active, experiential approach to facilitating change through storyline, projective play, and performance. Performers are invited to rehearse desired behaviors and perform the changes they wish to happen in the real world (Johnson 1991; Laurel 2013). There are many similarities between game properties and the drama therapy approach, since games can affect communication challenges, choices, and desired opportunities in various ways for the players (Lee, Jeong, and Kim). Thus, to maximize the potential of games for promoting mental health, gaming developers or researchers need to collaborate with drama therapists.

Our research aimed to improve upon some of the limitations of the aforementioned study. First, our sample was obtained through simple random sampling and included the general game population from adolescence to old age, whereas the previous study only focused on a small age group such as adolescents or university students. Second, we studied preferences on the basis of different types of games, compared to a single type of games (e.g., violent games).

In closing, we need to mention possible limitations of the current study and provide suggestions for future studies. First, the data were collected only from South Korean players. Future studies should gather data from additional countries. Second, we used a survey and relied on self-report measures, which limits the generalizability of our results. Future studies should thus be carried out using other methods such as longitudinal designs and experimental settings with controlled conditions. Finally, future studies should be carried out to compare the relationships of various other factors that could affect aggression.

REFERENCES

- Allahverdipour, H., Bazargan, M., Farhadinasab, A., & Moeini, B. (2010). Correlates of video games playing among adolescents in an Islamic country. *BMC Public Health*, 10, 286.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders (4th ed., text rev.)*, Washington, DC: American Psychiatric Association.
- Anderson, C. A., & Carnagey, N.L. (2004). Violent evil and the general aggression model. In A. Miller (Ed.), *The social psychology of good and evil* (pp. 168-192). New York: Guilford Publications.
- Andrews, G., & Henderson, S. (2000). *Unmet need in psychiatry: problems, resources, responses*. Cambridge, UK: Cambridge University Press.
- Averill, J. R. (1983). Studies on anger and aggression: Implications for theories of emotion. *American Psychologist*, 38, 1145-1160.
- Bandura, A. (1973). *Aggression: A social learning analysis*. Oxford, UK: Prentice-Hall.
- Baran, S. J., & Davis, D. K. (2006). *Mass communication theory: foundations, ferment, and future*. Belmont, CA: Thomson Wadsworth.
- Baron, R. B., & Richardson, D. (1994). *Human aggression*. New York: Plenum.
- Barsade, S. G. (2002). The ripple effect: Emotional contagion and its influence on group behavior. *Administrative Science Quarterly*, 47, 644-675.
- Bushman, B. J., & Whitaker, J. L. (2010). Like a magnet: catharsis beliefs attract angry people to violent video

- games. *Psychological Science*, 21, 790-792.
- Buss, A. H., & Mark, P. (1992). The aggression questionnaire. *Journal of Personality and Social Psychology*, 63, 452-459.
- Chefetz, R. A. (1997). Abreaction: baby or bathwater? *Dissociation*, 10, 203-213.
- Colwell, J. (2007). Needs met through computer game play among adolescents. *Personality and Individual Differences*, 43, 2072-2082.
- Denzler, M., Häfner, M., & Förster, J. (2011). He just wants to play: how goals determine the influence of violent computer games on aggression. *Personality and Social Psychology Bulletin*, 37, 1644-1654.
- Dillman Carpentier, F. R., Brown, J. D., Bertocci, M., Silk, J. S., Forbes, E. E., & Dahl, R. E. (2008). Sad kids, sad media? Applying mood management theory to depressed adolescents' use of media. *Media Psychology*, 11, 143-166.
- Ferguson, C. J. (2007). Evidence for publication bias in video game violence effects literature: A meta-analytic review. *Aggression and Violent Behavior*, 12, 470-482.
- Ferguson, C. J., & Dyck, D. (2012). Paradigm change in aggression research: The time has come to retire the General Aggression Model. *Aggression and Violent Behavior*, 17, 220-228.
- Ferguson, C. J., & Kilburn, J. (2010). Much ado about nothing: the misestimation and overinterpretation of violent video game effects in Eastern and Western nations: comment on Anderson et al. (2010). *Psychological Bulletin*, 136, 174-178.
- Griffiths, M. D., & Meredith, A. (2009). Videogame addiction and its treatment. *Journal of Contemporary Psychotherapy*, 39, 247-253.
- Hann, D., Winter, K., & Jacobsen, P. (1999). Measurement of depressive symptoms in cancer patients: evaluation of the Center for Epidemiological Studies Depression Scale (CES-D). *Journal of Psychosomatic Research*, 46, 437-443.
- Johnson, D. R. (1991). The theory and technique of transformations in drama therapy. *The Arts in Psychotherapy*, 18, 285-300.
- Klimmt, C. (2009). Serious games and social change: Why they (should) work. In U. Ritterfeld, M. Cody, P. Vorderer (Eds.), *Serious Games: Mechanisms and Effects* (pp. 248-270). New York: Routledge.
- Kolden, G. G., Strauman, T. J., Gittleman, M., Halverson, J. L., Heerey, E., & Schneider, K. L. (2000). The Therapeutic Realizations Scale—Revised (TRS-R): Psychometric characteristics and relationship to treatment process and outcome. *Journal of Clinical Psychology*, 56, 1207-1220.
- Krug, E. G., Mercy, J. A., Dahlberg, L. L., & Zwi, A. B. (2002). The world report on violence and health. *Lancet*, 360(9339), 1083-1088.
- Laurel, B. (2013). *Computers as theatre*. Upper Saddle River, NJ: Addison-Wesley.
- Lee, H. R., Jeong, E. J., & Kim, J. W. (2015). How do you blow off steam—the impact of therapeutic catharsis seeking, self-construal, and social capital in gaming context.
- Lee, H. R., Jeong, E. J., & Kim, J. W. (2016, January). Role of internal health belief, catharsis seeking, and self-efficacy in game players' aggression. *Proceedings of the 49th Hawaii International Conference on System Sciences (HICSS)*, Kauai, HI, USA. Retrieved from

<http://conferences.computer.org/hicss/2016/content/papers/5670d769.pdf#page=1>

Lorenz, K. (1963). *On aggression*. New York: Bantam Books.

Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist*, 41, 954-969.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224-253.

McCall, G., & Shields, N. (2008). Examining the evidence from small-scale societies and early prehistory and implications for modern theories of aggression and violence. *Aggression and Violent Behavior*, 13, 1-9.

McGonigal, J. (2011). *Reality is broken: Why games make us better and how they can change the world*. New York: Penguin Press.

Nabi, H., Kivimäki, M., Marmot, M. G., Ferrie, J., Zins, M., Ducimetière, P., ... Singh-Manoux, A. (2008). Does personality explain social inequalities in mortality? The French GAZEL cohort study. *International Journal of Epidemiology*, 37, 591-602.

Peplau, L. A., & Perlman, D. (1982). Perspectives on loneliness. In L. A. Peplau, & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 1-18). New York: Wiley.

Przybylski, A. K., Rigby, C. S., & Ryan, R. M. (2010). A motivational model of video game engagement. *Review of General Psychology*, 14, 154-166.

Reinecke, L. (2009). Games and recovery: the use of video and computer games to recuperate from stress and strain. *Journal of Media Psychology*, 21, 126-142.

Russell, D. W. (1996). UCLA Loneliness Scale (version 3): reliability, validity, and factor structure. *Journal of Personality Assessment*, 66, 20-40.

Russoniello, C. V., O'Brien, K., & Parks, J. M. (2009). The effectiveness of casual video games in improving mood and decreasing stress. *Journal of CyberTherapy & Rehabilitation*, 2, 53-66.

Sherry, J. L. (2007). Violent video games and aggression: Why can't we find effects? In R. W. Preiss, B. M. Gayle, N. Burrell, M. Allen, & J. Bryant (Eds.), *Mass media effects research: advances through meta-analysis* (pp. 245-262). New York: Routledge.

Singelis, T. M. (1994). The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin*, 20, 580-591.

van Baaren, R. B., Maddux, W. W., Chartrand, T. L., De Bouter, C., & van Knippenberg, A. (2003). It takes two to mimic: behavioral consequences of self-construals. *Journal of Personality and Social Psychology*, 84, 1093-1102.

Webber, N. (2014). Law, culture and massively multiplayer online games. *International Review of Law, Computers & Technology*, 28, 45-59.

HOW UNIVERSITY STUDENTS COPE WITH STRESS AND THEIR REACTIONS TOWARDS STRESS

Rüçhan Gökdağ,

Anadolu University, Eskişehir, Turkey

ABSTRACT

The purpose of this study is to determine the relationship between the defense mechanisms and the causes of stress that people use in coping with stress. These identified relationships will be classified according to the results of the causality analysis between the defense mechanisms in which they are able to cope with the causes of stress. The sample size determined for this research consists of 586 students at Anadolu University. Stress collected as open-ended from the sample causes, stress coping, Most Common defense mechanisms, often used defense mechanisms, and use the answers they gave their defense mechanisms. This is called the sub-themes of the statements made in association analysis contained in the relationship are determined.

In the resulting distribution of the analysis, causality between themes and most stress-coping mechanisms are given. In addition, this research examines the causality between defense mechanisms and causes of stress and looks at how stress is determined and how stress is coped with.

Keywords: Stress, Stress causes, Defense mechanisms

THE INTERNAL CHALLENGES FACING ISLAMIC BANKING IN LIBYA

Prof. Nassr Saleh Mohamad Ahmad

Accounting Faculty, Ghrian University, Ghrian- Libya

ABSTRACT

Purpose: The objective of this paper is to assess the main internal challenges facing Islamic banking in Libya. It also aims at providing solutions to these challenges.

Design/Methodology/Approach: This study is an exploratory study therefore, based on literature review to challenges facing Islamic banking in general and in Libya practically. The major part of data consisting of secondary source is collected through research journals, internet, conferences, relevant books, government report and author's experiences. Citation and literature discussion have been the major approach of this study.

Findings: Islamic banking in Libya is facing some internal challenges which require immediate action. These challenges include: (1) institutional challenges, and (2) operational challenges Islamic banks have no excuse to overlook or turn a blind eye to such internal challenges Islamic banking in Libya will make headway if and only if it can address these challenges objectively.

Research limitations: The external challenges are beyond the capacity of this study. Moreover, an empirical study is needed to provide more support to the suggested results of this study.

Originality/Value: This paper highlights an issue that has not received the needed attention, and it proposes the necessary solutions to the problems it identifies Moreover, the findings of this study may be useful to policy-makers and legislators.

Keywords: Internal Challenges, Islamic Banking, Libya, Institutional Challenges, Operational Challenges.

Paper type: An Exploratory Study

EPISTEMOLOGICAL ACCESS TO A HIGHER EDUCATION PROGRAMME IN BUSINESS AND INFORMATION ADMINISTRATION

Shairn Hollis-Turner

Cape Peninsula University of Technology, Cape Town South Africa

ABSTRACT

All professional education should provide access to the disciplinary knowledge that underpins professional practice. Epistemological access to the different disciplinary and practical knowledge domains necessitates that academics consider when these knowledge domains are necessary in professional curricula. This paper focuses on the development of a Diploma in Business and Information Administration to ascertain the knowledge base of the curriculum. The problem being investigated is whether the knowledge base of the curriculum supports the provision of epistemological access to professional knowledge. The study drew on the Semantic dimension of Legitimation Code Theory which was used to investigate the knowledge areas drawn on in the development of the Diploma. The subjects of the curriculum were analysed to determine the stronger contextual and practical curriculum components (stronger semantic gravity SG+) as well as the stronger conceptual and theoretical (stronger semantic density SD+) course components for the purposes of a deeper understanding of the logic of the curriculum. A multi-method research design was employed to establish the knowledge base of administration work which draws on a Delphi approach. The Delphi panel comprised employers, graduates and academics. Both quantitative and qualitative data was attained by using Delphi surveys, student surveys, interviews, workshops, and an international benchmarking exercise. The revised curriculum was analysed as a programme that is stronger in semantic gravity (SG+) and weaker in semantic density (SD-). The feedback from the Delphi panel and students highlighted the significant knowledge bases which should be included in the curriculum. However, the choices made by the Business Faculty involving the standardisation of some first year subjects may hamper the students' epistemological access to the professional disciplinary knowledge needed for cumulative knowledge building. This has resulted in tensions within academic departments and difficulties for curriculum developers to ensure that the Diploma provides students with epistemological access to professional knowledge for the field of practice of administrators and office managers. The study raises important questions about the role of higher education in professional programmes and makes recommendations that would strengthen the semantic density of the curriculum appropriately.

Semantic Dimension; epistemological access; professional knowledge; business, administration

STRATEGIC MANAGEMENT OF TOURISM DESTINATIONS BASED ON THE AUSTRIAN SCHOOL PERSPECTIVE

Zhonglu Zeng

Macao Polytechnic Institute, Macau, China

ABSTRACT

Despite various researches have been carried out on development strategies for tourism destinations, most of them are based on the resource-based view or industrial organization theory, and the tools used for strategy analysis (such as SWOT analysis, Diamond model of Mike Porter) focus mainly on the present factor endowments and the unique or distinctive tourism features offered by a destination, or monopoly of certain natural resources. Although these theories and the tools used are powerful, they suffer from one weakness, that is, they ignore the fast changing business environment. This paper will introduce the view of Austrian Economic School with its emphasis on the “market process” and “entrepreneurial discovery”. In contrast to static approach of resource-based view or IO theories on a destination’s competitiveness, the Austrian School holds that the market is always in a process of changing (market process). In such a market, everlasting competitive advantage is not in existence. Relying on unique monopolistic tourism resources cannot guarantee long time success. The lasting competitive advantage comes from continuous “entrepreneurial discovery”. Following the view of the Austrian School, a tourism destination should give up “once-and-for-all” resource perspectives and endeavor to get competitive advantage by continuous innovation. Thus it should monitor the changes in the environments and adapt to the changes continuously. The view of the Austrian School can explain why some tourism destinations with unique tourist attractions decline (Atlantic City of US, for example) and other cities without natural tourism resources thrive sustainably (Las Vegas, for example). The contribution of this research can fill the gap left by the research based on Resource-Based View & IO approach in tourism development strategy-making.

Keywords: tourism destination ; strategic management; market process; entrepreneurial discovery; Austrian school

PERCEPTION OF THE SOCIAL MEDIA MESSAGE OF THE FIRST UNDERGRADUATE STUDENTS FROM THE PUBLIC RELATIONS IN SUANSUNANDHA RAJABHAT UNIVERSITY, BANGKOK THAILAND

Chanyapat Sangsuwon* & Netdao Yooyong **

**Faculty of Science and Technology, Suan Sunandha Rajabhat University, Bangkok, Thailand,*

E-Mail: Chanyapat.sa@ssru.ac.th

***Office of President, Center of the public relation, Rajabhat Suansunandha University, Bangkok, Thailand*

E-Mail: Netdao.yo@ssru.ac.th

ABSTRACT

This study aimed to compare the perception of the Social Media message of the first undergraduate students from public relations of public universities in the Suansunandha Rajabhat University, classified by gender, year of study, and field of study. The research was conducted through a questionnaire, and the data were collected from 400 undergraduate students of public universities in Suansunandha Rajabhat University at Bangkok Thailand. Frequency, percentage, mean, standard deviation and t-test were employed for data analysis through SPSS. In addition, the LSD (Least Significant Difference) test was conducted for the results with significant differences.

Theory of perception of Social media were induced a survey of the first undergraduate students perceptions which it make the communication within the organization as successful as possible. The questionnaires 400 were to measure the perception the messages by Webpage, Facebook and Line were 68.17, 19.78 and 9.16%, respectively.

Keywords: Message, Perception, Social media, The first undergraduate students.

INTRODUCTION

Suan Sunandha Rajabhat University Is a state university It ranked the university as the # 1 ruling class in the rankings of the Spanish Research Council of the European Union and was awarded a 2 star QS Star in England, which means that it is internationally spoken. (The only Rajasthan from 38 places in Thailand that have starred QS). Effective communication is In addition to taking corporate communications out to the public to create a good corporate image. And communication within the organization. Because it is something that can't be avoided. And it is a very important factor in helping organizations succeed in managing their organizations. Nowadays, the communication within Suan Sunandha Rajabhat University are improved in the social media as Facebook Line Webpage and QR-code in every organizes. Although there are many channels of internal communication as wire broadcasting, publish relation broads and LED-signboard were sent message but were not cover and social media are interesting for the undergraduate student, this results, the study aimed the perception of the social media as Facebook Line and Webpage [1].

There are two types of theories to perception, there is the self-perception theory, and the cognitive dissonance theory [2]. There are many theories about different subjects in perception [3, 4]. There are also disorders that relate to perception even though you may think perception is just a person's view point First, the self-perception theory, inspired by B. F. Skinner's analyses [5], is when individuals come to "know" or better understand their own attitudes, emotions, and other personal states mostly by concluding them from observing their own behavior and/or the situations in which this behavior occurs. One example would be an individual who describes "butterflies in the stomach". We have all identified this feeling for ourselves, on our own [6].

Social perception (or person perception) is the study of how people form impressions of and make inferences about other people as sovereign personalities. People learn about others' feelings and emotions by picking up information they gather from physical appearance, verbal, and nonverbal communication [7].

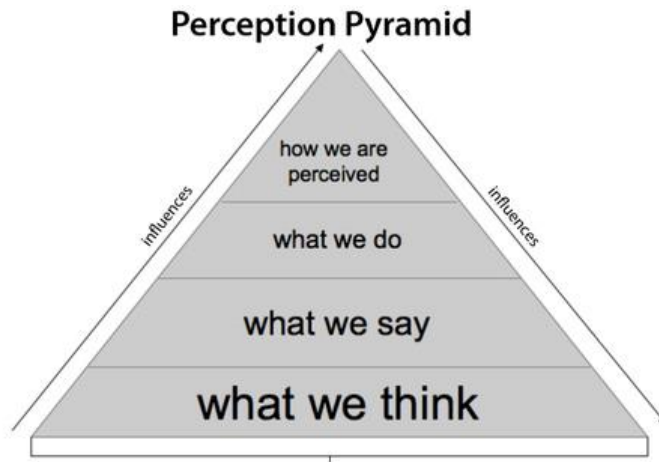


Figure 1. Social Psychology by Perception pyramid [7].

