

# UBRU

**INTERNATIONAL JOURNAL**  
of Humanities and Social Sciences

**Vol. 1 NO. 2**  
**2021**



**Ubon Ratchathani Rajabhat University**  
**Ubon Ratchathani, Thailand**



**Journal Owner**      Ubon Ratchathni Rajabhat University

**Journal Advisors**

Assoc. Prof. Thamarak La-ongnual

Acting President, Ubon Ratchathni Rajabhat University

Asst. Prof. Dr. Hathairat Khuanrudee, (Ph.D.)

Dean of the Faculty of Business and Management

**Editor**      Asst. Prof. Dr. Pimook Somchob, (D.B.A.)

**Management Editorial and Scrutiny of Articles** (Ubon Ratchathni Rajabhat University)

Asst. Prof. Dr. Jaturong Sriwongwana, (D.HRM.)

**Editors Scrutinizing Articles**

Assoc.Prof. Dr. Vinai Panjakajornsak, (Ph.D.)

King Mongkut's Institute of Technology Ladkrabang, Thailand

Assoc.Prof. Dr. Suree Funilkul, (Ph.D.)

King Mongkut's University of Technology Thonburi, Thailand

Asst.Prof. Dr. Roberto Eric Gonzales, (Ph.D.)

University of Santo Tomas, Philippines

Dr. Nguyen Hong Quang

Vietnam Academy of Social Sciences, Vietnam

**Operations and Journal Management Department** (Ubon Ratchathni Rajabhat University)

Assoc. Prof. Dr. Nopparat Songserm, (Ph.D.)

Asst. Prof. Dr. Seri Somchob, (Ph.D.)

Asst. Prof. Dr. Natthapong Nanthasamroeng, (Ph.D.)

Asst. Prof. Dr. Ananya Dechakhamphu, (Ph.D.)

Asst. Prof. Dr. Waransanang Boontarig, (Ph.D.)

Asst. Prof. Dr. Phukphon Munglue, (Ph.D.)

Dr. Wiranya Sutthikun, (Ph.D.)

Mr. Maitree Rimthong

## Peer Reviewers of Articles

Asst. Prof. Dr. Phattaraporn Timdang, (D.B.A.)	Suan Dusit University
Asst. Prof. Dr. Pongpitthaya Sapaso, (Ph.D.)	Khonkaen University
Asst. Prof. Dr. Sukunya Payungsin, (D.B.A.)	Thepsatri Rajabhat University
Asst. Prof. Dr. Thiti Panyain, (Ph.D.)	Buriram Rajabhat University
Asst. Prof. Dr. Purit Pongpearchan, (Ph.D.)	Mahasarakham University
Dr. Amnad Saleenukul, (D.B.A.)	Burapha University
Dr. Chao Kanwicha, (Ph.D.)	Buriram Rajabhat University
Dr. Kattiya Chadchavalpanichaya (D.B.A.)	Buriram Rajabhat University
Dr. Thitiwat Tongkaew	Office of the Court of Justice

## Objective

As mentioned above the aim of this journal is to provide a platform and a means for disseminating and exchanging of knowledge and experience pertaining to academic advancement and research findings which may be beneficial for academy and society as a whole.

## Deadline - Period of Publication

The UBRU INTERNATIONAL JOURNAL is a four-month academic journal (4 months per issue or 3 issues per year); the first issue is from January-April; the second from May-August; and the third from September-December.

**Published at** Limited Partnership Ubon Print & Media  
No. 88/13 Jae Ramae Subdistrict Mueang District Ubon Ratchathani Province.  
Phone:082-669-8295 Email: Ubon Print08@gmail.com

**Office** Faculty of Business and Management Ubon Ratchathani Rajabhat University,  
No. 2 Ratchathane Road, Nai Mueang Subdistrict, Mueang District,  
Ubon Ratchathani 34000 Phone: 045-352-000 ext. 1302 Fax. 045-352-044  
Email: ubruij@gmail.com

**Published on** August 2021

**Copyright** Ubon Ratchathani Rajabhat University

- \* Prior to publishing , every article in this journal has been evaluated in terms of academic quality by our peer reviews in the related fields, either from internal or external the university on the basis of three peer reviews per article.
  - \* The articles or ideas published in UBRU INTERNATIONAL JOURNAL are under the responsibility of the author.
  - \* For the sake of academic development, the copy right is not reserved by the editorial board of the journal but references must be rightly made.