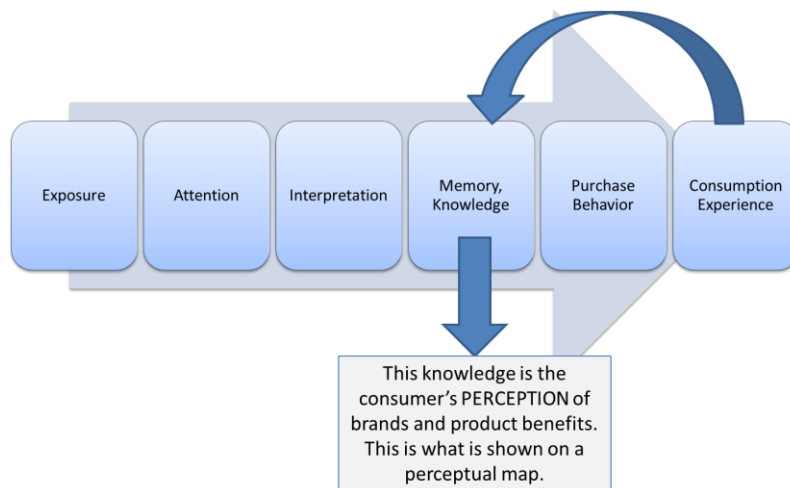


Figure 2. Theory of visual perception of the new techniques social media [8]

New medical imaging techniques make the brain's inner workings more accessible, we take the first rudimentary steps toward developing a unified theory of how the mind works, and therefore toward understanding how we receive, process, and act on visual information, A neurological approach to perception yields insights into those mechanisms that empower the visual image.

RESULTS

The study has 400 of the first undergraduate student and showed demographic characteristics in the age of students were 18-19 years old. The population showed 174 male and 226 female (Table 1)

Table 1

The questionnaires showed demographic characteristics of undergraduate students.

The first undergraduate students		Sex	
No.	Faculties	Male	Female
1	Faculty of Education	15	45

2	Faculty of Science	25	50
3	Faculty of Humanities and Social Sciences	35	35
4	Faculty of Management Science	30	60
5	Faculty of Industrial Technology	45	10
6	Faculty of Fine and Applied Arts	24	26
Total		174	226

Table 2

The percentage of perception social media of the first undergraduate students.

No.	Faculty	Amounts	Social Medias		
			Facebook(%)	Line (%)	Webpage(%)
1	Faculty of Education	60	16.6	16.6	66.6
2	Faculty of Science	75	13.3	6.6	80
3	Faculty of Humanities and Social Sciences	70	14.2	7.2	75.5
4	Faculty of Management Science	90	5.5	5.5	88.8
5	Faculty of Industrial Technology	55	9.09	9.09	81.8
6	Faculty of Fine and Applied Arts	50	10	10	80
Total		400	19.8	9.2	68.17

Faculty of Management Science, Industrial Technology, Science and Faculty of Fine and Applied Arts used the Webpage were 88.8,81.8,80 and 80, respectively. Table 2 were summarized Six faculties for 400 questionnaires showed the perception of the message from Webpage, Facebook and Line were 68.17, 19.8 and 9.2, respectively.

Table 3

The perception of the first undergraduate students for necessary message information for 400 samples.

No.	Necessary Message	Social Medias		
		Facebook (%)	Line (%)	Webpage (%)
1	The Semester-Vacation in University	30	20	50
2	The Grid Courses in University	30	30	40
3	The Student Activities in University	15	25	60
4	The Tuition Fee in University	35	10	55
5	The Holiday in University	20	10	70
6	The Midterm and Final Examination	10	10	80
7	The Education Registration	15	10	75
8	The Health Checkup Service	40	10	50
9	The Transfer of Academic	20	15	65
Total		24	15.5	60.5

The perception of the first undergraduate students for necessary message information were Webpage, Facebook and Line were 60.5, 24 and 15.5, respectively. Facebook and Line were importance to send necessary message which calculated were $24+15.5=39.5\%$ showed the channel for sent message to the first undergraduate students in the second social medias.

METHODOLOGY

The study on the perception of social media for the first students in SSRU were examined in the organization as follows. 1) Facebook 2) Line 3) Webpage

Population sample

The first undergraduate 400 students in 6 Faculties were Management Science, Industrial Technology, Science and Technology, Fine and Applied Arts, Humanities and Social Sciences and Education science.

Research tools

The questionnaires 400 were sent to the first undergraduate students of Suan Sunandha Rajabhat University. All questions were closed-ended questionnaires and used by the checklist and three parts were:

Part I The general of demographic characteristics as sex, age, graduate students in Faculties

Part II The perception of the information about: 1) The Semester-Vacation in University 2) The Grid Courses in University 3) The Student Activities in University 4) The Tuition Fee in University 5) The Holiday in University 6) The Midterm and Final Examination 7) The Education Registration 8) The Health Checkup Service 9) The Transfer of Academic Examined the data of exposure by calculated of percentage.

Part III The perception of the channel in the social medias: 1) Facebook 2) Line 3) Webpage. By studying the content of the channel media in 5 satisfactions in the rating scale of 1-5 score:

1 =the least satisfy,

2 = low satisfy,

3=middle satisfy,

4=satisfy,

5=very satisfy.

The score is based on Likert scale and calculated in formula:

$$\frac{\text{highest score} - \text{lest score}}{\text{number level of score}}$$

Evaluation of criteria showed the satisfaction in the range of 4.21-5.00 = very satisfy, 3.41-4.20 = satisfy, 2.61 -3.40 = middle satisfy, 1.81 -2.60 = low satisfy and 1.00 -1.80 = the least satisfy [9].

CONFLICTS OF INTEREST

The authors declare that they do not have conflict of interest.

CONCLUSION

PR division has attended to sending the information for the first undergraduate students that have the different of regulation. Social media reminded the first undergraduate students for appreciated information. The study showed Webpage is the best channel for sent the message and improved channel for increase efficiency. Facebook and Lines were visual perception technologies and were promoted for the perception the message for real times, suddenly and favorited for teenage. The study of sending message of public relations to the first undergraduate students are important for creating awareness both in the corporate and non-corporate media. The study was improving the social media in the organization and presents the message media in the organization to meet the needs of students.

ACKNOWLEDGEMENT

This work was generously supported by Suansunandha Rajabhat University, Bangkok, Thailand. I am thankful for Assoc.Prof.Dr. Luedech Girdwichai my president for supported the grants of this study.

REFERENCE

- [1] Laran J. (2016). Hallucinogen Persisting Perception Disorder DSM-5.
- [2] Elliot A. Wilson, TD., Akert, RM. (2010). Social Psychology Seventh Edition. Upper Saddle River, NJ: Pearson Education, Inc. pp. 83-115. ISBN 0-13-814478-8.

- [3] Jenkins DN. (2014).Perceiving is Believing Perf. Hank Green.
- [4] Yolanda.W.(2016).What is Perception Chapter 3.7 Williams' notes.
- [5] Skinner's BF. A Review of Verbal Behavior Chomsky, Noam*A Review of B. F. Skinner's Verbal Behavior*. [Journal (Paginated)] (1959).
- [6] Roy FB. and Brad J. Bushman *Social Psychology and Human Nature* offers an excellent broad overview of many topics under the branch of social psychology, including a primer on self-perception.
- [7] Armano D. (2012).Harvard Business Review Six Social Media Trends.
- [8] Barry AM.(2002).Perception and Visual Communication Theory *Journal of Visual Literacy*, Spring
Volume 22, Number 1, 91-106.
- [9] Pongwichai.S.(2010).Methodology of research, lecture on CA703 (page 32), Sripatum University.

SMALL AND MICRO COMMUNITY ENTERPRISE MARKETING STRATEGY, DUSIT DISTRICT, BANGKOK

Narumon Chomchom

*College of Innovation Management, Suan Sunandha Rajabhat University, Bangkok, Thailand,
E-Mail: narumon.ch@ssru.ac.th, chomchom_na@hotmail.com*

ABSTRACT

This research is to analyze marketing strategy of the product from Small and Micro Community Enterprise on an internal and external environment (SWOT Analysis) and to analyze TOWS Matrix of the Small and Micro Community Enterprise in order to propose Marketing Strategy to Small and Micro Community Enterprise. The researcher utilized qualitative research technique by using an in-depth interviewed to 7 members of the Dusit community leaders and 14 community members totaling 21 persons. The researcher found that the following strategies should be developed: 1. Production Development Strategy in order to enhance the quality standard. 2) Brand Product and Packaging Development Strategy 3) New Product Development that can enhance the value added to the product. 4) Online public relations strategy and 5) Distribution strategy to expand an international distribution channel.

Keywords: Marketing Strategy, Product, Small and Micro Community Enterprise, Dusit District.

INTRODUCTION

Small and Micro Community Enterprise has been set up by community members who owns product, create production, trade and finance, and would like to use this factor to enhance the facility in their community efficiently.[1] The Small and Micro Community Enterprise is the organization agency who coordinating on helping people in community to be able to manage themselves and existing resources to strengthen the economy, society and culture in order to be self-reliant, sustainable community. Therefore, Small and Micro Community Enterprise is a part that helps reduce expenses and increase income for people in the community. It is based on the use of knowledge, wisdom, culture and resources available in the community [2]. Small and Micro Community Enterprise is a method that establishing a strong economic and social foundation that can enhance the other parts of economy and society to expand on a strong foundation.

National economy, production, trade and finance are capitalism model all are under the domination of monopoly capital both national capital and multinational capital. Small and Micro Community Enterprise with a small capital, small production, trade and financial cannot change the market mechanism. The only thing that will make the Small and Micro Community Enterprise stronger is self-change in accordance with the market mechanism by creating a way consistent with the socio-economic conditions. From Thailand's strengths, and high biodiversity, so the wisdom to produce goods has a high diversity as well. Especially the production and processing of goods which is related to daily life utensils, snacks, food, beverages, medicines, handicrafts, apparel derived from plants and animals or planted or commonly available resources in each community or may be purchased from one place to produce in one community easily. However, the efficiency in producing or processing products in Thai community is the same or very similar because of the development of the same wisdom. All members can produce the same product nationwide. It is different at flavoring, production techniques, colors, patterns, expertise, art and fractional method. [3]

The launch of Small and Micro Community Enterprise Products by The government's policy that try to promote The Small and Medium businesses, and the promotion of Small and Micro Community Enterprises by launching policy "One Product One District" has not yet been successful and is not yet widely

known. As in the past, the government tried to encourage housewives or groups of farmers to transform and develop products in their community with the support from the Community Development Department, Cooperative Promotion Department and Ministry of Industry, etc. for example, but most fail or not succeed due to market problems [4]. Therefore, Small and Micro Community Enterprise under "One-Tambon One-Product" is one of a capitalism model which needs to struggle and compete to survive in the globalization. To survive under the crisis, Small and Micro Community Enterprises should develop a holistic community by developing the potential of the community to conduct Small and Micro Community Enterprises through analytical thinking with various Small and Micro Community Enterprises. They should have the knowledge of the market situation at all times by analyzing an internal and external environment by using analysis tool (SWOT Analysis) [5] to assist in strategic planning in order to develop Small and Micro Community Enterprise products creatively. Currently, product and goods in each community is not different because of the development of the same wisdom and knowledge. The only difference, as a result is the Small and Micro Community Enterprise has no bargaining power so to create a competitive advantage. The strategy is important and essential for every organization as well as Small and Micro Community Enterprise to formulate their strategies in order to achieve the objectives. Each strategy is determined by the nature, the strength, the development potential of each Small and Micro Community Enterprise and will enhance the negotiation power of the group with outside society.

RESEARCH OBJECTIVES:

1. To analyze the internal and external environment (SWOT Analysis) and analyze TOWS Matrix of Dusit Small and Micro Community Enterprise, Bangkok
2. To propose a marketing strategy for Dusit Small and Micro Community Enterprise, Bangkok

RESEARCH METHODOLOGY:

This research is a qualitative research. The researcher studies the opinions of entrepreneurs in the Small and Micro Community Enterprise by using an In-depth interview technique. The researcher used the information obtained to analyze, summarize the relevant issues and found a solution to propose appropriate guidelines for entrepreneurs in Dusit Small and Micro Community Enterprise, Bangkok

Primary informers in this study, the researcher specifically selects entrepreneurs. 7 Leaders of the Dusit Small and Micro Community Enterprise community entrepreneurs and 14 Dusit Small and Micro Community Enterprise members, each, totaling 21 persons were interviewed.

SMALL AND MICRO COMMUNITY ENTERPRISE STRATEGIC PLANNING CONCEPT

The first step is to plan by using the tools (SWOT Analysis) to analyze the internal and external environment which consists of analyzing the internal environment and external environment. To analyzing the internal environment is analyzing the strengths, analyzing weaknesses, analyzing what Small and Micro Community Enterprises can control or direct by analyzing the inputs, the process that related to the 4M process which involves the person or personnel, money, materials, equipment and management, etc., To analyzing the external environment is an opportunity analysis. Opportunities and Threats: analyze what Small and Micro Community Enterprises can control and cannot control, such as the environment, politics, governance, society, economics, education, culture and technology. Then, start setting up the plan, set up the strategic goals, indicators of what the community will do to achieve the goals. In defining strategies, use TOWS Matrix analysis by pairing strengths with opportunities (SO), weaknesses with opportunities (WO), strengths with threat (ST), and weaknesses with threat (WT) to determine alternative strategies, determine strategic objectives and set up the project. The final step is tracking and evaluation. This is the part that will

be used to make changes or make decisions for planning the operation of Small and Micro Community Enterprises which related to Goodstein et al. (1993) [7] of the SWOT Analysis, objectives setting and strategy building.

RESULT OF THE RESEARCH.

Based on the information obtained from 7 of Dusit Small and Micro Community Enterprise, the SWOT analyzes were carried out as below.

Table 1
Result of SWOT Analyze of Dusit Small and Micro Community Enterprise, Bangkok

Strengths	Weaknesses
1. Knowledge and wisdom in producing goods in the Small and Micro Community Enterprises 2. Members are proficient in producing product in the Small and Micro Community Enterprises 3. Members Can work in local area together. 4. Members participate and co-operate with the community.	1. Members lack of knowledge in product development, branding and packaging in order to create value added. 2. Small and Micro Community Enterprises lack the power to negotiate. 3. Some Small and Micro Community Enterprises lack funding to support. 4. Some Small and Micro Community Enterprises have leadership problems.
Opportunities	Threats
1. Government agencies can provide business knowledge. 2. There are government / private sector organizations supporting Small and Micro Community Enterprises products. 3. New target market.	1. The minimum wage has been adjusted. 2. Competitiveness in the primary market 3. Natural Disasters affecting Productivity

After analyzing the SWOT analysis environment of the Dusit Small and Micro Community Enterprises in Bangkok, the researcher determined the marketing mix as a guideline to the development the potential and strength of the Small and Micro Community Enterprises by using the TOWS matrix analyze as Table 2.

Table 2
TOWS Matrix Analysis Based on SWOT Analysis of Community Enterprise, Dusit District, Bangkok

	Strengths	Weaknesses
	1. Knowledge and wisdom in producing goods in the Small and Micro Community Enterprises 2. Members are proficient in producing product in the Small and Micro Community Enterprises S3. Product Variety	W1. Members lack of knowledge in product development, branding and packaging in order to create value added. . W2. Some Small and Micro Community Enterprises lack funding to support. W3. Some Small and Micro Community Enterprises have

		leadership problems.
Opportunities	Sub-strategy Strengths - Opportunities	Sub-strategy Weaknesses - Opportunities
O1. Government agencies provide business knowledge. O2. Government / private sector organizations supporting Small and Micro Community Enterprises products. O3. New target market.	S1 S2 O1 Create a strong network. S1 S2 O1 O2 Promote Small and Micro Community Enterprises products. S1 S2 O3 Brand Product Development and packaging To make a difference	W1 O2 Training about product development and standards that can make a difference and value added. W3 O1 O3. Get support from the government and private sector.
Threats	Sub-strategy Strengths - Opportunities	Sub-strategy Weaknesses - Opportunities
T1. The minimum wage has been adjusted. T2. Competitiveness in the primary market. T3. Natural Disasters affecting Productivity	S1 S2 T3 Continue on Training and Knowledge Sharing	W2 T1 T2 Develops products to be more international and more distinctive. W2 T3 Expand network and expand distribution channels.
	Sub-strategy strengths	Sub-strategy weakness
	S3 Branding Training And packaging to create value added.	W4 Develops members who are knowledgeable and competent about the Small and Micro Community Enterprise products.

From the analysis of TOWS Matrix and SWOT analysis of Dusit's Small and Micro Community Enterprise in Bangkok Metropolitan Area, all seven groups found that there are many products and product diversity that are needed by the market but there has not yet received international standards and still have problems with marketing. The development of products, brands and packaging has no creativity to make a difference to add value added, to the product moreover, public relation or selling through various and appropriate marketing channel has not yet not being defined.

The researcher can summarized and proposed the marketing strategy of Small and Micro Community Enterprise commodity from the finding as following.

1. Product Development Strategy in order to raise the quality standard.

Small and Micro Community Enterprise should promote and encourage knowledge about product development and Develop the potential to raise the quality standard of the product. If the quality of the product is poor, it may not be competitive, so they should develop from strengths and opportunities. In order to be accepted on Production standards, such as efficient production, high speed, high quality standards, they should bring in technology to support the production process.

2. Brand Development Strategy and packaging

Creating brand awareness by pulling out and create brand differentiation to the brand is very important because the product also includes the uniqueness of the brand that we share. This will make it

easier for consumers to remember. Moreover, to name a brand that is easy to understand, and communicate with the consumer exactly.

Develop packaging to suit target customers, by focusing on adding value to the product and to increase the sales channels in various festivals or important occasions such as New Year, Valentine's Day that will increase the volume of sales dramatically. Small and Micro Community Enterprise should enhance the knowledge of the product design and packaging design related to the occasion throughout the year.

3. Strategy for product differentiation and value added.

In the past, the knowledge development and experiences of Small and Micro Community Enterprise was derived and transfer by members to members which can create the expertise and increase productivity in their production. Currently, Small and Micro Community Enterprise should train their member and develop the new product and create product differentiation, add more value to community products. Entrepreneurs must invent products that are different from the existing market and offer differentiated products and use new sales and marketing methods as well as thinking about local resources, local identities and local wisdom that was existing in the community.

4. Public Relation Strategy.

The various media channel should be used to promote Small and Micro Community Enterprise product. Online promotion should be the priority for today. For example, the social media such as Facebook, Instagram Line and so on because it is easy to reach the target audience with low cost. No need to advertise through high-cost television or radio, in order to better the supporting of the offline media.

5. Distribution and Channel Strategy.

Small and Micro Community Enterprise should expanded their distribution channel from the traditional trade channels through modern trade channels, to suit with the change in technology and lifestyle of consumers. Market penetration through the online channel, such as website or Facebook etc. should be implemented as it is also an important channel to play a greater role in digital society.

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to Suan Sunandha Rajabhat University for invaluable help throughout this research.

CONCLUSION AND FUTURE WORK

The summary and strategy of enterprise goods of Small and Micro Community Enterprise in Dusit district, the government should develop business incentives, such as technology, regulations, marketing, finance, government services, and create regulations to protect the entrepreneurial of Small and Micro Community Enterprise and to promote and raise standards of Small and Micro Community Enterprise products. Government also should supports opportunities to enter the international market and should support the knowledge of Small and Micro Community Enterprise allows members to develop standardized products, Packaging Development, Branding to make a difference and value added to create a strong financial sustainability in Small and Micro Community Enterprise in the future.

REFERENCES

- [1] Office of the Secretary of the Community Enterprise Promotion Commission (2008) Provincial Agriculture Office and District Agricultural Office Bangkok. Department of Agricultural Extension Ministry of Agriculture and Cooperatives.
- [2] KANJANAVISUTT Chintana. (2015). Enterprise Pathways for Career Development and Self-Reliance. Bangkok: A service provider.

- [3] PETCHPRASERT N. and Vongkul P. (2013) . Small and Micro Community Enterprise, Fundamental of economic mechanisms (6th edition), Bangkok: Edison Press Products.
- [4] SRISOM, Wijitra. (2015) . The Development of Community Enterprise to Strengthen the Community and to Support Cultural and Ecological Conservative Tourism. Proceedings. / Conference Name, 6th IASTEM International Conference. Berlin, Germany. 29th November 2015. Vol. 6, No. 1, Pp. 96-99.
- [5] HUTANUWATR Narong and HUTANUWATR N. (2008). Thinking strategic by SWOT. (7th edition). Bangkok: Ubon Rachathani University.
- [6] KANCHANAWISUTT Chintana. (2013) Teaching Material, Strategic Planning for Vocational Education (Copy Version). Bangkok: Department of Vocational Education, Faculty of Education, Kasetsart University.
- [7] Goodstein,L., Nolan, T., and Pfeiffer, J., W., (1993). Applied Strategic Planning. Singapore: McGraw-Hill.

THE CONSERVATION OF PRIVATE THAI TRADITIONAL HOUSE FOR TOURIST ATTRACTION TO PROMOTE THAI CULTURAL TOURISM: CASE STUDY OF “MR. KUKRIT PRAMOJ’S HOUSE” BANGKOK THAILAND

Supakit Mulpramook*, Korkiat Nimmol**, Suriyun Chanswang***
& Ladda Poonsawatmongkol****

*Deputy Dean of College of Architecture., Suan Sunandha Rajabhat University, Bangkok, Thailand,
E-Mail: *supakit.mu@ssru.ac.th, **korkiat.ni@ssru.ac.th, ***suriyan.ch@ssru.ac.th, ****ladda.po@ssru.ac.th*

ABSTRACT

Thai Architecture always in the first row of the cultural tourism attraction in Thailand , The most of tourists who love cultural tourism strongly interested in Thai traditional style of architecture but most of them are Palaces and Temples which was conserved by the government only a few of them operated by private sector. The original Thai traditional style house is one of the popular categories among cultural lover. This research aim to study on conservation of private Thai tradition house for tourism attraction , Since There are 4 regions in Thailand and each of them have their own characteristic in architectural details. Traditional Thai houses from the different regions in Thailand have their distinct characteristics and designs based on the region's history and culture. The author will focus only the Thai Traditional house style in the central region. The case study of MR.Kukrit Pramoj’s House is one of the outstanding sample for appropriate conservation method to preserve the valuable architectural heritage for cultural tourism attraction in Thailand.

Keywords: Thai traditional style house, MR.Kukrit Pramoj, Architectural conservation

INTRODUCTION

Thai houses in Thailand are difference in styles depend on native people that lives in each parts of the country, and it climate. Traditional Thai houses are well adapted to the lifestyle needs and climatic conditions. Simplicity and open space are the core features of the Thai style house. Whole families would sleep together in a single room. In some instances, the open space was partitioned off into separate living areas to accommodate various generations. In a typical old Thai house, the various rooms would be separate units connected by open walkways and the staircase was on the outside. Mainly, Traditional Thai houses are divided them into 4 part :- central , Northern , North-eastern and Southern which all difference styles and details. Traditional Thai houses are made from wood, held together by wooden joints or pegs. No nails are used. Such houses can be dismantled and reassembled somewhere else. So it's a real case of house moving.

The Home of MR Kukrit Pramoj, officially known as M R Kukrit's Heritage Home, is set deep in a quiet soi off the busy South Sathon Road in downtown Bangkok .MR Kukrit's home consists of five teak houses, the earliest of which is more than 100 years old. An additional structure, the public functions hall was added later. The original houses for the Home of M R Kukrit were acquired from various parts of Central Thailand, dismantled, transported and painstakingly reassembled in the present location.. The whole process from the first house till completion took twenty years. These authentic Thai houses are based on the traditional Thai architecture of the central region.

GENERAL FEATURES OF A TRADITIONAL THAI HOUSE

Raised Platforms

The primary reason for elevating the house floors on post is to protect the house and other properties from flooding during the rainy season.

Pitched Roof

The frequent times it rains in Thailand has caused architects to consider making pitched roofs since rainwater could run off the steep roof quickly. Houses have long overhangs which provide the shade and help keep the rain out. Regional variations in roof designs include pointed and wing-like structures from Central Thailand houses and the V-shaped gables of the northern houses. Stories have it that the “wing-shaped roofs” are the means to reach heaven.

Open Terrace

The traditional Thai house has an open terrace which takes up about 40% of the floor space of the house. These open areas are often used for outdoor activities such as family gatherings or other special occasions. It also helps achieve good ventilation for the house.

Prefabricated and Modular

The traditional Thai house is also uniquely distinguished from other architecture because of its modular construction. The different areas in the houses are constructed in modules such that they can be disassembled and assembled from one location to another. In the past, land was abundant and that caused people to move a lot, as they please. They can simply pack their belongings including the house to transfer to another community or region.

TRADITIONAL THAI HOUSE CENTRAL STYLE

The main and most outstanding style is Thai central plain style, that have survived to our time. The majority of them were built between some 100 to 150 years ago. They are known for high gabled roof, wood panel, generously wide eaves, ample space underneath the house on stilts. Thai houses in the central plain come in different categories, i.e. Thai house for lone family unit, Thai house that does business on the dry land, residence for royal personages, and living quarters for Buddhist monks. Characteristics of Thai Houses in the Central Plain:

1. High floor level allowing an averaged man to walk with clearance above his head. High floor level are built for the following reasons:

1.1 As a measure against any inconvenience from flooding.

1.2 Space under the house for storage of farming equipment such as wagon, planks, boats, ploughing set, large frying pan, etc.

1.3 Floor space under the house is used for producing handicraft, and a common sitting or squatting area.

1.4 Safety from wild beasts and possible intruders during night time.

2. High gabled roof and ample slanting eaves, and the roof cover made from a tap or earthenware tiles.

3. Large platform area which may represent as much as forty percent of the total floor area allowing exposure to sunlight and good clean air.

There is a functional aspect behind this design and structural element. Hot air rises so the height of the roof keeps the house cool. Thai house in the central plain has its roof line oriented along east west direction. This is to cut down the amount of sun light into the main body of the house and at the same time obtain the maximum benefit of the cool winds. Walls were generally left unpainted, though sometimes oiled. The curved roof-ends which give the tip of the eaves a highly distinctive look and add to the graceful

appearance of the Thai houses are symbolic of the 'nagas'¹ or serpents that adorn the Khmer temples. They have been stylized and often bear little resemblance to the original art form.

CONSTRUCTED WITHOUT NAILS

Traditional Thai house in the central plain are only style that built with pre-fabricated system, allowing people to build or move easily, and groups together with many form of functions. One practical feature of the Thai house is the ease with which it can be assembled or taken down. The entire house is built in light, pre-fabricated sections with each section forming a wall. Each wall is then fitted together and hung on the superstructure - a frame of wooden pillars - without nails. In former times, the fact that the house could be taken down and re-assembled with relative ease was well-suited to the indigenous way of life. When families decided to move, as they frequently did, the house would be taken down, stacked on a raft and floated down the nearest klong to a new

MR. KUKRIT PRAMOTJ A FORMER PRIME MINISTER OF THAILAND

MR²Kukrit pramoj a former Prime Minister of Thailand in the 1970s who was usually addressed with the noble title of Mom Rajawong because he was the son of a royal prince was one of Thailand's most colorful, outspoken and versatile characters. He co-founded a newspaper and wrote political commentary, mastered classical Thai dancing and opened a school to teach it to younger generations, acted in a film "The Ugly American" with Marlon Brando and remained an unashamedly opinionated elder statesman until the end of his life Author and statesman Mom Ratchawong Kukrit Pramoj (1911–95) once resided in this charming complex now open to the public. Surrounded by a manicured garden, the five teak buildings introduce visitors to traditional Thai architecture, arts and the former resident, who served as prime minister of Thailand in 1974 and '75, wrote more than 150 books and spent 20 years decorating the house. On 24 October 2009, the United Nations Educational, Scientific and Cultural Organisation (UNESCO) named Mom Rajawongse M R Kukrit Pramoj as a World Historic Important Figure.

MR. KUKRIT PRAMOJ 'S HOUSE – How to Get There

The house is situated at 19 Soi Phra Pinit, South Sathorn Road, with the nearest BTS Skytrain station at Chong Nonsi. Leave by Exit 2, head across the main road past the BRT bus Station, walk along the side of the main road and take the first soi on the left.

MR. KUKRIT PRAMOJ 'S HOUSE – The Home

Set in 2 acres of grounds, the home itself consists of 5 separate one roomed elevated teak houses, connected by an open-air terrace. In a style reminiscent of the Jim Thompson House, these buildings were sourced elsewhere in Thailand, meticulously dismantled, transported and then re-assembled on site.

Under the houses on the ground floor, there is an open dining and sitting area, guest rooms and meeting room. An elegant teak staircase takes you upstairs to the terrace, also open, where you will find a bedroom, shrine and private rest room located on either side and a pagoda overlooking the garden at one end.

Each room, crammed full of antiques and personal artifacts collected by Kukrit over the years, has been carefully preserved as though still in use and the whole home feels very much alive.

¹is the Sanskrit and Pali word for a deity or class of entity or being taking the form of a very great snake, specifically

² Mom Rajawongse or MR for short is a royal title granted to direct descendants of Chakri kings who were not in the line of succession. The titles run for three generations; Mom Chao, Mom Rajawongse and Mom Luang after which they end. MR. Kukrit Pramoj was the great grand nephew of King Rama II.

You can also wander about the Thai ornamental gardens with their rare plants and miniature sculpted trees, known as Mai Dat³ in Thai. Or you can take a stroll in the lawn gardens at the rear, a nice spot to appreciate this peaceful oasis, located in the heart of the city.

MR. KUKRIT'S HOUSE - Information

He died in 1995, and much of his living quarters—five interconnected teak houses—has been preserved. Throughout his life, MR.Kukrit was dedicated to preserving Thai culture , and his house and grounds are monuments to a bygone era; the place is full of Thai and Khmer art and furniture from different periods. The landscaped garden with its Khmer stonework is also a highlight. It took Pramoj 30 years to build the house, so it's no wonder that you can spend the better part of a day wandering around.

The house is open every day from 10.00am to 16.00, with admission fee of 50bt for adults and 20bt for children. English speaking guides are available.

METHODOLOGY

Method of study

1.Documentation research

- Observing and collecting tourism information and details
- Observing the behavior of local communities that are involved in M.R.Kukrit's House as a comparison.
- Review all literature pertaining to cultural or sustainable tourism
- To study all documents relating to places and activities in MR.Kukrit's House from both primary sources and secondary sources, such as diaries, local documents, ancient photographs, maps, reports and related studies.
- Collect the original and ancient information from national archives.

2. Site research

- Site survey of tradition Thai house to gather general information of the existing physical landscape and its architectural heritage. Photographing and mapping the site
- Data will be collected from the local community, visitors and local authority.
- This will be studied, collected and reviewed to establish the architectural heritage of MR. Kukrit Pramoj's house assessing and analyzing the potential and planning the promotion of cultural tourism.

THE CONSERVATION AWEARNESS

The conservation of Thailand's heritage buildings require craft and trade people that are trained with necessary skill-sets to ensure that correct techniques and materials are used. In Thailand, age-old building traditions and skills that were traditionally passed from masters to students are disappearing, leading to an increasing shortage of skilled tradespersons and craftspeople. In addition, the restoration of such places faces a range of challenges, including lack of access to the raw materials as well as a lack of know-how in traditional construction,

There are two important paths for the conservation are

³ miniature sculpted trees

1. Increasing awareness and understanding on the international standard of cultural heritage conservation to the conservation project supervisors, foremen and related private companies.

2. Increasing necessary professional skills for building craftspeople, in order to conduct conservation works more efficiently, including the use of appropriate materials and techniques.

A traditional Thai house is generally described as a wooden structure raised on posts with elegantly tapering roof and other ornate decorations that differ from region to region. Common to all traditional houses in the different regions is the method of raising a platform on poles, to protect the house from dirt, thieves, hostile wildlife, and more importantly, for protection against monsoon floods which affect the entire country at its worst conditions.



Figure.1 MR. Kukrit Pramoj



Figure.2 MR. Kukrit Pramoj's House



Figure.3 the group of building .MR. Kukrit's home consists of five teakwood houses



Figure.4 the group of buildings .M R Kukrit Pramoj 's home surrounded with the greenery

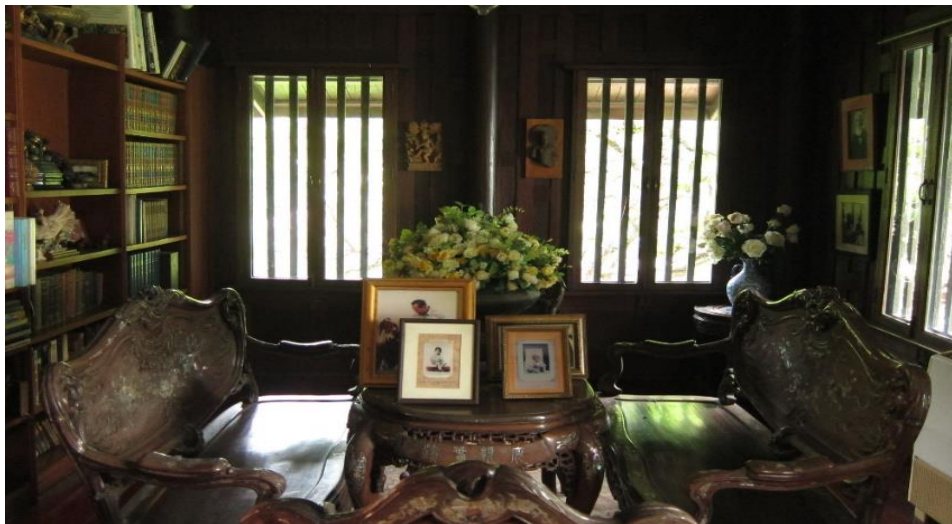


Figure.5 Interior of livingroom decorated with wood furniture in traditional style

TEAKWOOD

The most important wood is teak (*tectona grandis*) or locally known as mai sak⁴. Perhaps the strongest wood in the world, it is noted for its capacity to withst and changes in the weather and season. Teak tree grows tall and straight, so it can be milled into a maximum amount of quality timber. The teak tree resin typically has an oil in its Galih (Cambium/heartwood) that is highly water resistant. This content alone can protect the teak from decay, insects, and bacteria. Teak houses can last up to 200 years. Thus it becomes an excellent choice for house builders Another versatile wood is narra or pradu⁵(*pterocarpus macrocarpus*). It is a hard, medium-weight timber with yellow coloration. Moderate in cost, it is used for structural elements, interior finish, paneling and furniture.

⁴ Thai word for teakwood

⁵ A kind of Thai hard wood

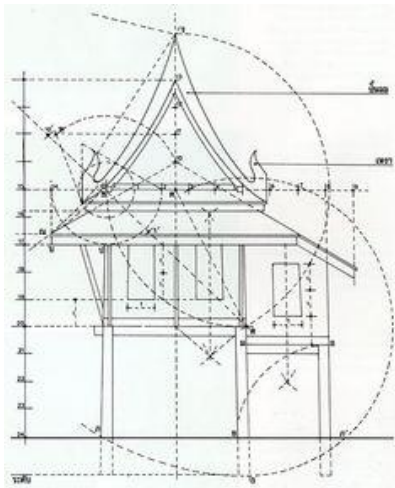


Figure.6 Thai House proportion



Figure.7 The wall panel ready made from the builder shop.

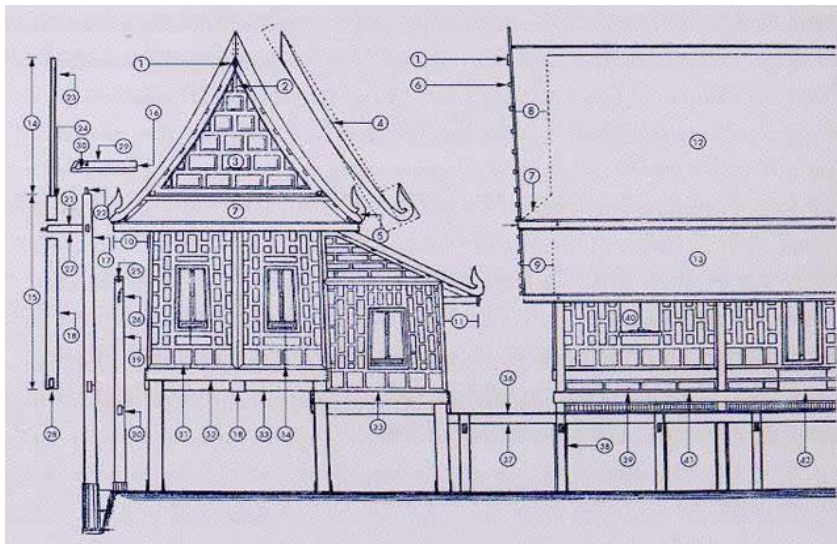


Figure.8 Details drawing of thai traditional house



Figure.9 Teakwood is the most important material for thai traditional house



Figure. 10 Skilled craftman worked on teakwood post.

CONCLUSION

The Thai house, like other houses in Southeast-Asia, is a wooden structure raised on posts. Over many centuries it has acquired its own unique style. The distinguishing marks are an elegantly tapering roof and various finials and decorations that differ regionally. While architectural features vary throughout the four cultural regions, Central Thailand, the North (Lanna), the North-East (Isaan), and the South, the method of raising a platform on poles is common to all parts of the country. It offers protection from dirt, hostile wildlife, thieves, and most importantly from the monsoon floods which affect all of Thailand.

The traditional Thai house is ideally adapted to its environment. The open high-pitched roof facilitates air circulation. Open windows and walls in combination with a large central terrace provide ideal ventilation and offer relief from the hot and humid climate. Wide overhanging eaves protect the house from sun and rain. Rainwater runs off the steep roof quickly and falls through the permeable terrace and house floors. The use of wood and bamboo reflects the once abundant forests that provided these materials ubiquitously and cheaply. In the past, an agricultural society existed in relative harmony with its natural environment.