## Message from the President

Greetings!

This is our Vol.1 No.2 of UBRU International Journal issued both online and in hard copies, an academic platform for sharing and exchanging academic works among academicians and researchers. On behalf of Ubon Ratchthani Rajabhat University, I wish to extend my best wishes and gratitude to those who have cooperated and contributed in making our first issue possible and valuable for academic development and advancement. Though our current world is still confronting with COVID-19 pandemic, we continue carrying out our mission as a higher education institution, including issuing this journal for distributing academic information, knowledge as well as advancement in various areas to professors, researchers, other personnel in academe, and interested persons. We would like to stress that this is a platform for our respected lecturers, professors, and researchers from all over the world to exhibit their research papers, academic articles or academic accomplishment to others. Therefore, we are pleased to accept the aforementioned above from other institutions all over to publicize in this journal.

Once again, we would like to express our sincere appreciation and gratitude to those who are involved for their cooperation and contribution to this journal. It is hoped that you find this journal useful and helpful.



Assoc. Prof. Thamarak La-ongnual  
Acting President, Ubon Ratchathni Rajabhat University  
31 August 2021



## EDITORIAL

This UBRU INTERNATIONAL JOURNAL is the Vol.1 No.2 officially issued by Ubon Ratchathni Rajabhat University. As I have said earlier this is a four-month journal, thus there will be three issues in a year. This one is for May -August 2021. Its focus is still on humanities and social sciences with the aim to be medium for disseminating knowledge and sciences through online and a hard-copy journal.

The editorial board would like to express their sincere thanks and gratitude to every author of the each article for their contribution and every reviewer for their kind assistance, cooperation and suggestions for making this journal possible and readable. We also wish to express our gratitude to university administrators for their encouragement and financial support. On this occasion we would like to invite our readers and interested persons to submit their academic articles for publishing in our journal. Please contact us from ThaiJo system at <https://so04.tci-thaijo.org/index.php/ubruij> and website <http://www.bba.ubru.ac.th/ubruij/>.

We sincerely hope that you find this journal useful and applicable in your situation.



Asst. Prof. Dr. Pimook Somchob

Editor





# Contents

## Page

Factors Affecting Decision Making to Use Electronic True Money Wallet of Students of Kasetsart University Si Racha Campus, Chon Buri Province <i>Pattamaporn Boonloy and Jaruporn Tangpattanakit</i> .....	1
Influencers Affecting Consumers' Purchase Intentions through VDO Advertising on TikTokOnline Social Media in Chonburi Province <i>Sasipon Cantawee, Ngamsiri Witoonphan and Touchakorn Sammasut</i> .....	11
Desirable Characteristics of the Students Admitted to Study Western Music in Higher Education <i>Ditthapong Uthetthamrong and Kritsana Thipakson</i> .....	25
Waste Management Behaviors and Waste Management Approaches with Community Participation in Ubon Ratchathani City Municipality, Ubon Ratchathani Province <i>Piyakanit Chotivanich, Irada Phorncharoen and Adunyadet Tankaeoc</i> .....	37



# Factors Affecting Decision Making to Use Electronic True Money Wallet of Students of Kasetsart University Si Racha Campus, Chon Buri Province

Pattamaporn Boonloy<sup>a\*</sup>

Jaruporn Tangpattanakit<sup>b</sup>

Article Info  
Received 9 August 2021  
Revised 28 August 2021  
Accepted 29 August 2021  
Available online 31 August 2021

<sup>a</sup>*Bachelor of Business Administration (Marketing),*

*Kasetsart University Sriracha Campus, E-mail: pattamaporn.bo@ku.ac.th*

<sup>b</sup>*Ph.D., Doctor of Marketing Program, Faculty of Management Science*

*Kasetsart University Sriracha Campus, E-mail: tangpattanakitj@gmail.com*

## Abstract

This study is a survey and quantitative research aimed at investigating acceptance of security technology, image of service and marketing mix that affect decision making to use electronic True Money Wallet of students who use this service at Kasetsart University, Si Racha Campus, Chon Buri province. The data were collected by a questionnaire from 409 students using the electronic True Money Wallet. The statistics for data analysis were frequency, percentage, mean, standard deviation, simple linear regression analysis, and multiple linear regression analysis. The results of the study showed that the students who used the electronic True Money Wallet at Kasetsart University, Si Racha Campus had different monthly incomes which differently affected their decision making to use the electronic True Money Wallet, and that they understood the security factors on transition of accepting security technology that affected decision making to use electronic True Money Wallet most, followed by factors on communication, consumers' capitals, service images, customers' needs, and on consumers' conveniences and comforts, all of which affected decision making to use the electronic True Money Wallet respectively.