Unfortunately, things are different today. Uncontrolled development has led to poorly planned traffic-choked cities, vanishing forests, and overall environmental degradation. Thai architecture has changed, too. As canals have been filled; cars, TVs and air conditioners have made inroads, ugly rows of uniform, concrete shophouses and apartment blocks are now the norm. In recent years, however, people began to realize the negative impact of unbridled economic development. Zoning laws and building regulations were just introduced recently. One may hope that the tropical climate will do its part to rid the landscape of unsightly and poorly adapted structures and that the commencing rediscovery of the vernacular architecture will lead to increased harmony between buildings and environment.

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to Suan Sunandha Rajabhat University for invaluable help throughout this research.

REFERENCES

- [1] Aasen, Clarence. *Architecture of Siam: A Cultural History Interpretation* Oxford University Press, 1998. Kuala Lumpur
- [2] Amranand, Ping & Warren, William. *Art & Design of Northern Thailand: Lanna Style* Sirivatana Inerprint Public Co., 2000. Bangkok
- [3] Cummings, Joe. *Lonely Planet: Thailand* Lonely Planet Publications, 1990. Singapore
- [4] Freeman, Michael. *Lanna: Thailand's Northern Kingdom* River Books, 2001. Thailand

- [5] Lassus, Pongkwan (Sukwattana). Architectural Heritage in Thailand, Amarin Printing and Publishing, 2004. Bangkok
- [6] Sthapitanonda, Nithi & Mertens, Brian. Architecture of Thailand: A Guide to Traditional and Contemporary Forms Thames and Hudson, 2005. Singapore
- [7] Weaver, E.M. and Matero, F.G. (1993), CONSERVING BUILDINGS, Guide to Techniques and Materials, The United State of America, John Wiley & Sons, Inc.
- [8] McDonald, Travis C.Jr., Understanding Old building : The Process of Architectural Investigation', Preservation Brief, (reading book in Building Conservation Technique Cause)

EFFECTS OF 2R2W MODEL IN TEACHING SUMMARY WRITING

Wipada Prasansaph

Faculty of Education, Suan Sunandha Rajabhat University, Bangkok, Thailand,

E-Mail: wipada.pr@ssru.ac.th

ABSTRACT

Summary is considered a significant one for college students. It requires the skill after the reading to show how much the reader understands the text by writing a brief note about what s/he has read. The purposes of the study were to 1) develop and test the efficiency of 2R2W model in teaching summary writing, and 2) to compare their pretest and posttest score, before and after studying through 2R2W model of teaching summary writing. The research sample, selected by purposive sample technique, comprised 40 third-year English major students, Faculty of Education, Suan Sunandha Rajabhat University. The experimental research lasted 7 weeks and covered 5 teaching lessons, a pretest, 5 practice tests, and a posttest. The t-test dependent was used to analyze the students' writing score before and after studying through 2R2W model of teaching summary writing. The percentage, mean, and standard deviation were used to evaluate the efficiency of the teaching activities. It was found that the efficiency of 2R2W model of teaching summary writing was 75.45/78.88 percent for the formative tests and the posttest respectively, exceeding the expected criterion (75/75). The students' writing score after studying through 2R2W model of teaching summary writing was higher than that of before the studying at the significance level of 0.05.

Keywords: model of teaching, summary writing, EFL

INTRODUCTION

The teaching of English in Thailand is regarded as an EFL (English as a Foreign Language) context. The opportunity to use English outside the classroom is rare. The medium of instruction in schools and universities are mostly in Thai, the official language of the country. If the school environment was English, it would be the international schools or English Program schools, while the majority of schools are still run the regular program. Recognizing the significance of learning English, the core curriculum of basic education of Thailand sets English as one of the major school subjects for Grade 1-12 [1].

English teaching in Thailand has been experimented through several EFL pedagogical methods for several decades; namely Grammar-Translation Method (GT), Direct Method, Audio-Lingual Method, Cognitive-Code Learning, The Natural Approach, Communicative Language Teaching (CLT), Content-based Instruction (CBI), and Task-based Language Teaching (TBLT).

While Grammar-Translation Method focuses on teaching the accurate grammar rules and translating from Thai to English and English to Thai, Direct Method does not allow the use of Thai (the students' mother tongue) in English (the target language) classroom. Rather, Direct Method proponents support the total use of the target language and believe that the language learners tend to deduce grammar rules from the authentic use of the language.

Audio-lingual Method believes in language drills and repeated practice, while Cognitive-Code Learning trusts human language learning ability that people will be able to produce unlimited language when they have precise understanding of grammar.

The Natural Approach hypothesizes that the subconscious language acquisition can lead to fluent language use. Comprehensible input is very important for the learners to learn what they are able to understand. [2][3].

CLT is more like an approach than a method; therefore, it is varied to put CLT into practice under the big umbrella of communication-based instruction. In Thailand, the PPP (Presentation-Practice-production) version of CLT is widely applied for English lesson planning because it has clear practical procedure of teaching.

However, during the past twenty years, CBI has been modern trends in teaching English in Thailand. There are more English programs in primary and secondary schools where English is used as a medium of instruction in other school subjects besides English subject with the belief that when students learn academic knowledge through the target language, they are also learning the language. While CBI focuses on the content of subject matters, TBLT focuses on tasks. Students are assigned to complete the tasks. In the process of completing the tasks, students are communicating the target language and learning it effectively [4].

Among the four skills of language teaching and learning, writing is the most challenging skill to teach due to a few reasons. There is usually no direct contact between the writer and the reader. Therefore, the writer usually does not know whether the reader understands or enjoys what s/he is written. Moreover, the writer needs to have a good knowledge of grammar, vocabulary and structure of the target language to convey the meaning of the message clearly as, unlike speaking, there is no place for negotiation. Also, writing needs a lot of thinking, imagination and organizing. In other words, the writer has to make sure the style of writing is interesting [5].

Among various types of writing genres, summary is considered a significant one for college students. It requires the skill after the reading to show how much the reader understands the text by writing a brief note about what s/he has read. A summary written for content area reading has four defining features: (a) it is short, (b) it tells what is most important to the author, (c) it is written in your own words, and (d) it states the information you need to study. Teachers can make a powerful learning strategy available to college students by teaching them to think about the passage (what they have read) and relate the ideas to one another to construct a summary rather than select sentences from the passage [6].

As summary is important due to the aforementioned reason, the teaching summary writing is necessary. According to the researcher's experience of teaching summary writing, Thai learners often find it is difficult to make it short and in their own words. They tend to select some parts from the reading text and combine parts together to become their summary. This is due to two main reasons. First, their understanding in the reading text is not thoroughly complete, so they tend to think that they may miss some parts when making it shorter. Second, they are not confident of their English language in writing. Instead of writing a summary in their own words, they select some parts that they think important to form a summary. Hence, the researcher is interested in finding the way to solve these two problems; weak reading comprehension and lacking of confidence in using their own language.

Considering the experiments of pedagogical theories in ELT (English Language Teaching) in Thailand, it seems that the newer trends are replacing the former ones as time goes by. Grammar-Translation Method (GT), the traditional one, seems to be out-of-date and has a lot of criticism such as using mother tongue as the medium of instruction, focusing on grammar rule memorization, and lacking of daily-life conversation practice [7]. Newer trends like CLT and TBLT have become more popular as they promote the use of authentic target language and the inductive teaching of the grammar rules. However, for EFL contexts, GT may not be totally ignored. While total use of the target language has a lot of benefits to students' language acquisition, grammar and translation also contribute in terms of comprehension in reading and editing of writing. Attempting to find the way for the students in writing a good summary with their

understanding and in their own words, the researcher integrates the underpinned theories of GT, CLT and TBLT to form a model called “2R2W Model” in teaching summary writing for the students in EFL contexts. The detail will be explained below.

1) GT has existed for a long time and is still a popular method employed in many schools in Thailand. [8]. Since the goal of this teaching method was to help learners read and appreciate foreign language literature, the emphasis is put on studying the grammar and vocabulary of the target language [9]. Features of GT is identified as follows [10].

- Instruction is given in the native language of students.
- There is little use of the target language for communication
- Focus is on grammatical parsing.
- There is early reading of difficult texts.
- A typical exercise is to translate sentences from the target language into the mother tongue or from the mother tongue into the target language.
- The result of this approach is usually an inability of the part of the student to use the language for communication.
- The teacher does not be able to speak the target language.

As a result, GT has a lot of criticism for not creating the language learning atmosphere in terms of language communication. Also, the teacher's role in this method is not to use the target language, but to explain and translate the language instead. However, in this research, GT is not purely applied in the teaching process. Rather, it is used as a part of the whole teaching procedure. The detailed steps will be explained later in the 2R2W model of teaching summary writing.

2) CLT was developed under the influence of communicative competence theory. It was explained that communicative competence consists of grammatical, discourses, sociological, and strategic competence. [11].

The definition of communicative competence changes our views of language. It shows that language is not just about learning structures, but is importantly also about how to use the structures to communicate in different real life situations. People learn a new language in order to communicate with each other through both written and spoken language. Moreover, the knowledge of semantics and syntax alone cannot allow people to communicate effectively and fluently. These ideas have been widely accepted among second language educators.

CLT has been interpreted into designs, instructions, and materials in many different ways. Since it is more like a group of approaches than a particular methodology, there is no specific way of teaching [12]. However, in the context of Thailand, CLT is mostly interpreted to put into practice as PPP (Presentation-Practice-Production) since it has the clear steps of teaching as follows.

Presentation stage

The teacher presents to the class, in a clear context, the form and one use of a particular grammatical pattern, e.g., the present simple for daily routines, or ways of expressing a function or notion, e.g., greeting and introduction.

Practice stage

The teacher leads controlled practice using different activities, e.g., drills, grammar games, dialogues for role-plays (a type of speaking activity where students are asked to imagine that they are in different situations and act accordingly), and information-gap activities (a type of speaking activity where two speakers have different information making up a whole). The emphasis is on getting the new form correct. When the teacher asks a question, the reply is often required to conform to the target pattern.

Production stage

The teacher sets up an activity where students are encouraged to use language freely. The aim is to “produce” the new language learnt in a given situation.

3) Task-based Language Teaching derives from Communicative Language Teaching. Attempting to implement tasks and design a task-based lesson, language educators have proposed a number of instructional frameworks. However, they all have in common three principal phases, pre-task, during-task and post-task

The first phase, *pre-task*, involves activities that teachers and students undertake before they start the task. This aims to prepare readiness to perform tasks.

The second phase, *during-task*, centers on the task itself and affords various instructional options as the students perform the task.

The third phase, *post-task*, concerns procedures for following up on the task performance.

4) After synthesizing the three language pedagogical theories, *the 2R2W model* was developed to guide the instructional procedure as follows.

- **Readiness stage:** The teacher gets students' attention by asking questions, eliciting known vocabulary from storytelling, pictures, or any other teaching materials in order to lead to the lesson. Brainstorming and general discussion about the known topics are recommended.

- **Reading stage:** The teacher sets the guided questions and assigns students to read silently in order to find the answer to the guided questions. Drawing mind mapping, discussion and note-taking skills are required. Grammar-translation is allowed in this stage. Some long texts such as articles and novels need longer time to read. Students are advised to continue reading outside class and draw mind maps and take notes.

- **Writing stage:** Students are assigned to write a summary of the text in the scope of the given number of the words such as 250, 300, 350 or more words in a limited time in class. They are allowed to use their own mind maps and notes as a guide. Outlining, and drafts can be bilingual (Thai and English or monolingual draft in Thai or English) No discussion is allowed in this stage.

- **Wrapping up stage:** In pairs or in groups, students discuss about the language use in the previous stage; whether they think the language is right or wrong, appropriate or inappropriate. Raise the problematic grammar points to be learned. The medium of instruction is in English. Finally, let students correct their own summary and submit their final draft to the teacher.

METHODOLOGY

The purposes of the study were to 1) develop and test the efficiency of 2R2W model in teaching summary writing, and 2) to compare their pretest and posttest score, before and after studying through 2R2W model of teaching summary writing. The research sample, selected by purposive sample technique, comprised 40 third-year English major students, Faculty of Education, Suan Sunandha Rajabhat University. The experimental research lasted 7 weeks and covered 5 teaching lessons, a pretest, 5 practice tests, and a posttest. The 5 lesson plans are implemented through the 5 novels (simplified version around 5,000 word in length) namely Sherlock Holmes, Moby Dick, Treasure Island, Huckleberry Finn, and Romeo and Juliet. The formative tests assign students to write a summary in a limited time and the given number of words for the summary. It could be 250, 300, 350, or more words. Students need to strictly follow the instructions. The pretest and the posttest assign students to write a summary of the unseen story (around 1,000 words in length) in a limited time and the given number of words for the summary.

The timeline of the implementation of the process of the research

Table 1

The timeline of the implementation process of the research

Week	Implementation	Instrument
1	Implementing pretest	Pretest (Writing a summary of an unseen story)
2	Implementing 2R2W model of teaching summary writing on "Sherlock Holmes" and taking a formative test 1 on summary writing	Lesson plan on "Sherlock Holmes" A formative test 1 on summary writing
3	Implementing 2R2W model of teaching summary writing on "Moby Dick" and taking a formative test 2 on summary writing	Lesson plan on "Moby Dick" A formative test 2 on summary writing
4	Implementing 2R2W model of teaching summary writing on "Treasure Island" and taking a formative test 3 on summary writing	Lesson plan on "Treasure Island" A formative test 3 on summary writing
5	Implementing 2R2W model of teaching summary writing on "Huckleberry Finn" and taking a formative test 4 on summary writing	Lesson plan on "Huckleberry Finn" A formative test 4 on summary writing
6	Implementing 2R2W model of teaching summary writing on "Romeo and Juliet" and taking a formative test 5 on summary writing	Lesson plan on "Romeo and Juliet" A formative test 5 on summary writing
7	Implementing posttest	Posttest (Writing a summary of an unseen story)

The criteria for writing task scoring

The criteria for writing task scoring in this research is the ESL composition Profile [13] considering 5 aspects of the written text; content (30%), organization (20%), vocabulary (20%), language use (25%), and mechanics (5%). The teacher researcher marks the writing tasks by herself. Each written paper is marked twice, the 2-week gap between the two markings, and then calculate the average score in order to be fair for scoring.

RESULTS

1. It was found that the efficiency of 2R2W model of teaching summary writing was 75.45/78.88 percent for the practice tests and the posttest respectively, exceeding the expected criterion (75/75) as presented in Table 2.

Table 2
The results of the efficiency of the 2R2W model

Items	Practice Tests					Total	Posttest Score
	1	2	3	4	5		
Score of Practice Test	10	10	10	10	10	50	40
Number of Participants	40	40	40	40	40		
Total Score	223	288	313	335	350	1,509	1,262
Average Score	5.58	7.20	7.73	8.38	8.75	37.73	31.55
Percentage	55.75	72.00	78.25	83.75	87.50	75.45	78.88
E1/E2	75.45						78.88

E1/E2 : E1 represents the percentage of the average of all scores the students earn from their activities or assignments as formative evaluation. In this research, they were called Formative Tests 1-5. E2 is the percentage of the average of all scores the students earn from their posttest, final examination. Thus, the E1/E2 is used to test the efficiency of the designed model representing the process versus product ratio. [14]

2. The students' writing score after studying through the 2R2W model of teaching summary writing was higher than before studying through the 2R2W model of teaching summary writing at the 0.05 level as shown in Table 3.

Table 3 shows the t-test comparing the average writing score before and after studying through the 2R2W model of teaching summary writing.

Table 3
The results of the comparison of pretest and posttest scores

Tests	\bar{X}	S.D.	\bar{D}	S.D. _D	t	Sig. (1-tailed)
Pretest	21.65	6.67	9.90	2.98	21.03 *	0.0000
Posttest	31.55	4.29				

*Significance level of 0.05

CONCLUSION AND FUTURE WORK

The 2R2W model of teaching summary writing is developed by using the underpinned theories of EFL pedagogical methods; Grammar-translation Method, Communicative Language Teaching, and Task-Based Language Teaching. The model was named the 2R2W model of teaching summary writing. As the name suggests, 2R2W refers to Readiness stage, Reading stage, Writing stage, and Wrap-up stage. The developed model was tested by being used to teach third-year English major students in 5 lesson plans. The result revealed as follows.

1. The efficiency of 2R2W model of teaching summary writing was 75.45/78.88 percent for the formative tests and the posttest respectively, exceeding the expected criterion (75/75). There are some reasons for this result. As the 2R2W model is designed from the base of the theories of Grammar-translation Method, Communicative Language Teaching, and Task-Based Language Teaching, it comprises the highlights of each theory. In Readiness stage, the learners are prepared for encountering the language task in the later stage. They are asked to brainstorm, discuss, and recall their background knowledge of the world and knowledge of the language. The necessary vocabulary and language structures are also taught in the meaningful way. These activities help build confidence and overcome vocabulary limitations. In Reading stage, the learners are allowed to use Grammar-translation Method and discussion in order to deeply understand the reading text. As the first problem of summary writing is the weak reading comprehension, GT and searching help from others help them understand the reading text better. The first language and translation use in a foreign language class is not prohibited activities, as Kim experimented in her foreign language class with the Korean low-level students. The result revealed a successful writing class using L1 (first language) and translation and peer editing to produce a better writing task [15]. In the writing stage, the students are allowed to use mind maps, draft (bilingual or mono lingual) to help them in writing, but limit them with the number of words for the summary. This helps them to try to write the summary by producing sentences; simple, compound or complex sentences to fit the number of words given. They are allowed to have ± 10 words. Then, in the wrap-up stage, they also have opportunity for editing by themselves and by peers before they submit the final task. As the CLT and TBLT theory suggest that when learners notice their own mistakes and correct them by themselves, this enhances the learning ability. [16]

2. The students' writing score after studying through the 2R2W model of teaching summary writing was higher than before studying through the 2R2W model of teaching summary writing at the 0.05 level. As mentioned earlier, the 2R2W model of teaching summary writing includes all the key elements to support learners in learning how to write comprehensibly. Learners have opportunity to scrutinize their own language products, which produced from the background knowledge and their learned knowledge from the particular lesson. Accordingly, learners will be able to create their authentic and meaning-focused writing tasks in the real-life situations.

Results from the study have led to recommendations for pedagogical implications and recommendations for future research as follows.

1. According to the regular formative assessment during the implementation process, the learners are enthusiastic to pay attention to the result of each test. Their goal-oriented attitude towards writing becomes more positive. Thus, they pay much attention to the learning process.

2. During the Wrap-up stage, there might be unexpected linguistic issues that the learners did in their task performances. The teacher should allocate time and allow students to search more knowledge from various sources. Moreover, the teacher should be knowledgeable about knowledge of the language and be ready to give the learners advice in terms of language rules and language use.

3. As this study was implemented with the pre-service EFL teachers, or English major students, it is interesting to replicate the 2R2W model implementation with students of other majors.

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to Suan Sunandha Rajabhat University for invaluable help throughout this research.