**Keywords:** Factors Affecting Decision Making, True Money Wallet, Students of Kasetsart University Si Racha Campus

## Introduction

In the current world, advancement in technology has changed rapidly and also affected monetary technology to develop itself for a new system of payment called e-Wallet or electronic wallet in the form of application to help facilitate business transactions without using cash. This system has high security in keeping users' personal data, and also in preventing monetary risks, making the users have confidence in that the money would not be lost, and causing consumers to accept such technology (Thikamporn Intarakasem and Soawarot Sisutto, 2020).

The idea of cashless society beginning to be used in a complete form in many countries, makes the economy of countries grow quickly. Reversely, in Thailand there are a number of limitations so that it cannot be used in a complete form. But since this technology has much been developed together with modern consumers' behavior of Gen Z which focus on convenience, comfort and time-saving. Due to the fast-moving society, monetary transactions through electronic Wallet has played important roles in peoples' daily life. For this reason, consumers turn their attention to use electronic monetary service more, including that the government has enacted a law certifying online business transactions. Thus, Thailand has tendency to enter a complete cashless society.

On the part of entrepreneurs of many businesses, there is a self-adjustment in order to get along with changing consumers' behaviors by adjusting new technology to apply in business, develop efficient channels of money payment for the advantages in competitions and create satisfaction among consumers (Pattarat Wongchaikul, 2019). As such, the researcher chose to conduct a study on True Money Wallet by collecting the data from electronic True Money Wallet users. The number of True Money Wallet users in Thailand is more than 7,000,000 which is Number 1 in Thailand. The majority of users are Gen Z group because it is a good response to their needs of payment, the service of which is available in CP network, especially 7-ELEVEN, making it a very strong brand, and making consumers have confidence in the brand. Accordingly, this application is able to gain a good business image.

Based on the literature review and related studies, it was found that there were studies on factors affecting behaviors on selection of payment services through mobile telephone applications of service providers which are monetary institutions using marketing mix (7P's), factors affecting acceptance of technology in payment by e-Wallet, and factors affecting decision making in using electronic True Money Wallet of consumers in Lak Si, Bangkok. Most studies were surveys of general people in Bangkok but there was no study on acceptance of safety technology, service image, and factors on marketing mix (4C's) whether it was useful for entrepreneurs and people who use electronic monetary system, particularly student group in Chon Buri province.

Based on the fact that consumers' behaviors are important and that technological changes are entering the cashless society, the researcher, is, therefore, interested in investigating the factors affecting decision making to use electronic True Money Wallet of students at Kasetsart University Si Racha Campus, Chon Buri province by applying those mentioned variables in the study.

## Objective

1. To investigate security factors affecting decision making to use electronic True Money Wallet through technological acceptance of students at Kasetsart University Si Racha Campus, Chon Buri province.
2. To investigate the factors on service image affecting decision making to use electronic True Money Wallet through technological acceptance of students at Kasetsart University Si Racha Campus, Chon Buri province.
3. To investigate the factors on 4Cs marketing mix pertaining to consumers' wants and needs affecting decision making to use electronic True Money Wallet through technological acceptance of students at Kasetsart University Si Racha Campus, Chon Buri province.
4. To investigate the factors on 4Cs marketing mix pertaining to consumers' costs affecting decision making to use electronic True Money Wallet through technological acceptance of students at Kasetsart University Si Racha Campus, Chon Buri province.

## **Literature Review**

### **Literature Review on Cashless Society**

Cashless society is a kind of economic society without using cash beginning to be firstly known in the 1950s in a commercial bank circle. In the future, it is foreseen that cash will decreasingly decline in significance and it will be replaced by a computer system and telecommunication in doing various business transactions. Later, at the beginning of the 1960s, companies' owners had a consultation on setting up computer networks for banks that could process exceeding burden on documents due to economic growth, followed by growth in cash transactions and cash cheques, resulting in an unnecessary rapid increase of cost for banks. For this reason, a cashless system was promoted to replace the old system available at that time and it has continuously been used until present in many countries. Thailand increasingly began to change from a cash society to a cashless society, starting from using credit and debit cards until entering the era of using more electronic e-Payment to pay for services in daily life (Chatpong Choosaengnil, 2019). Besides, there are also supports from both government and private sectors to push the National e-Payment in a concrete manner together with various forms of payment technology. This shows that Thai people are alert in payment through digital channel. Therefore, it could be concluded that cashless society is an idea of promoting digital payment in all forms in response to consumers' needs in the present era that digital system is related to our daily life and increases efficiency of monetary transactions in Thailand to be faster, safer and more convenient.

### **Literature Review on Technological Acceptance**

Technological acceptance is explaining of the procedure and reason of acceptance of personal information technology in order to predict people's behaviors in accepting the information technology that leads to the explanation and results in understanding of the influences of the factors that originate technological acceptance (Singha Chawisuk and Sunantha Wongjaturapat, 2012). Nevertheless, basic factors of technological acceptance have been developed from the Theory of Reasoned Action: TRA asserted by Ajzen & Fishbein (1972) who conducted a study on factors affecting acceptance of technology or innovation of users. The results of the study could be concluded that technological acceptance originated from behaviors of users who tried to understand it and realized in application of technology for their own benefits or related activities (Camarero, Antón & Rodríguez, 2013). This is in congruence of a study by Siriporn Mueansichai (2012) who stated that technological acceptance was an important factor in using technology, and that using technology brought about experience, knowledge, skills and needs in using technology. Accordingly, consumers made decision to accept and apply technology, and that each individual would understand how easy it was to use technology, and also know the different benefits in using new technology.

### **Literature Review on Security**

Security of the information system refers to protecting the information and other relevant factors, taking care of the information arising from implementing the system following the policy, operating regulations used in proof, control and prevention of disclosure of the information without permission. Therefore, there is an idea on information security which can be concluded that risk is perception of false information or uncertainty in keeping security of the security system and keeping personal data of customers including unclear presentation of complete information on merchandises or services, resulting in making negative impacts and

leading to disappointment or dissatisfaction in using the services. As the result, customers become so worried that they do not want to make their payment through electronic system any longer in the future. However, considering acceptance of technology, it is considered as a process that occurs within a person, commencing from receiving the information on a particular subject, then accept it, and eventually use it (Rogers, 1983). That each individual will be able to accept technology or not, it depends on one's perception of the information whether it is true or not, to what extent is the source of information reliable, and if the benefits of using technology are appropriate for individuals' situations, and to what extent. So, technology users have to evaluate whether the products have any security and convenience when in use.

### **Literature Review on Service Image**

Service refers to providing convenience or serving by a person giving assistance or convenience (Sasiporn Witsanumahimahachai, 2008). This service is not a concrete body but an activity a service provider sets it up for sale and hands it over to a receiver (Kotler, 2015). The quality of the service provider depends on the expectation and perception of what is going of consumers who receive the service. Consumers' expectations could occur in a number of ways such as from words of mouth, experience in receiving services including the information that consumers perceive, whether directly or indirectly. If the service the consumers receive is better or equal to their expectation, it means that the service has good quality (Parasuraman, Zeithaml and Berry, 1985). The successful service can be classified, according to its quality characteristics, into seven aspects.

1. Reliability refers to regular service providing without errors and with punctuality.
2. Competence refers to being knowledgeable and skillful in providing service such as ability in communication and handling the service.
3. Access refers to convenience in accessing to receive the service without complexity.
4. Communication refers to communicating a kind of service that makes receivers have easiest understanding.
5. Credibility refers to reputation of an organization and the quality of reliable service.
6. Security refers to the service without risk of danger and being unable to answer consumer's doubt.
7. Tangibility refers to preparation of user interface to be ready for providing the best service to consumers.