REFERENCES

- [1] Ministry of Education (2008), — Core Curriculum of Basic Education (A.D.2008), *Ministry of Education*, First Edition, Kurusapa, Bangkok, Pp. 1-10.
- [2] Brown, H. D. (2001), — *Teaching by Principles: An Interactive Approach to Language Pedagogy*, Longman, Second Edition, New York, Pp. 34-35.
- [3] Richards, J.C. and Rodgers, T.S. (2014), — *Approaches and methods in Language Teaching*, Cambridge University Press, Third Edition, Cambridge, Pp. 3-17.
- [4] Prasansaph,W. (2009), —Task-Based Learning for Oral Communication: A Case Study of Thai EFL Learners, *The University Of Melbourne*, Melbourne.
- [5] SEAMEO Regional Language Centre (1995). — A Distance Education TEFL Programme: Module Five The Teaching of Writing, *SEAMEO - Canada Programme of Cooperation in Human Resource Development*, First Edition, Singapore, Pp.13-14.
- [6] Friend, R.(2001), — Teaching Summarization as a Content Area Reading Strategy, *Journal of Adolescent & Adult Literacy*, Vol. 44(4), Pp320-329.
- [7] SEAMEO Regional Language Centre (1995). — A Distance Education TEFL Programme: Module One Classroom Techniques in Teaching EFL, *SEAMEO - Canada Programme of Cooperation in Human Resource Development*, First Edition, Singapore, Pp.107-108.
- [8] Muangkaew, C. (2005), — Focus on Form in a Thai University English Course, *The University Of Melbourne*, Melbourne.
- [9] Larsen-Freeman, D. (2000), — *Techniques and Principles in Language Teaching*, Oxford University Press, Oxford, p.11.
- [10] Celce-Murcia, (2001), — *Teaching English as a Second or Foreign Language*, Heinle & Heinle Publishers, Third Edition, Boston, p.6.
- [11] Beale, J. (2002), — Is Communicative Language Teaching a Thing of the Past?, *Babel*, Vol.37(1), Pp.12-16.
- [12] Nunan, D. (1999) — *Second Language Teaching and Learning*, Heinle & Heinle Publishers, First Edition, Boston, Pp.5-10.
- [13] Jacobs, H.L., Zingraf, S.A., Wormuth, D.R., Hartfiel, V.F., and Hughey, J.B. (1981), — *Testing ESL Composition*, Newbury House Publishers, Rowley, MA.
- [14] Brahmawong, C. (2012), — E1/E2 Model for Process and Product-Based Developmental Testing of Instructional Media and Instructional Packages, URL: <http://www.chaiyongvision.com/pdf/E1-E2.pdf>
- [15] Kim, E. (2011), — Using translation exercises in the communicative EFL writing classroom, *ELT Journal*, Vol.65/2, Pp.154-160.
- [16] Hedge, T. (2000). — *Teaching and Learning in the Language Classroom*, Oxford University Press, Oxford, Pp.310-311.

REFLECTIVE THINKING ABILITIES OF STUDENT TEACHERS IN RAJABHAT UNIVERSITIES OF RATANAKHOSIN GROUP

Asst. Prof. Dr. Sucheera Mahimuang

*Faculty of Education, Suan Sunandha Rajabhat University, Thailand
E-mail: sucheera.ma@ssru.ac.th, sucheeram@hotmail.com*

ABSTRACT

Reflective thinking has gained importance in teaching profession, teachers should have in order to face the challenges of education in the knowledge society. It can be developed from the experience during the course of the teacher training. But that means having the knowledge of the students' original reflective thinking abilities. This study aimed to investigate the level of reflective thinking abilities of student teachers studying at Faculty of Education from a group of 5 Rajabhat Universities named Ratanakhosin Group. Data were gathered by using 30 item 5-point Likert scales which highly reliable (coefficient alpha=.942). Participants were 1,272 year 1-4 student teachers who multistage-random sampling selected.

Key words--reflective thinking, student teachers, Rajabhat University of Ratanakhosin Group

INTRODUCTION

The period of knowledge-based society has changed the teaching profession landscape. According to Goodwin, (2010) [1], Rong & Preissle (2009) [2], and Wipawon Egwonnung (2018) [3] there are at least three new norms that currently influencing the education system. The first, classroom that are more and more diverse, almost regardless of where they are. Secondly, teachers have been expected to work alongside colleges who are not have been recruited locally, or they themselves may be the one responding to regional or international searches to fill teaching shortages. And the last, teachers will be instructing children who are not only diverse but may enter the classroom with very unique and challenging needs, effected the teacher may be faced to many challenged and complicated questions, such as how to manage their classrooms, how to analyze students' learning ability and facilitate to fulfillment of their capacities. Research on reflective thinking over the past two decades has shown that reflective thinking is a key practice that has long been recognized as an important and valuable cognitive process which engages to understand conflicting factors in a situation of instruction then develops a strategy to proceed within it. Since it is linked to inquiry and continually resurfaces in conceptualizing the practice setting, 'reflective thinking' is acknowledged as one of the key feature for sustainable development, especially in higher education institutions [4] and many profession training institutes. Since, reflective thinking has been accepted as the particular way to achieve an integration of theory and practices, so that prospective teachers are encouraged to construct their own philosophy of education integrating their experiences and personal practical knowledge with general theory [5] [6], [7]. Therefore, a study of the student teachers' reflective thinking abilities would shed light on important data that could be utilized to determine development approaches to equip Rajabhat Universities which the major goal of mission concerned student teachers training.

LITERATURE & THEORY

Reflective thinking is an interpersonal experience leading to insight about individuals as actors in their own worlds. Dewey (1933) [8] defined reflection as active, persistent and careful consideration of any belief or supported form of knowledge in the light of grounds that support it and the further conclusions to which it trends. In addition to Dewey, Schon (1995) [9] and Rogers (2002) [10] suggest the concept of reflection in problem-solving, which involves rethinking and reconsideration of past events and experiences for the better and more defined solution. In harmony to Kemmis (1985) [11], reflection is a process which involves an inward examination of our thoughts and thought process, and an out ward consideration of the situation in which individual find their own self. Clarke & Croft (1998) [12] suggested that reflective practice has the board meaning of being able to look at our own professional behavior and practice with the intention of improving and developing.

According to review of related literatures, this study proposed reflective thinking as the student teachers' abilities encompassing with three sub-constructs of self-assessment, awareness of individual's learning, and the lifelong learning skills [13], [14], [15]. The mention sub-constructs were identified as a scheme that used for assessment the participants' reflective performances in order to prevent purely subjective assessment. The highlighted of them are as the following:

1. Self-assessment: the ability of observing, gathering details, using the main reason, distributing details, and using question for guiding education structure to obtain the information for evaluation with the purpose of development work, and determining the success and impacts.

2. Awareness of individual's learning: ability to understand their ideas, believe in a better idea, to create the concept of experience and knowledge, as well as the ability to knowledge application.

3. Lifelong learning skills: the ability for systematic practicing to achieve one learning, transfer knowledge/attitude to learning. And the awareness of lifelong learning should occur continuously.

Further with Mezirow (1991) [16] and Kember et al. (2000) [13] who claim to the four level of reflective thinking which each characteristic is described here:

1. Habitual Actions: These are actions that learnt through frequent used and started to be performed automatically with little conscious thought.

2. Understanding: Thoughtful activity of individuals in which they use their existing knowledge and get comprehension of different things/phenomena without reflecting upon its significance in personal or practical situations.

3. Reflection involves the process of internally examining and exploring an issue of concern, triggered by an experience, which creates and clarifies meaning in terms of self, in a changed conceptual perspective. Including with differentiates problem posing from problem solving and raises questions regarding the validity of the problems' solutions.

4. Critical Reflection: Mezirow calls "premise reflection". In this level, learners become aware of why he/she perceive, think, feel, or act. It involves testing of a premise or reviews reflection evidence on the bases of conscious and unconscious prior learning. This level of reflective thinking is not observed frequently

OBJECTIVE OF THE STUDY

The purposes of this research was to investigate the level of reflective thinking ability of the 1st-4th year student teachers who studying in Rajabhat University of Ratanakhosin Group. Then to compare the reflective thinking abilities that categorized by participants' gender, and major of study.

METHODOLOGY

The participants who completed the questionnaires were 1,272 student teachers who were multistage-random sampling selected from Faculty of Education in 5 Rajabhat Universities named Ratanakhosin Group, including with 1) Suan Sunandha Rajabhat University (n=334), 2) Bansomdejchaopraya Rajabhat University (n=237), 3) Dhonburi Rajabhat University (n=325), 4) Chandrakasem Rajabhat University (n=152), and 5) Pranakhon Rajabhat University (n=224).

The research instrument was a 30 item 5-point Likert scales ranging from 5 Definitely Agree, 4 Agree with reservation, 3 only to be used if a definite answer is not possible, 2 Disagree with reservation, and 1 Definitely disagree. The 30 items were divided by four level subscales of Habitual Action, Understanding, Reflection, and Critical Reflection. And their content emphasized on the three sub-constructs of reflective thinking ability: self-assessment, awareness of individual's learning the lifelong learning skills which their internal reliability were 0.84, 0.824, and 0.824, respectively, and total alpha coefficient was 0.942.

Data were analyzed by means of descriptive statistics in terms of mean, and standard deviation (SD). Then inferential statistics in terms of independent group t-test, and One-way Analysis of Variance (One-way ANOVA) were implied to compare mean score of reflective thinking ability which categorized by gender, and major of study.

RESULTS

The analysis results with the basic statistics show the level to reflect thinking. The mean scores of the three sub-construct of reflective thinking abilities: self-assessment, awareness of individual learning, and lifelong learning skills are 3.64 (SD=.625), 3.67 (SD=.503), and 3.68 (SD=.555), for respectively. And its total mean score is 3.66 (SD=.457). They accumulatively demonstrate the participants have high agree with the statements concerning reflective actions. (Table 1)

Table 1

Descriptive statistics of the four level of Sub-construct of reflective thinking abilities

construct of Reflective thinking	Habitual action		Understanding		Reflection		Critical Reflection		Total	
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD
1. Self-assessment	3.56	.668	3.64	.693	3.71	6.43	3.66	.625	3.64	.625
2. Awareness of individual's learning	3.68	.694	3.69	.613	3.67	.695	3.65	.624	3.67	.503
3. Lifelong learning skills	3.73	.712	3.64	.682	3.68	.678	3.65	.693	3.68	.555
Total	3.64	.521	3.66	.518	3.69	.514	3.66	.512	3.66	.457

Table 2

The mean score comparison of Reflective thinking abilities categorized by gender

	n	\bar{X}	SD	t-value	df	p
Male	432	3.92	.478	.777	1270	.085
Female	840	3.66	.383			

* Sig. < .05

The results of t-test analysis for comparing reflective thinking abilities between gender show in Table 2. The mean scores of male (\bar{X} =3.92, SD=.487), and female (\bar{X} =3.66, SD=.383) which is not statistical significant different value.

Table 3

The mean score comparison of Reflective thinking abilities categorized by major of study

	Sum of squares	df	Mean square	F	P
Between group	5.358	6	.893	4.343	.000
Within group	260.112	1265	.206		
Total	265.470	1271			

For comparing reflective thinking abilities of student teachers in 7 major of study via One-way Analysis of Variance (as in Table 3). The results imply some difference which its statistics significance level at .05 (p =.000). The further analyzed by Post Hoc with LSD indicates eight pairs of major of study are statistical significant different in mean score of reflective thinking ability.

Table 4

Multiple comparisons of major of study via Post Hoc Tests by LSD

Comparison Group	Mean difference	Std. Error	p
1. Early childhood education - Thai language	.181*	.045	.000
2. Early childhood education – Computer & Technology	.126*	.047	.008
3. Mathematics – Thai language	.162*	.048	.001
4. Mathematics – Computer & Technology	.107*	.050	.033
5. Science – Thai language	.152*	.048	.002
6. Social study – Thai language	.136*	.047	.004
7. English language – Thai language	.183*	.048	.000
8. English language - Computer & Technology	.128*	.050	.011

DISCUSSION

The finding reveals student teachers' sub-construct of reflective thinking abilities: self assessment, awareness of self learning, and lifelong learning skills are not so much as it should be. Harmoniously, Kember at al. (2000) [13] concluded the reflection, particularly the critical reflection presence is generally less than understanding. As a result, Schon suggests the instructional model of developing reflection that should be concerned the continuous practice.

Analysis of the difference between the mean score of reflective thinking abilities of male and female students which found no difference statistically significant. This finding is consistent with the findings of Canning (1991) [17] and Clarke & Croft (1998) [12] who concluded the correlation co-efficient values are almost similar for both gender. They also advised the practice of reflective teaching methodology that holds good in professional training of individuals irrespective of their gender. However, the results of this study

showed a difference of reflective thinking abilities between students of different majors. Such a findings confirmed by Dymoke and Harrison (2008) [18] who noted learning activities encourage five reflective thinking skills core competent thoughts were observation, communication, judgement, decision making, and team working. All five skills of reflective thinking were important professional skills and are applicable to all stages of teacher learning, including initial teacher education. Also, teachers can develop reflective thinking skills by the interaction provided through a dialogue journal, purposeful discussions, and teaching portfolios [19].

CONCLUSION AND FUTURE WORK

The study shows that student teachers' reflective thinking abilities are in moderate to high. That indicates a gap waiting to be developed to fulfill their thinking capacities. Additionally, the difference between majors of study, indicate the thinking ability is affected by the nature of science and learning activities.

ACKNOWLEDGEMENTS

I would like to acknowledge Suan Sunandha Rajabhat University as this research fund and a supporter.

REFERENCES

1. Goodwin, A. L. (2010). Globalization and the preparation of quality teachers: rethinking knowledge domains for teaching. *Teaching Education*, 21(1): 19-22.
2. Rong, X. L. & Preissle, J. (2009). *Educating immigrant students in the 21st Century*. Thousand Oaks, CA: Corwin.
3. Wipawon Egwannang. (2018). The teaching professional competency assessment module for pre-service teachers of Rajabhat University. In *Research and Development Journal Suan Sunandha Rajabhat University*, 9(2) (July-December).
4. Dawe, G., R. Jucker, and S. Martin (2005) Sustainable development in higher education: current practice and future developments. *A report for the Higher Education Academy*. www.heacademy.ac.uk/assets/York/documents/ourwork/tla/sustainability
5. Shin, S. J. (2006). Learning to Teach Writing through Tutoring and Journal Writing. *Teachers and Teaching: theory and practice*, 12(3): 325-345
6. Claxton, G. (1999). *Wise up: the challenge of lifelong learning*. London: Bloomsbury.
7. Rofle, G. (2011). Knowledge and practice. In G Rolfe, M Jasper & D. Freshwater (Eds.), *Critical reflection in practice. Generation knowledge for care* (pp. 11-29). London: Palgrave Macmillan.
8. Dewey, J. (1933). *How we think*. Lexington, MA: D.C. Heath & Co.
9. Schon, D. A. (1995). *The reflective practitioner: How professionals think in action*. Farnham, UK: Ashgate Publishing.
10. Rogers, C. (2002). Defining reflection: Another look at John Dewey and reflective thinking. *Teachers College Record*, 104(4): 842-866.
11. Kemmis, S. (1985). Action Research and the Politics of Reflection, in Boud, D., Keogh., & Walkder, D. (eds). *Reflection: Tuning experience into learning*. Kogan Page.
12. Clarke, R. & Crof, P. (1998). *Critical reading for reflective practitioner*. Butterworth Heineman: Oxford.
13. Kember, D., Leung, D., Jones, A. & Loke, A. Y. (2000). Development of a Questionnaire to measure the Level of Reflective Thinking. In *Assessment and Evaluation in Higher Education*, 25: 380-395.
14. Hamilton, S. J. (2005). *Development in Reflective thinking*. Retrieved August 20, 2016, from http://www.reap.ac.uk/reap07/portals/2/csl/trydy%20banta/development_in_Reflection_Thinking.pdf
15. Jasper, M. A, & Rofe, G. (2011). Critical reflection and emergence of professional knowledge.
16. Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco: Jossey-Bass.
17. Canning, C. (1991). What teacher's voice: action research in your classroom. *ERIC/CLNews Bulletin*, 18(2): 5-8.
18. Dymoke, S. & Harrison, J. (2008). *Reflective Teaching and Learning*. USA: SAGE Publications Ltd.
19. Cruickshank, D. R., Jenkins, D.B., & Metcalf, K.K. (2006). The Act of Teaching, In *New York: Teaching*, 27: 23-38.

CONTENT-BASED INSTRUCTION: THE EXPERIENCES OF FOREIGN TEACHERS IN THAILAND

Abigail Melad Essien

Faculty of Education, Suan Sunandha Rajabhat University, Bangkok, Thailand

E-mail: abigail.es@ssru.ac.th, simply_me_abie@yahoo.com

ABSTRACT

Currently, Content-Based Instruction has become gradually popular as a means of enhancing the language abilities of Thai students. Though CBI is not new in other part of the world, there has been a greater amplified interest in it over the last 5 years, particularly in Thailand and other non-Asian English speaking countries where it has proven to be very effective in increasing the students' interest towards learning English language. Content-Based Instruction is an approach to language teaching that focuses not on the language itself, but rather on what is being taught through the language. Content-based approaches provide a better structure and situation for language development, in which focus is not on grammar correctness, but on communication. This study is based on reflective life-world research approach. Consequently, a semi-structured interview is employed to get the views of the subjects on their English language teaching experiences with Content-Based Instruction. The population of the study consists of 20 foreign teachers in Thailand. Experiential data was collected by asking participants to recollect and describe in real and everyday language specific events of their teaching experiences using CBI. Findings from this research shows that all the participants struggle to implement Content-Based Instruction in their various schools because of being contrary to the school laid down curriculum. The result of this study as testified by the participants also shows that indeed, students are in favor of CBI against the traditional method of language teaching. The results of this research is a wakeup call for ESL educators in Thailand to incorporate CBI into curriculum so as to reap its educational benefits.

Keywords: Content-Based Instruction, Experiences

INTRODUCTION

For successful language learning to occur, "the language syllabus must take into account the uses the learner will make of the target language", which means systematic focusing on those language forms and functions which will best serve the learner in his/her future language use. (Brinton et al 1989). CBI is the integration of a particular content with language teaching the concurrent academic subject matter and second language skills" (Brinton et al., 1989, p. 2). The use of informational content which is perceived as relevant by the learner enhances motivation in language learning and thus promotes learning effectiveness. Teeraporn Plailek (2016) in her study "Factors affecting English speaking abilities of second year English major students in the faculty of education, Rajabhat universities in Bangkok" revealed English learning strategies as one of the factors affecting the English speaking ability of the participants.

The origin of Content-Based Instruction can be traced back to the Canadian experiment with French immersion schooling (O'Maggio-Hadley, 2001; Swain & Johnson, 1997), initiated in 1965 in St. Lambert (Lambert & Tucker, 1972). CBI is attributed as one of the main ingredients that explain the success of language immersion education (Brinton, Snow, & Wesche, 2003; Genesee, 1994). CBI is aimed at 'the development of use-oriented second and foreign language skills' and is 'distinguished by the concurrent learning of a specific content and related language use skills' (Wesche, 1993). Natural language acquisition occurs in context; natural language is never learned divorced from meaning, and Content-Based Instruction provides a context for meaningful communication to occur (Curtain, 1995; Met, 1991) As stated by Van Lier, "If you take the context away there is no language left to be studied. It's like an onion. You can't peel

away the layers and hope to get to the ‘real’ onion underneath: it’s layers all the way down. So it is with language: it’s context all the way down”. (Van Lier, 2004, p. 20).

CBI promotes negotiation of meaning, which is known to enhance language acquisition (students should negotiate both form and content) (Lightbown & Spada, 1993). The integration of language and content in instruction respects the specificity of functional language use. It recognizes that meaning changes depending upon context (Genesee, 1994). CBI lends itself to the incorporation of a variety of thinking skills, and learning strategies which lead to rich language development, e.g., information gathering skills—absorbing, questioning; organizing skills—categorizing, comparing, representing; analyzing skills—identifying main ideas, identifying attributes and components, identifying relationships, patterns; generating skills—inferring, predicting, estimating (ASCD, *Dimensions of Thinking*) (Curtain, 1995; Met, 1991).

RELATED LITERATURE

Content-Based Instruction (CBI) is “an approach to second language teaching in which teaching is organized around the content or information that students will acquire, rather than around a linguistic or other type of syllabus” (Richards & Rodgers, 2001, p.204). Sociocultural linguistics emphasize the interrelation between language, culture, and society. According to Thorne (2000), “Language patterns of some durability are the sedimented product of historical and sociocultural activity, which in part structure current contexts, and reciprocally, such contexts in turn co-structure interactional and communicative practices.” The key principles that shape the CBI curricular approach align with the view that defines “language learning as the acquisition of new forms of discourse.

The work of Krashen, Swain, and Cummins. Krashen’s (1982, 1985) comprehensible language input provides an important rationale for the development of second language, and a greater support for CBI. He contends that Canadian immersion programs, U.S. bilingual immersion programs, and the University of Ottawa sheltered programs for second language learners all provide a good content learning experiences for the learners. The report also shows that mostly, students in Canadian immersion programs have been positively affected by CBI approach.

CBI is supported by cognitive learning theory and Second Language Acquisition (SLA). Brinton et al (1989), research emphasizes that literacy development can be enabled by providing numerous opportunities for learners to interact in communicative contexts with authentic, linguistically challenging materials that are relevant to their personal and educational goals.

The purpose of the study by Glenn (2005), was to examine the effect of English literacy proficiency, academic English literacy, and content literacy of 30 Spanish-speaking students enrolled in a bilingual 10th grade Global Studies course in a public school in New York City through the sheltered content method. The result of the study was very positive. The students’ English language reading score increased with the mean score of the post-reading 65.87, compare to the mean score of the pre-reading 18.4. The result also revealed the gains on students’ academic English reading with the mean score of pre-reading 33.65, compare to the mean score of post-reading 58.2. According to Glenn, “The curriculum delivered through systematic use of Content-Based Instructional strategies, including explicit reading strategies instruction, explicit language objective introduction, explicit core vocabulary introduction, activating background knowledge and schemata, prior knowledge developing, scaffolded modified instruction through well-structured interaction and activities, and the use of authentic reading materials, helps students contextualize concepts and expand their reading skills”.

Models of Content-Based Instruction

Language and content are combined in many different ways. Various forms of instruction have made it flexible and feasible to apply the CBI approach to language teaching. The most commonly known models are the three prototypes defined by Briton, Snow, and Wesche (1989).

Theme-Based Model

In the term-based model, the language class is structured around topics or themes, with the topics forming the backbone of the course curriculum. Its primary purpose is to help students develop second language competence within specific topic areas. The topics chosen can be several unrelated topics or one major topic. Language instructors are responsible for language and content instruction (Brinton et al., 1989). The theme-based model is mainly employed in adult schools, language institutions, and all other language programs. It is suitable for low to advanced learners.

Sheltered Model

Sheltered - content courses are taught in the target language by a content specialist. Target language learners are sheltered from native-speaking students of the language. In the sheltered model, content courses are taught in the second language by a content area specialist to a group of ESL learners having been grouped together (Richards & Rogers, 2005) or a language teacher with content-area knowledge (Gaffield-Vile, 1996).

Adjunct Model

In Adjunct model, students are enrolled concurrently in two linked courses, a language course and a content course. Learners are sheltered in the language course, but integrated in the content course. The rationale of this model is that the linked courses can assist students developing academic coping strategies and cognitive skills which can be transferred to other disciplines. The adjunct model is suitable for high intermediate to advanced levels (Brinton et al., 1989).

METHODOLOGY

Phenomenology approach was selected as the research approach for this study because it is particularly well suited to answer questions that explore the nature of foreign teachers' experience of CBI. Descriptive phenomenology inquiry approach, is aimed at revealing the structures that produce meaning in consciousness (Polkinghorne, 1989). The special focus of phenomenological research on the subject's experienced meaning distinguishes it from other approaches that focus instead on descriptions of subject's actions or behaviors (Polkinghorne, 1989, p. 44).

1. Participants

The participants were 20 foreign teachers from different schools in Thailand. The participants were selected based on the fact that they all have 5-10 years teaching experience in Thailand.

2. Data sources and Analysis

Data were collected through the use of semi-structured interview with the participants (individually). Experiential data gathered by asking participants to reminisce and describe their experiences of using CBI. Analytical approach to phenomenological text analysis was adapted to suit the particular needs of this study. The transcripts of the interviews were read, re-read, and marked with annotations. These annotations and specific descriptive phrases were afterwards grouped into broader ideological categories: 'thematic units' and 'core categories' respectively that captured recurring patterns in the data. (Strauss and Corbin 1998).

RESULTS

For clarity, the researcher will make use of 'FT' to connote participants. And the findings of this study is divided into two distinct thoughts 1) Challenges faced by the foreign teachers, and 2) the successes achieved with CBI.

Challenges faced by the foreign teachers

1. School Curriculum

Over focus of school curriculum on grammar was the main challenge faced by foreign teachers when trying to implement CBI. "Attempting to make content fit within the existing English language curriculum of my school was the most difficult part because the curriculum was largely based on grammar correctness and not communicative approach" (FT). This instructional methodology grammar approach focuses mainly on the explicit teaching of grammar in the belief that the mastery of the morphology, syntax and the other mechanics of the target language is the key to effective second language-acquisition. This methodology will follow a Structural Syllabus (White, 1998). Grammatical oriented lesson does not lead to an improvement in the quality of students' level of English. As concluded by all the subjects of this study that, the majority of the students are always confused by grammatical labels and descriptions. They are made to believe that they cannot understand or speak English perfectly without a good knowledge of grammar" (FT).

2. Lack of Resources

Implementing CBI requires not just resources but suitable resources. (FT) "Implementing CBI in my lesson is not a big deal. But, the problem is lack of resources and materials to use. It is very difficult to convince the school administrator to buy materials. They feel the textbook they have been using is good enough for any teaching approach." For CBI to be successfully implemented, students will really need new course books and new resources. Teachers of each subject will need explicit materials and tools. In general, there will be additional expenses to implement this approach and schools are not prepared to fund the budget" (FT).

Successes achieved with Content-Based Instruction

1. Motivating students

The goal of CBI is to prepare students to acquire the languages while using the context of any subject matter so that students learn the language by using it within the specific context. Rather than learning a language out of context, it is learned within the context of a specific academic subject. CBI is student-centered, and one of its goals is to keep students motivation high by generating stimulating content instruction and materials. "My students were highly motivated when I implemented CBI. They were actively involved in the lesson and took part in all the activities" (FT). Motivation and interest are crucial in supporting student success with challenging, informative activities that support success and which help the student learn complex skills (Grabe & Stoller, 1997). "The lessons and the activities were very motivating to my students because they explore interesting content and they were engaged in appropriate language-dependent activities naturally" or automatically, not through direct instruction which is teacher-centered.

2. Classroom Management

Classroom management refers to the wide variety of skills and techniques that teachers use to keep students organized, orderly, focused, attentive, on task, and academically productive during a class. When learning is made more fun and interesting, behavior problems naturally decrease. "To manage a classroom of 50 students is really a nightmare. Since CBI is student-centered oriented and the activities are interesting to them, the typical bad behavior of Thai students towards a foreign teacher seems to disappear" (FT). "CBI is more effective and more efficient in classroom management in the sense that active thinking and the use of authentic materials accelerates the learning process that is appealing to the students. While traditional approaches usually require extensive memorization and repetition, thereby leading to the students being bored and in turn leads to unwanted behaviors in the classroom" (FT). Hectic classroom environments are a large issue for all the foreign teachers in Thailand and this has contributed to high teacher stress and burnout rates.

CONCLUSION

Content-Based Instruction is a method to integrate language instruction with subject (Crandall, 1987). A lot of evidence shows that content based instruction is effective in a wide range of context in bilingual education. The ever multifaceted 21st century multiethnic, multilingual, and multicultural society we now live in, calls for a change in the field of second language learning and teaching. It is time for a shift from the traditional language teaching approach to CBI approach which is capable of stimulating critical thinking skill

of Thai students and develop proficiency in the target language. The findings of this study revealed lack of resources as an important challenge that stands against the path of implementing CBI in Thai schools. Butler (2005) acknowledged some vital resources that include: (a) a good collaboration among teachers, administrative staff, parents and community, (b) allocation of required time and money, and (c) readiness for text book and other kind of materials. Making resources available for effective implementation of CBI in Thai schools and conducting more research on the effectiveness of CBI on Thai students' English language proficiency is recommended by the researcher for the benefit of ESL education in Thailand.

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to Suan Sunandha Rajabhat University for the invaluable help throughout this research. An exceptional thank you to Mr. Dennis Michael Essien for his unrelenting support, to my son Abiel Dennis Melad Essien for the inspiration, and to all the participants for sparing the time to take part in the successful completion of this study.

REFERENCES

- [1] Brinton, D., Snow, M., & Wesche, M. (1989). Content-based second language instruction. New York: Newbury House.
- [2] O'Maggio-Hadley (2001) Teaching Language In Context (World Languages) 3rd Edition
- [3] Swain & Johnson, 1997), Immersion Education: International Perspectives. Cambridge University Press, Jul 13, 2540 BE - [Education](#).
- [4] Lambert & Tucker (1972) *Bilingual Education of Children: The St. Lambert Experiment*. Newbury House Publishers, 1972 - [Language Arts & Disciplines](#) - 248 pages.
- [5] Grabe, W., & Stoller, F. L. (1997). Content-based instruction: Research foundations. In M. A. Snow, & D. M. Brinton (Eds.), *The content-based classroom: Perspectives on integrating language and content* (pp. 5-21). NY: Longman.

ECONOMETRIC ANALYSIS OF A FARM ANIMAL WELFARE PROGRAM IN BURSA-TURKEY

Serkan GURLUK

*¹Uludag University, Agricultural Faculty, Department of Agricultural Economics,
Gorukle, Nilufer, 16059 Turkey*

ABSTRACT

The paper aimed to present the value of a farm animal welfare (FAW) program that is not compulsory in South Marmara Region of Turkey. It is based on the face-to-face survey results administered in rural areas of Bursa City. The study measures the willingness to accept of producers for changing FAW levels in regards to sheep and goat husbandry. Contingent valuation technique is employed in the statistical analysis. Three different FAW levels were identified for valuation as "base" level, "better" level, and the "best" level. The best level was the most stringent FAW program. The current study suggests a protocol with WTA(P) nomenclature to resolve complexity issues in FAW studies by investigating producers rather than consumers. FAW programs' value were calculated as 130.3 million United States Dollars (USD) for base scenario. The figures were 166.2 million USD/Year and 175 million USD/Year for "better" and "best" FAW conditions, respectively. The results show that FAW programs have strong public opinion and non-market value.

Key words: farm animal welfare, contingent valuation, non-market valuation

INTRODUCYION

Farm animal welfare (FAW) is an important phenomenon in Turkey in the way of membership of the European Union (EU). In 1997, it was agreed that animal welfare considerations become annexed to the Treaty of Rome through a Protocol on Animal Welfare. A year later, EU Council Directive 98/58 was enacted for the protection of animals for farming purposes, and set minimum common standards. From that date, weak FAW sensitivity in the Europe has begun to rise. In 2003, an EU Regulation established a principle that "farmers who do not comply with certain requirements in the areas of public, animal and plant health, environment and animal welfare are subject to reductions of or exclusion from direct support. This cross compliance system forms an integral part of Community support under direct payments". This legislation concerned both of farmers and processors at the food industry as well as consumers. The farmers who think that the industry can be damaged by strict legislations while the processors and distributors on the other side are worried about economic loss. In 2009, a regulation concluded the debates on FAW by suggesting that the Member States should be allowed to use up to 10 % of their national ceilings for the single payment scheme for granting specific support in clearly defined cases. Such support should allow Member States to address environmental and animal welfare issues.

Turkey is not a member state, but it tries to follow EU regulations. Consequently, it is not compulsory to provide FAW in Turkey. In this study, an approach of producers to prospective FAW programs by using non-market valuation method was employed. Results are candidate to support FAW programs in Turkey although some critiques were possible.

MATERIALS AND METHODS

The negative externality issue occurs in poor animal welfare conditions as well, and they must be internalized appropriately (Gürlük and Rehber, 2008). Several surveys support this phenomenon. In fact, there has been increasing demand for higher animal welfare standards beyond the minimum standards set by regulations such as the EU's (Barcellos et al. 2013; Bennett and Blaney, 2003).

The research area is the Bursa province of Turkey. Even though the Bursa Province has a 11.4 percent share of the sheep and goat numbers in Turkey. Regional statistics were used in order to determine development levels, and then 294 farmers were interviewed by using the face-to-face survey method. The face-to-face survey format has an advantage in developing countries where such work is not widespread. Yet, valuable researches are more and more increasing (Soltani, et al. 2012). The survey for this study consists of three sections. Socio-economic questions in the first section put forward the demographic structure of respondents. Farm structure and knowledge of FAW programs were investigated in the second section. In the last section,

respondents answered the willingness to accept question according to changing FAW levels. EU criteria and scientific criteria for ovine animal welfare were simultaneously considered in the FAW scenarios. (Bartussek et al., 2000; Sorensen et al., 2001). Three different FAW levels were identified for valuation: "Base" level, "better" level and the "best" level. The base level indicates current farm level in terms of animal welfare conditions. Better and best scenarios were created by making more stringent the FAW levels. Respondents were asked to state their WTA payments for shifting FAW levels.

The current paper contributes to existing literature by combining environmental attitudes/behaviors and FAW level preferences through certain components of the New Ecological Paradigm (NEP) scale. The NEP scale consists of several items previously developed by Dunlap and Van Liere (1978). Liu et al. (2010) measured the environmental attitudes of stakeholders on protected areas in China while Bonaiuto et al. (2002) emphasized the importance of 'values' within the NEP scale. In the NEP scale, the question format is a typical five-level Likert scale starting from Strongly disagree to Strongly agree answers.

RESULTS AND DISCUSSIONS

Statistical model was tested using various test methods, and the results are as following table 1. The likelihood ratio chi-squared of -1219.86 with a p-value of 0.000 indicates that the model as a whole is statistically significant. Hosmer-Lemeshow (H-M) is a statistical test for goodness of fit for logistic regression models. H-M value of current Research is 19.15, and lower than critique χ^2 value. Kendall's Tau coefficient (τ) is a statistic, which have values between -1 and +1, used to measure the association between two measured quantities. τ -value of current research is 0.30 indicates that there is a relationship between dependent and explanatory variables. Goodman and Kruskal's gamma coefficient (γ), which have values between -1 and +1, is a measure of rank correlation, but it measures the strength of association of the cross tabulated data when both variables are measured at the ordinal level. γ -value of current research is 0.60 indicates existence of association.

Table 1. Statistical model results

Variable	Parameter estimate	Standard error	Pr>chi
Intercept	0.4340	1.7178	0.8026
Bid ¹	-4.4e-5	4.7e-6	0.0000
Income ²	-0.6e-5	2.1e-6	0.0004
Age ³	0.0034	9.12e-4	0.0000
Coop_member ⁴	0.0335	0.30549	0.2758
Hholder_gender ⁵	-0.1408	0.0269	0.0000
Sacrifice ⁶	-0.0389	7.75e-3	0.0000
Education ⁷	0.0510	2.11e-2	0.0160
Development ⁸	-0.0270	0.191	0.1586
NEP_scale ⁹	-0.0014	3.29e-2	0.8886
FAW-II ¹⁰	-0.0060	1.793e-3	0.0000
FAW-III	-0.0130	1.797e-3	0.0000

Log-Likelihood= -1219.86

Hosmer-Lemeshow=19.15

Kendall's Tau= 0.30

Goodman-Kruskal Gamma= 0.60

¹ Bid is the presented bid amount through payment card

² Income is the monetary income of producer. It is expected to be more sensitive for high FAW levels.

³ Age is the respondent's age and expected to be positive. Older producers' WTA(P) for shifting FAW levels may higher than that of younger producers.

⁴ Coop_member is membership situation to a cooperative apart from existence membership to Union of Cattle and Sheep Husbandry of Bursa. 1: yes 0: No

⁵ Hholder_gender is gender of householder 1:Male 0:Female

⁶ Sacrifice is a question that it investigates if respondent is ready to endure any sacrifice so that farm animals experience better welfare circumstances 1: Yes 0: No

⁷ Education is the levels which are primary school graduation:1 secondary graduation:2 and higher:3

⁸ Development is development level of location that survey administered. 1: Developed region 0: Less developed region

⁹ Nep_scale is a scale measuring environmental sensitivity of related individual. The expected sign is puzzle because it was not tested in former farm animal welfare valuation studies.

¹⁰ FAW is farm animal welfare program introduced to respondent. Of three FAW levels, FAW-I is the most stringent level

To find out the effects of statistically significant model parameters on the FAW levels, the median value of other variables was multiplied by their coefficients and then a constant was added to total value. The reason for using median value is to reduce the impact of greater and lower values above central tendency. Related model's expected value was calculated in this fashion, and presented as following Table 2. Thus, 1204.5 USD/year, 1142 USD/Year and 894.5 USD/Year was estimated for FAW-I, FAWII and FAW-III, respectively. The number of goats and sheep in the survey area, Bursa, was calculated to be an average of 132 head per farm. If this number is associated with FAW values it is calculated per head as 9TL/Year, 8.6 USD/year, and 6.7 USD/Year. The values lead us to remarkable results. It is known that the number of sheep and goats is 38.5 million head in Turkey. If half of this figure is assumed to be in bad animal welfare conditions, which is worse than the base level investigated in the current paper, non-use benefits of bringing them to at least the base level would be approximately 130.3 million USD/Year with a possible FAW program that can be implemented. Figures would be 166.2 million USD/Year and 175 million USD/Year for "better" and the "best" FAW conditions, respectively. If 80 percent of goat and sheep numbers in Turkey is assumed to be in bad conditions, that accounts for 30.8 million head. If so, the non-use benefits of bringing them to at least the base level would be approximately 208.5 million USD/Year while it would be 266 million USD/Year and 280 million USD/Year for "better" level and the "best" level, respectively (Table 2).