### **Literature Review on 4Cs of Marketing Mix**

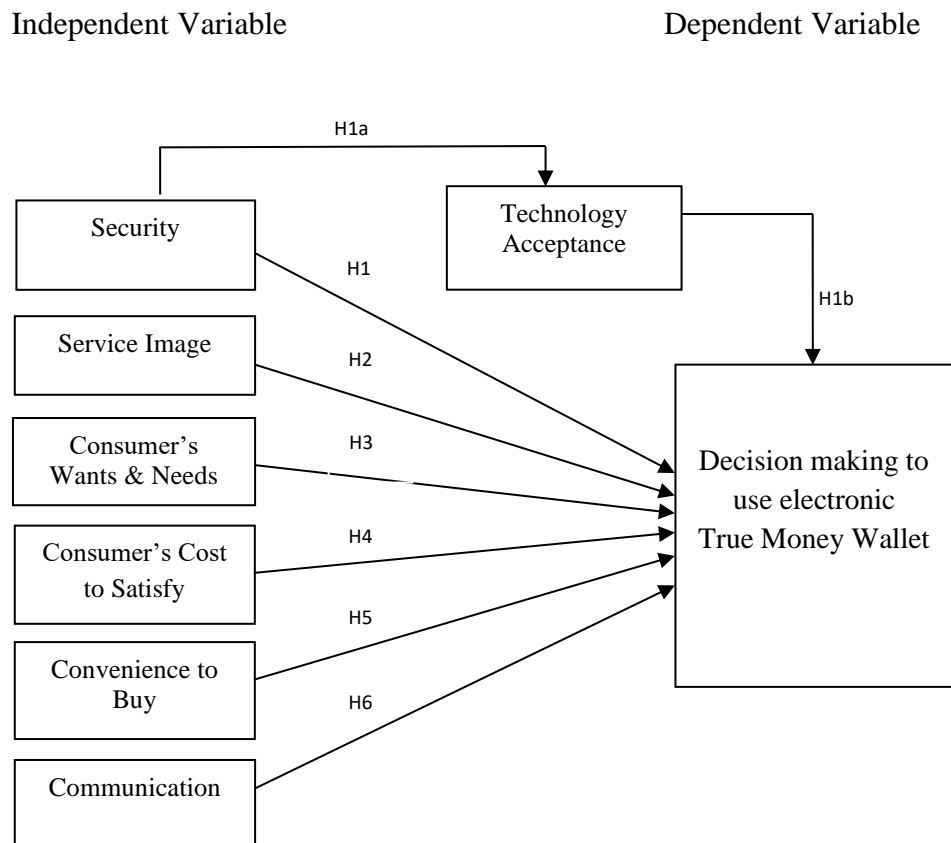
Generally, businesses usually use the 4Cs of marketing mix as a basis in marketing planning, but social changes including changes in human behaviors make marketing adjust itself in order to create business advantages for competition. Besides, marketing mix must be appropriately adjusted in accordance with the business target group. One of the marketing strategies that could be developed is the 4Cs of marketing mix which is a new marketing concept developed to increasingly answer the consumers' problems. A study by Borden (1964) has defined the 4Cs marketing mix as follows.

1. Consumer's wants and needs. Upon production of merchandises and services, it is necessary for entrepreneurs to take into consideration what consumers want and need. Therefore, they should study as to know what products and services the consumers want or need to buy, so that they would be able to serve their wants and needs appropriately.
2. Consumer's cost to satisfy refers to consideration of the total cost consumers have to pay in order to get the merchandise or service including travel cost, parking fee and time cost.

3. Convenience to buy refers to easy ways or channels by which consumers can get access to the merchandise or the service without difficulty.

4. Communication refers to various means of communication so that consumers can listen, pay attention and interest, not just doing marketing promotion by offering discounts, gift brochures, freebies and so on.

### Conceptual Framework



**Figure 1:** Research Conceptual Framework

Figure 1 shows that six independent variables, through acceptance of using technology, will influence consumers' decision making to use electronic True Money Wallet. That is, they must feel secure of using it, believe in the image of service, they want or need to use it, they are satisfied with the cost they have to pay, it is convenient for them to use it, and that they have good understanding from communication about the electronic True Money Wallet. They may have some or all independent variables, however, they must have the feeling of accepting this kind of technology first, then decision making to use it will follow.

## Research Methodology

This study is a quantitative research following a mono method based on positivism theory, the result of which could be deductively concluded with reference to theories and previous studies which were logically related. Based on the information from the literature review and related studies, a hypothesis was set up, and the questions established within the frame of the research objectives, the main issues of the study. The researcher has prescribed the research methodology with important content details as follows.