Table 2. FAW program's non-use benefits in Turkey

FAW levels	Percentage of total number of goats and sheep which are under worse conditions than base level investigated in current study	
	50%	80%
Base level	130,3*	208.5
Better level	166.2	266
The best level	175.0	280

*Aggregate WTA(P) in million USD /Year

CONCLUSIONS

FAW programs are not considered to be luxury issues for developing countries such as Turkey. However, it is also one of great complexity, and if changes in the regulations governing animal production methods are to be made, those changes should take full account of the implications for producers, consumers, and society in general. The farming industry should not interpret the interest in animal welfare as a threat to its livelihood. The appropriate animal welfare policy for society will be identified only when all the interested parties become fully aware of the consequences of their actions. In the near future, foreign trade will be depending on good animal welfare conditions in the world. Hence firms have some advantages in advance if they provide good animal welfare conditions. The analysis tests 'panel estimators' in stated preference data in a FAW pricing study by using the payment card question format. Probit panels are employed to measure individual effects on FAW levels by considering producers' willingness to accept a scenario FAW program during a year. The results supply important insights to policy makers. For instance, farm revenue is a significant parameter. The farms that approach medium-sized enterprises and have the advantage of economies of scale result in differences among FAW levels. However, the FAW concept is able to be treated as a valuable input for larger enterprises who want to create their own brands. In addition, the phenomenon of experienced farmers who spend many years in their profession are more sensitive on FAW issues points out that agricultural extension programs should be for younger farmers.

REFERENCES

- Barcellos M. D., Grunert, K. G., Zhou, Y., Verbeke, W., Perez-Cueto, F. J. A., Krystallis, A., 2013. Consumer attitudes to different pig production systems: a study from mainland China. *Agriculture and Human Values* 30: 443-455.
- Bartussek, H., Leeb, C.H., Held, S., 2000. Animal need index for cattle ANI 35L/2000. Irdning: Federal Research Institute for Agriculture in Alpine Regions BAL Gumpenstein.
- Bennett, R. M., Blaney, R. J. P., 2003. Estimating the benefits of farm animal welfare legislation using the contingent valuation method. *Agricultural Economics* 29 (1): 85-98.
- Bonaiuto, M., Carrus, G., Martorella, H., and Bonnes, M., 2002. Local identity processes and environmental attitudes in land use changes: the case of natural protected areas. *Journal of Economic Psychology*, 23, 631–653.
- Dunlap, R.E. and Van Liere, K.D., 1978. The new environmental paradigm. *Journal of Environmental Education*, 9, 10–19.
- Gürlük, S., Rehber, E., 2008. A travel cost study to estimate recreational value for a bird refuge at Lake Manyas, Turkey. *Journal of Environmental management* 88(4): 1350-1360.
- Liu, J., Ouyang, Z., and Miao, H., 2010. Environmental attitudes of stakeholders and their perceptions regarding protected area-community conflicts: a case study in China. *Journal of environmental management*, 91, 2254–2262.
- Soltani, A., Angelsen, A., Eid, T., Naieni, M. S. N., Shamekhi, T., 2012. Poverty, sustainability, and household livelihood strategies in Zagros, Iran. *Ecological Economics* 79: 60-70.
- Sorensen, J. T., Hindhede, J., Rousing, T., Fossing, C., 2001. Assessing Animal Welfare in A Dairy Cattle Herd With An Automatic Milking System. Department of Animal Health and Welfare Danish Institute of Agricultural Sciences Research Centre Foulum, 8830 Tjele, Denmark

SWOT ANALYSIS OF HEALTH TOURISM AND A ROAD MAP FOR TURKEY

Ali Fuat Guneri¹, Muhammet Gul¹, Tugce Gultekin¹

¹*Department of Industrial Engineering, Yildiz Technical University, 34349, Besiktas, Istanbul, TURKEY*

ABSTRACT

Health tourism, as defined the activities of consumers traveling abroad for health services and medical procedures, is growing rapidly all over the world. Turkey has a serious potential and goal to be a leading country in health tourism in the goals of 2023. The main aim of this study is to examine the situation in Turkey for emerging health tourism and explore possibilities for development of health tourism and its elements by comparing with other countries. Within this context, strengths, weaknesses, opportunities and threats (SWOT) analysis is carried out for Turkey's health tourism by taking into consideration competition conditions inside and outside the selected countries for analysis, their national competitors and healthcare sectors. The status of health tourism around the globe, advantages, disadvantages and characteristics obtained from various sources have been evaluated conceptually in this study. Thus, a road map for Turkey on health tourism is created.

Key words: health tourism, SWOT analysis, Turkey, healthcare.

I. INTRODUCTION

Health tourism that defined as travels interurban or intercountry with the aiming of treatment and leisure started to become an important revenue generation tool for the world countries (Ozer and Songur, 2012). The annual trade volume over the globe in this sector is approximately USD 100 billion and 20 million people are travelling for health tourism (Erdem, 2015). Health tourism has become a popular topic in recent years in Turkey as well. Turkey draws attention of many foreign citizens in terms of its geographical position, climate, natural riches, historical beauties and relatively cheap and high quality health care services (Icoz, 2009; Erdem, 2015).

The aim of this study is to inform about health tourism and reveal Turkey's health tourism over the globe health tourism, carry out a SWOT analysis for Turkey's health tourism by taking into consideration competition conditions inside and outside the selected countries for analysis, their national competitors and healthcare sectors.

II. HEALTH TOURISM

Health tourism is defined as travelling from a location to another place (domestic or foreign) in order to get service for any health reasons (Erdem, 2015). Moreover, Erdem (2015) presents a different definition of Health Tourism as "Travelling of people to protect health and be treated for a certain period of time to the tourism facilities based on natural resources to meet the requirements of cure, accommodation, food and entertainment". In the literature health tourism is called with the same meaning of medical tourism. Health tourism is analyzed under three main groups as in Table

Table 1: Classification of health tourism

Health-Beauty Tourism	Treatment	Rehabilitation
<ul style="list-style-type: none"> • SPA-Wellness • Natural tourism • Eco-tourism • Mass tourism • Herbal therapy • After-treatment 	<ul style="list-style-type: none"> • Elective surgery • Plastic surgery • Joint replacement • Cardiothoracic services • Diagnostic services • Cancer treatment • Infertility treatment 	<ul style="list-style-type: none"> • Dialysis • Additional treatment • Elderly care programs • Addiction treatment

III. HEALTH TOURISM AND HEALTH TOURISM ORGANISATIONS IN THE WORLD

Health is an important factor enables people do international tourism movements. It is stated that the trading volume of health tourism is said to be 100 billion dollars/year. This trading volume is performed by 22 million health tourists (Erdem, 2015). Considering development potential of health tourism over the globe, it is stated that its importance will increase in the next years and that there will be an environment of global competition. According to the data of the World Tourism Organization (WTO), international tourist arrivals worldwide are expected to increase by 3.3% a year between 2010 and 2030 to reach 1.8 billion by 2030, according to UNWTO's long term forecast *Tourism Towards 2030*. International tourist arrivals (overnight visitors) increased by 4.3% in 2014, reaching a total 1133 million after topping the 1 billion mark in 2012. France, the United States, Spain and China continue to top the rankings by both international arrivals and receipts (World Tourism Organization/UNWTO Tourism Highlights, 2015). Mexico re-entered the Top 10 by arrivals at position 10. By receipts, China and the United Kingdom both moved up two places, to 3 and 7 respectively. Turkey was ranked 6th in arrivals and 12th in receipts in 2014 (Table 2).

Table 2: Recent statistics of international tourist arrivals and receipts (WTO Tourism Highlights, 2015 Edition)

International Tourist Arrivals						International Tourism Receipts								
Rank	Series ^a	Million		Change (%)		Rank	US\$				Local currencies			
		2013	2014*	13/12	14/13		2013	2014*	13/12	14/13	13/12	14/13		
1	France	TF	83.6	83.7	2.0	0.1	1	United States	172.9	177.2	7.0	2.5	7.0	2.5
2	United States	TF	70.0	74.8	5.0	6.8	2	Spain	62.6	65.2	7.6	4.2	4.1	4.2
3	Spain	TF	60.7	65.0	5.6	7.1	3	China	51.7	56.9	3.3	10.2	1.4	9.2
4	China	TF	55.7	55.6	-3.5	-0.1	4	France	56.7	55.4	5.6	-2.3	2.1	-2.3
5	Italy	TF	47.7	48.6	2.9	1.8	5	Macao (China)	51.8	50.8	18.1	-1.9	18.1	-1.9
6	Turkey	TF	37.8	39.8	5.9	5.3	6	Italy	43.9	45.5	6.6	3.7	3.1	3.7
7	Germany	TCE	31.5	33.0	3.7	4.6	7	United Kingdom	41.0	45.3	12.1	10.3	13.2	4.8
8	United Kingdom	TF	31.1	32.6	6.1	5.0	8	Germany	41.3	43.3	8.2	5.0	4.7	4.9
9	Russian Federation	TF	28.4	29.8	10.2	5.3	9	Thailand	41.8	38.4	23.4	-8.0	22.1	-2.7
10	Mexico	TF	24.2	29.1	3.2	20.5	10	Hong Kong (China)	38.9	38.4	17.7	-1.4	17.7	-1.5

*=provisional figure or data; TF: International tourist arrivals at frontiers (excluding same-day visitors)

The growth of health tourism can be effected by a number of criteria. From the demand side, the unavailability or inaccessibility of health services in the domestic market is the major driving criteria (Loh, 2015). Until recent decades, health tourism has been preferred by affluent patients from developing countries traveling abroad for health procedures that are unavailable or of lower quality in their countries

of residence (Loh, 2015). Examples of health tourism activities from different countries are as in the following.

United States of America follows a two aspect based policy on health tourism. While the first one is to attract health tourists to the country, the second one is to infrastructure of health tourism in various countries. Lebanon aims to become regional health center of Middle East on health tourism. Lebanon has advanced in cardiology. In Hawaii, health tourism is consisted of medical treatment, check-up, spa, nutrition programs and healthy lifestyle exercises. Japan develops a new area in health tourism called "Tourism for Mental Health". India is placed in a good condition in this sector. It reaches a percentage of 30% increment of each year. Colombia is famous for its eye clinics. Patients from Venezuela, Panama and Equator prefer Colombia because of high quality service level. Bulgaria is a rich country in terms of its medicinal waters. Health tourism in Argentina is relating of the needs of patients from USA and Europe. The recent expansions of the health tourism sector in some countries, such as Thailand, India, Singapore, and Malaysia, added significant emphases on hip replacement, organ transplant, coronary artery bypass surgery, and other invasive procedures. In Egypt, number of facilities that serve Spa and Wellness has increased day by day (Loh, 2015; Erdem, 2015).

Regarding of health tourism organizations in the world, International Health Tourism Congress and Joint Commission International (JCI) are two forefront instances. Some important decisions taken in the third of International Health Tourism Congress which is carried out by participating of 28 different countries are as follows:

- Health tourism is a rapid developing sector in Turkey and the globe.
- It is so crucial of international standards, quality and information sharing in order to amplify the sector.
- In health tourism, it should be taken attention to customer oriented management and branding.

IV. HEALTH TOURISM IN TURKEY

Turkey is ranked 6th in international tourist arrivals. Since, there is a strong influx of tourists, Turkey has the potential to become at the forefront in health tourism. The number of international patients who prefer Turkey is increasing every year. In 2011, the number of international patients who utilized healthcare in Turkey was around 160.000, which rapidly rose to around 265.000 in 2012 (Akgun, 2015). Private hospitals contributed to this figure a lot. However, the majority of treatments are performed by JCI accredited hospitals. This is probably one of the main reasons for medical tourists to utilize healthcare in Turkey (Akgun, 2015).

In Turkey, planning and promoting activities relating to health and tourism are managed by The Turkish Prime Ministry State Planning Organization. The Turkish Ministry of Culture and Tourism is an organization that makes rules, guides and controls for businesses that directly serve the tourism sector. Additionally, The Turkish Ministry of Health is responsible for the establishment of health facilities, training and employment of health personnel, controlling of the various public health services.

The Turkey Ministry of Health highlights some developments in the action plan between 2010 and 2014 as follows (Turkey Ministry of Health Primary Health Services, Health Tourism 2010 Annual Report):

- A new role model to the world will be developed rapidly in the country for the elderly tourism.

- Hotels over five hundred beds have to establish and operate a health unit.

The Turkey Ministry of Health aims to strengthen the health tourism in Turkey by some targeted strategies as follows (Erdem, 2015): (1) to make a promotion within the scope of health tourism and to create attraction, (2) to improve quality of services delivery covered by health tourism, (3) to expand the scope of health tourism services and (4) to improve governance of health tourism.

Health tourism has some advantages for Turkey. First, advantage of price. Secondly, hospitals has advanced equipment capacity and physician quality. Third, Turkey is closer to Europe and Middle East geographically. Fourth is about the religious dimension. Turkey serves the patients of Muslim countries and non-Muslim countries easily. Finally, Turkey has an adequate number of staff who speaks foreign languages.

The Turkey Ministry of Development reveals a development plan between 2014 and 2018 that objects establishment of 100,000 beds in thermal tourism, providing service to 1,500,000 (600,000 therapeutic) foreign thermal tourists in thermal tourism, 3 billion dollars of revenue in thermal tourism, being in the world's top 5 destination for medical tourism, treatment of 750,000 medical patients, 5.6 billion dollars of revenue in medical tourism, establishment of 10 thousand beds in the elderly tourism, 150.000 foreign tourists visiting our country in the elderly tourism and obtaining 750 million dollars in elderly tourism (Erdem, 2015).

V. SWOT ANALYSIS ON HEALTH TOURISM IN TURKEY

SWOT analysis is one of the most known tools of strategic planning. It is comprised of the four letters of SWOT respectively, which represent: *Strength*, *Weakness*, *Opportunity*, and *Threat*. SWOT is used to identify internal strengths and weaknesses which can include image, structure, access to natural resources, capacity and efficiency; and financial resources and external opportunities and threats including customers, competitors, trends in the market, partners and suppliers, social changes and new technology, and various environmental economic, political and regulatory issues are also included (Maneenetr et al. 2015). The objective of this study is to reveal the strengths, weaknesses, opportunities and threats for health tourism in Turkey by taking into consideration competition conditions inside and outside the selected countries for analysis, their national competitors and healthcare sectors. The details of SWOT analysis is given in Table 3.

Table 3: SWOT analysis of health tourism in Turkey

Strengths	Weaknesses
(1) In terms of geographical location, climate and historical places Turkey has an advantageous position.	(1) Health staff and managers in Turkey have inadequate knowledge about European health legislation and patient rights.
(2) In Turkey rather than public hospitals, private and university hospitals have capability in terms of bed capacity, physical and technological infrastructure and physician quality.	(2) Due to unsatisfactory promotion, there are still people and countries that do not know Turkey has several capability on health tourism.
(3) It is a very important advantage that the price of health care is lower than the other European Union countries.	(3) Since it is not given enough attention to marketing strategies and marketing research, there are wrong practices in pricing.

(4) The viewpoint of EU countries, for Turkey is changing through a positive direction.	(4) Physical and technological infrastructure of public hospitals is inadequate. Few hospitals have been accredited.
Opportunities	Threats
<p>(1) The increase in the average life expectancy in the European countries and the increase in chronic diseases, increasing waiting time for treatment and the shortness of the working hours of medical staff in European countries, high labor costs, and lack of personnel are considered as an opportunity for the Turkish health institutions.</p> <p>(2) While wealthy Muslims in the Middle East prefer America to treat, patient moves are directed to Greece and western countries because of the terrorism measures taken by the United States after the 9/11 attacks. Turkey is expected to receive the largest share of this market.</p> <p>(3) After the collapse of USSR (Soviet Union), citizens of the countries that gained independence, citizens living in the Turkish Republics and citizens of Russia are in search for therapeutic purposes.</p> <p>(4) Turkish citizens living in Europe, instead of getting health care from the staff that has different cultures and languages; they wanted to receive the services they trust the medical staff serving in their own language, in their own countries and according to their own culture.</p>	<p>(1) It is not shown the necessary sensitivity in patients' rights and wrong medical practice.</p> <p>(2) Promotional activities of the competitor countries are more interesting.</p> <p>(3) It has seen increases in health care costs.</p> <p>(4) Political crises and wrong pricing policies have been experienced.</p> <p>(5) The danger of war in the Middle East and terrorist acts and terrorist news media outlets in Turkey lead to negative publicity and lobbying.</p> <p>(6) Natural disasters and bird flu, and so on disease crisis have been important threats.</p>

VI. CONCLUSION

By incorporating Turkey's natural wealth, historical and cultural assets with other competitive factors developed using SWOT analysis enables itself get the maximum level of the opportunities and better assess of its potential in the face of competing countries and international conjuncture. The main two factors for the selection of Turkey as for the health of patients coming from abroad are price and climate. Tourism activities in the country are adversely affected by various factors such as natural disaster, terrorism and climate. Pluses of Turkey's health tourism are quite high. These can be mentioned as geographical position, the rapid developments in the health sector, technological equipment, increase in the number of

health care organizations, quality health services, provided good results, friendliness, and hospitality and are tolerant approaches to different cultures.

In this study, a roadmap for Turkey on health tourism is created benefiting from a SWOT analysis. The status of health tourism around the world, advantages, disadvantages and are assessed conceptually. For future studies, development studies such as SWOT, A·WOT (Analytic Hierarchy Process-AHP and SWOT) and BSC (Balanced Scorecard) for each classes of health tourism which are actively operated in Turkey can be executed.

REFERENCES

- [1] Akgun, S. (2015). Medical tourism in Turkey: past, present, and future. *European Journal of Public Health*, 25(suppl 3), ckv167-014.
- [2] Erdem, H. (2015). Added Value of Health Tourism and its Potential in Bursa. *The Russian Academic Journal*, 31(1):136-140.
- [3] Icoz, O. (2009). Sağlık turizmi kapsamında medikal (tıbbi) turizm ve Türkiye'nin olanakları. *Journal of Yasar University*, 4(14): 2257-2279.
- [4] Loh, C. P. A. (2015). Trends and structural shifts in health tourism: Evidence from seasonal time-series data on health-related travel spending by Canada during 1970-2010. *Social Science & Medicine*, 132, 173-180.
- [5] Maneenetr, T., Naipinit, A., & Tran, T. H. (2015). SWOT analysis of wellness tourism in Roi-Kaen-San-Sin Cluster, Thailand. *European Journal of Social Sciences*, 47(3), 262-269.
- [6] Ozer, O., & Songur, C. (2013). Türkiye'nin Dünya Sağlık Turizmindeki Yeri ve Ekonomik Boyutu-Turkey's Position in the World Health Tourism and Its Economic Dimension. *Mehmet Akif Ersoy Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 4(7), 69-81.
- [7] The World Tourism Organization (UNWTO), Tourism Highlights 2015 Edition. <http://www.unwto.org/doi/pdf/10.18111/9789284416899>
- [8] Turkey Ministry of Health Primary Health Services, Health Tourism 2010 Annual Report and 2011 Working plan. <http://www.saglik.gov.tr/TR/dosya/1-71809/h/2010-yili-faaliyet-raporu.pdf>

THE POWER OF THE VIRAL MARKETING AND OBSERVING ITS IMPACT VIA PUBLISHED VIRAL VIDEO

Bahadır GÜLSÜN*, Onur YILMAZ**

Industrial Engineering Department, Yildiz Technical University, Istanbul, Turkey

ABSTRACT

As a result of human nature, people always are influenced by others, they look for recommendations when choosing a product or service. The social ties they have, strong or weak, influence their decisions, actions and opinions. With the fierce competition that e-commerce companies face today, a low-cost high-impact marketing strategy, such as viral marketing, can become valuable.

The critical issues about viral marketing and its impact on consumer's purchasing behaviour have been examined in every respect in this paper. For that subject, special attention has been given to Gen Y consumers to measure if the seed selection can be comprised of this generation or not for viral marketing campaigns, and what kind of viral marketing properties can change on their perception for a product or service. A video is used for implementation part of this study, which was published on the internet by L'Oreal Turkey, in which has focused to difficulty of using eyeliner for a woman with sense of humor.

Key words: Viral Marketing, Generation Y, Purchasing Behaviour, Word of Mouth, Social Media

I. INTRODUCTION

The marketing process, which started in the minds of consumers and continued after consuming, has shifted from traditional marketing to the modern marketing thanks to technological innovations. The early marketing thoughts were focused on how to bring products to the market and make the consumers buy what was available at the market. While the economy developed, organizations had to become more market and customer positioned. The technology changes that have occurred in the recent years have been reflected in the product and services in the market. Companies have to adapt these changes to keep their competitiveness because of many substitutes in the market. The communication in the Internet market has become more important and therefore social media such as Facebook, YouTube and blogs have become one of the most important ways for companies to market themselves.

Viral marketing is a strategy that boosts individuals to pass along a message to other people. If a large number of receivers forward a message to a large number of people, the message grows quickly.

A viral message can be exploded to thousands and millions of people, therefore the name viral marketing and off version of the viral marketing come to be known as "word of mouth". Also commonly referred to as "buzz", companies that mercantile in viral marketing techniques must be aware of how to maintain a healthy balance in inducing consumers to spread their messages, while not making them feel as though they are only a part of the marketers' promotional game. Similar to any other form of advertising, viral marketing does not always work effectively. The key points included the right choice of the channel, brand and the target consumer for a successful viral marketing.

Shortly, it is a vital concept for today's marketing professionals to understand and be able to effectively utilize the target consumers.

Considering that our study based on the power of the viral marketing techniques and observing its impact on Y generation's purchasing behaviour via published viral video by L'Oreal Turkey in 2014. For this examination, a two phased online survey have been applied on our focus group and then the results have been analysed via WEKA software. During the analyses answers of the survey questions have been

collected as a data and then this data has been used for explaining the meaning of the survey answers. Finally, our hypotheses have been tested, in regard to WEKA outputs.

II. ANALYSIS OF SURVEY FINDINGS

The survey is shared online. In the end 119 respondents answered all the questions and results came up as follows for all 23 questions.

2.1 Ages and Gender

77.3% of respondents were female and 22.7% of them were male. Also respondents were separated to five main groups according to their birth year intervals as follows; 1982-1985, 1985-1990, 1990-1995, before 1982 and after 1995. These data are shown on Table 1.

Table 1

Respondents per cent according to their birth years

Birth year intervals	Percentage
Before 1982	0.8
1982-1985	5.9
1985-1990	9.2
1990-1995	82.4
After 1995	0.8

2.2 Social Media Usage

94.1% of respondents agree that they follow social media actively and 99.1% of them have an account in one of those social media channels. The social media that are used most by the respondents are given in Table 2.

Table 2

Most used social media

Social Media	Percentage
Instagram	47.1
Facebook	34.5
Twitter	12.6
YouTube	3.4
Blogs	1.7
Pinterest	0.8

2.3 Viral Awareness

81.5% of the respondents already know what the viral advertisement is, on the other hand 18.5% of them do not even have a clue about it.

2.4 Sharing Motivation

%93 of the respondents agree that they would share a video that they like in social media and %21.8 of them don't. Also the most important criterion for respondents to share a viral video online was questioned in the online survey and results are shown in Table 3.

Table 3

Most important criteria to share a viral video online

Criteria	Percentage
Interest on the brand	6.7
Interest on the kind of product	6.7
Interest of the video	70.6
Interest of the product	16

The kind of videos that impress the respondents most and their percentages are given in Table 4.

Table 4

Kind of videos that impress the most

Kind of videos	Percentage
Videos which have positive contents more	22.7
Videos which have negative contents more	0.8
Videos which have rational contents more	32.8
Videos which have humorous contents more	40.3
Videos which have emotional contents more	3.4

2.5 Knowledge of the video

The knowledge of the viral video of Maybelline "Underline your beauty" was also questioned in online survey. Beside that video, six other viral videos were also added to the questionnaire (see Table 5).

Table 5

Viral videos and their recognisability

Viral video	Percentage
Profilo "O tabak biticek"	71.4
Markafoni "Aşk insana neler yaptırıyor"	11.8
THY "İnanılmaz evlenme teklifi"	49.6
Gittigidiyor.com "Aldatılan kız Fulya"	27.7
Gittigidiyor.com Batesmotelpro "Ah Anam Lahanam"	22.7
Secretcv.com "Muhteşem Piyanist"	4.2
MNY "Maybelline ile güzelliğin altını çizmek bu kadar kolay"	30.3

2.6 Purchasing Decision

Until this headline, the main issue that have been questioning was the effectiveness or awareness of the viral videos. Hereafter, the questioning subject is changed into variations in consumer's purchasing decision with the questions.

When asked if they ever purchased a product of any brand after watching a viral video of that brand, 27.7 per cent of the respondents answered "yes".

The kind of videos that change the respondents' minds about purchasing a product are given in Table 6.

Table 6

Kind of videos that change respondents' minds about purchasing a product

Kind of videos	Percentage
Videos which have positive contents more	30.3
Videos which have negative contents more	3.4
Videos which have rational contents more	44.5
Videos which have humorous contents more	21
Videos which have emotional contents more	0.8

2.7 Questions about the video

Our online survey shows us %63.9 of respondents are already eyeliner user and %36.1 of them are none user. On the other hand, %45.7 of them said they have a difficulty in using eyeliner and %54.3 of them said they don't.

%76.5 of the respondents are already user of L'Oréal as a brand and %70.6 of them are user of Maybelline.

Also, the kind of content in the video impressed people more is questioned. The results are given in Table 7.

Table 7

Kind of content that impressed more

Kind of content	Percentage
Being positive	17.6
Being negative	10.9
Being rational	50.4
Being humorous	33.6
Being emotional	1.7

At the time we asked if they would share this video, %19.3 of them said "yes" and %80.7 of them said "no". Another question of survey in which we asked the respondents if there was a specific criteria motive them to share, being user of the eyeliner of any brand came out as the strongest one (see Table 8).

Table 8

Reasons that affect towards to share the video

Reasons	Percentage
I share this video because I am already a Maybelline NY user	23.1
I share this video because I am already an eyeliner user of any brand	69.2
I share this video because I am already user of Maybelline Gel Liner	7.7

Finally, we asked if they used MNY Gel Liner before. %80.7 of them said “no” and at the time we asked if they would buy it after watching the video in the survey, %50.4 of them said “no”.

To sum up, we came through that Gen Y consumers follow social media actively and almost all of them have their own account. Top following two social media channels are Instagram and Facebook by Gen Y consumers and YouTube and blogs are becoming watch out points for the firms to use this channels as a tool for reaching those consumers in terms of viral marketing. Results also show us Gen Y consumers highly aware about viral videos and they don’t care about which brand creates the video when the subject came to the sharing videos. Results point out, they are also potential perception spreaders for the firms, so that almost all of them said that they share the videos which they like independently of their sympathy to those brands.

III. ANALYSIS AND RESEARCH FINDINGS

In this chapter, we evaluated key Generation Y consumers’ characteristics in every respect. We also made studies to measure how much effect it has to use viral videos as a marketing tool on this generation of people to affect their purchasing behaviour.

For all these, we used data mining as a method with the software of WEKA to explain the meaning of the data in crosstabs. In all data mining analysis, we used $\Delta=0.05$ and tested our hypotheses according to this criteria.

3.1 Sample Selection and Design

For this study, target group was determined as Generation Y, and components like age, gender, social media usage chose to investigate the Generation Y respondents deeply.

3.2 Sample Characteristics

To understand Generation Y consumers’ line of vision, we asked a few questions in our online survey (like their birth year interval, gender, social media usage, awareness of viral advertisement etc.) and analyzed the results of those questions with data mining methodology by using the software of WEKA.

WEKA results showed us 100% of people who born in 1990-1995 year interval use social media actively and all of them have their own social media account. Also the 96% of people, who use social media actively, are aware of what viral advertisement is.

3.3 Hypothesis Testing and Results

With using the software of WEKA, accuracy of the hypothesis have been searched by determining $\Delta = 0.05$, minimum metric value = 0.90 and number of rules are = 10. Then best 10 results examined for each hypothesis and polysemous of them have chosen according to relation criteria that were determined by us.

3.4 Purchasing Behaviour

By comparison of “What kind of videos does affect you most?” and “What kind of videos change your mind about purchasing a product?” questions, the result obtained as 89% of the people have been affected by the humorous and rational contents more while watching a video and rational contents have the strongest effect on their purchasing decision.

1. What kind of content does affect you most while watching this video=Being rational - 45 ==> Would you buy Maybelline Gel Liner after watching this video=Yes - 31 conf:(0.69)

2. What kind of content does affect you least while watching this video=Being humorous 32 ==> Would you buy Maybelline Gel Liner after watching this video=No -20 conf:(0.63)

Also, by the comparison of “What kind of content does affect you most while watching this video?” and “Would buy the Maybelline Gel Liner after watching this video?” questions, the result obtained as 69% of people affected the rational contents of the viral video and decide to purchase the product, however 63% of them affected by the humorous contents of the video said “no” to purchase same product, the WEKA results have shown in above. Based on these results, we prove that the videos which include rational and humorous content affect consumers’ purchasing behaviour and other contents don’t have a significance impact as much as they have. As a consequence, we accept H3 and H5 reject H1, H2, H4.

3.5 Sharing Motivation

At the time, we compare the questions “What kind of content does affect you most while watching this video”, “What kind of content does affect you least while watching this video” and “Would you share this video?”, WEKA outputs have shown as written below:

1. What kind of content does affect you most while watching this video=Being positive 17 ==> Would you share this video=No 16 conf:(0.94)

2. What kind of content does affect you least while watching this video=Being rational 45 ==> Would you share this video=No 38 conf:(0.84)

As we see, outputs show us positive and rational contents have a negative effect on Generation Y consumer’s sharing motivation of the viral videos, on the other hand the videos, which have humorous content mostly push them to share according to survey ratio. As a result of these we reject the hypotheses H6, H7, H9, H10 and accept the H8.

3.6 Users vs. Non Users

1. Do you ever use any product of L’Oréal =No Do you ever use any product of MNY=No 20 ==> Would you share this video=No 19 conf:(0.95)

2. Do you ever use any product of MNY=Yes Would you share this video=Yes 18 ==> Do you ever use any product of L’Oréal =Yes 17 conf:(0.94)

3. Do you ever use any product of L’Oréal =No 28 ==> Would you share this video=No 26 conf:(0.93)

4. Would you share this video=Yes 23 ==> Do you ever use any product of L’Oréal =Yes 21 conf:(0.91)

When we compared the questions “Do you ever use any product of L’Oréal?”, “Do you ever use any product of Maybelline?” and “Would you share this video?”; 94% of the respondents who are already user of both L’Oréal and Maybelline said they would share this video and 91% of them user of just L’Oréal also said so. Therefore all the results support the hypothesis H11, which says the motivation of sharing the video is higher for brand users.

The time we compared the “Do you use eyeliner?” and “Would you share this video?” 97% of the non-users of that kind of product said “no”. However, being 80.7% of respondents none user of Maybelline Gel Liner and the same percentage of them said they would not share this video after watching, the hypothesis H12 could not interpret properly. Therefore hypothesis H12 and H13 determined as uninteruptable.

In addition to that, the results of survey already supported the fact that 50% of the respondents said they would buy this product after watching this video, even though 80.7% of them being none user of this product. In view of almost all respondents were non-user, we could accept the 50% for supporting, so that H14 and H15 accepted.

Last but not least, the WEKA results also showed us 93% of the respondents who said that they would this product are user of L’Oréal or MNY and 92% of them are already eyeliner user, but they did not use Maybelline Gel Liner before, so that we accept H16 and H18 and reject H17. On the other hand the hypothesis testing ended up as in Table 9.

Table 9

Hypothesis Results

H1	Viral videos that includes a positive content affects consumer's purchasing behaviour	Rejected
H2	Viral videos that includes a negative content affects consumer's purchasing behaviour	Rejected
H3	Viral videos that includes a humorous content affects consumer's purchasing behaviour	Accepted
H4	Viral videos that includes an emotional content affects consumer's purchasing behaviour	Rejected
H5	Viral videos that includes a rational content affects consumer's purchasing behaviour	Accepted
H6	Viral videos that includes a positive content are more likely to be shared	Rejected
H7	Viral videos that includes a negative content are more likely to be shared	Rejected
H8	Viral videos that includes a humorous content are more likely to be shared	Accepted
H9	Viral videos that includes an emotional content are more likely to be shared	Rejected
H10	Viral videos that includes a rational content are more likely to be shared	Rejected
H11	The motivation of sharing the video is higher for brand users	Accepted
H12	The motivation of sharing the video is higher for that kind of product users of any brand	Uninterruptable
H13	The motivation of sharing is higher for the users of the product that shown in video	Uninterruptable
H14	People, who watch this video, purchase the product	Accepted
H15	People, who watch this video, have been effected positively	Accepted
H16	People who purchase the product were already user of that kind of product	Accepted
H17	People, who purchase the product were already user of this product	Rejected
H18	People, who purchase the product were already user of this brand	Rejected

IV. RESULTS AND DISCUSSION

The aim of the study was to measure the viral marketing’s power on our focused point Generation Y. For these measurement, during the study, 18 hypotheses set up and an online survey created with a sample viral video of L’Oréal Turkey to test these hypotheses. For interpretation of the data survey statistics of Google and data mining solutions have been used.

According to survey statistics, we clearly reach the point that the Gen Y consumers who born between 1990-1995 have a great potential for viral marketing campaigns as a seed, cause the 100% of them from

our respondents agreed that all of them use social media actively and have their own accounts. Furthermore, they also affect by videos immediately and spare no effort for sharing a video that they like.

In the light of all these hypotheses results, we conclude our study understanding that the videos which include rational content and humorous contents affect Generation Y consumers' purchasing behaviour and the videos which include the rational content affects their purchasing decision positively and the videos that include humorous contents are more likely to be shared by this generation's people.

Last but not least, we conclude our study helps understanding that brand users, also product users are the best starting points for the firms to seeding their viral messages for the product that they want to commercialize and even their non-users of the product for which the viral video stands might change their mind easily and recommend it to their social ties.

REFERENCES

- [1] Gardner, J.T., Sohn K., Seo, J.Y., Weaver, J.I., (2013). "Sensitivity Analysis of an Epidemiological Model of Viral Marketing: When Viral Marketing Efforts Fall Flat", *Journal of Marketing Development and Competitiveness*, 7: (4).
- [2] Yanga, J., Zhuang, D., Xie, W., (2013). "A study of design approach of spreading schemes for viral marketing based on human dynamics", *Physica A: Statistical Mechanics and its Applications*, 392: 6494–6505.
- [3] Mochalova, A., Nanopoulos, A., (2014). "A targeted approach to viral marketing", *Electronic Commerce Research and Applications*, 13: (283-294).
- [4] Hinz, O., Skiera, B., Barrot, C., Becker, J.U., (2011). "Seeding Strategies for Viral Marketing: An Empirical Comparison", *Journal of Marketing*, Vol. (75): 55–71.
- [5] Pescher, C., Reichhart, P., Spann, M., (2014). "Consumer Decision-making Processes in Mobile Viral Marketing Campaigns", *Journal of Interactive Marketing*, (28): 43–549.
- [6] Hausmann, A., (2012). "Creating 'buzz': opportunities and limitations of social media for arts institutions and their viral marketing", *International Journal of Nonprofit and Voluntary Sector Marketing*, (17): 173–182.
- [7] Norazah, M.S., (2014). "Customer Satisfaction in the Context of the Use of Viral Marketing in Social Media", *Pertanika J. Soc. Sci. & Hum*, 22 (4): 953 – 967.
- [8] Kim, J., Lee, W., Yu, H., (2014). "CT-IC: Continuously activated and Time-restricted Independent Cascade model for viral marketing", *Knowledge-Based Systems*, (62): 57–68.
- [9] Henke, L.L., (2013). "Breaking Through The Clutter: The Impact of Emotions and Flow on Viral Marketing", *Academy of Marketing Studies Journal*, Volume 17: (2).
- [10] Daniasa, C.I., Tomita, V., Stuparu, D., Stanciu, M., (2010). "The Mechanisms of the Influence of Viral Marketing in Social Media", *Economics, Management, and Financial Markets*, Volume 5(3): 278–282.
- [11] Botha, E., Reyneke, M., (2013). "To share or not to share: the role of content and emotion in viral marketing." *Journal of Public Affairs*, Volume 13: Number (2): 160–171.
- [12] Berger, J., Milkman, K. L. (2012). "What Makes Online Content Viral?", *Journal of Marketing Research*, Vol. (XLIX): 192 –205.
- [13] Radighieri, P.J, Mulder, M., (2012). "The impact of source effects and message valence on word of mouth retransmission", *International Journal of Market Research*, Vol. 56 Issue (2).

- [14] Iskeceli, E., (2013). "The Effect of Viral Marketing on Y Generation's Purchasing Behaviour", MA Thesis, Bahcesehir University and Graduate School of Social Sciences Marketing, Istanbul.
- [15] Gardiner, S., Grace, D., King, C., (2013). "Challenging the use of generational segmentation through understanding self-identity", *Marketing Intelligence & Planning*, Vol. 31 No (6): 639-653.
- [16] Leask1, A., Fyall, A., Barron, P., (2013). "Generation Y: An Agenda for Future Visitor Attraction Research", *International Journal of Tourism Research*, (16): 462-471