### Population and Samples

The population of this study consisted of 10,590 undergraduate students of Kasetsart University, Si Racha Campus, Chon Buri province which were Gen Z citizen group who had access to use of technology and gave significance to business transactions through electronic system. The samples of the study were those with the age of 18 years and above who bought merchandises or received services via electronic True Money Wallet in Si Racha district, Chon Buri province. The sample group were 386 students derived by using Taro Yamane's (1973) formula with reliability 95%, and acceptance of variance 5%. However, for a more accurate and reliable study, the researcher collected the primary data from 409 students, using a questionnaire.

The method of selecting the sample group was conducted by means of non-probability sampling. That is, a multi-stage random sampling was conducted among the students at the Kasetsart University, SiRacha Campus who used the electronic True Money Wallet, but without giving an opportunity or probability for the sample group within the whole population. The steps of sampling were as follows:

1. Purposive sampling based on the areas around the University campus such as 7-Eleven convenient stores, shops and food stores around the University that accepted payment through electronic True Money Wallet.
2. Convenient sampling aimed at the desired sample group and use of inquiring to screen sample group having experience in using the electronic True Money Wallet, and then 409 questionnaires were distributed using Google Forms to those who were willing to give information and answer the questions at the above mentioned venues.

### Research Instrument

This study used a closed-ended response questionnaire, constructed by the researcher, with the content relevant to the research documents and related studies, examined for the IOC by two experts, revised according to the experts suggestions, and examined for the reliability by experimental group of 30 students. The questionnaire had Cronbach's Coefficient Alpha 0.975 and found that  $\alpha$  was  $>0.7$ , meaning that it was reliable and could be used with the sample group of 409 students. Thus, the researcher constructed an online questionnaire via Google forms consisting of three parts: general information or personal data about the respondent, information on using electronic True Money Wallet, and factors influencing decision making to use electronic True Money Wallet. This was done through a survey on online Google forms which could be rapidly distributed in a wide range.



### **Data Analysis**

The data collected from a quantity study were analyzed by SPSS computer program to find the percentage, standard deviation and mean of the respondents' opinions. Then the data were interpreted into five levels according to Likert-Scale using simple linear regression analysis to find simple linear relation of independent variables influencing the dependent variable. The multi linear regression analysis was used to find the relation of independent variables influencing the dependent variable through the mediator in between, including correlation analysis of various variables in the study.

### **Research Findings**

The data from the questionnaires showed that the majority of the respondents were female with the average monthly income of 5001-10,000 baht who used the electronic True Money Wallet with the average of four to six times a week, and perceived and followed the information through the internet. It was found that the factors affecting decision making to use the service of electronic True Money Wallet most were security factor once transferred through acceptance, followed by communication, consumer's cost to satisfy, service image, consumer's wants and needs, and consumer's convenience respectively, all of which were at the highest level as the details that follow.

1. Security factors affected decision making to use electronic True Money Wallet through acceptance of technology since currently technology progressively and rapidly developed may hide insecurity in system of using such as risk in personal information, risk of monetary theft making consumers not decide to use the service because of the worry on such security. Therefore, technology development should be coupled with security in order to establish confidence and reliability in the service users.

2. The marketing mix factors on communication influenced decision making to use electronic True Money Wallet of the students of Kasetsart University Si Racha Campus, Chon Buri province because communication technology became to play a role in Gen Z student group, enabling them to easily get access to news and information of branded merchandises with interesting and attractive platforms and advertisements, so that they were motivated to use the service easily.

3. The marketing mix factors on cost to satisfy influenced decision making to use electronic True Money Wallet because the Gen Z student group of Kasetsart University Si Racha Campus, Chon Buri province, the majority of whom usually compared the prices, value of the merchandise or service they would receive and other costs so as to decrease their expenses, such as price of merchandises and travel cost. In addition, the consumers could also save time in doing monetary transactions which was very important, especially for this group of consumers, to make decision use the service.

4. The marketing mix factors on service image influenced decision making to use electronic True Money Wallet of students at Kasetsart University Si Racha Campus, Chon Buri province because True Money Wallet had a good image in providing the service, accepted as a number one leader on electronic payment which could give immediate response, without an error, to the need of Gen Z consumers, and also had a quality service regularly.

## Discussion/Conclusion

1. Security factors affected decision making to use electronic True Money Wallet through acceptance of technology which as in line with a study by Chawisa Phumdontree (2016) investigating the factors affecting acceptance of people's use of Prompt pay service in Bangkok Metropolitan Region which found that risk accepting factors negatively affected acceptance of using Prompt pay service which showed that service users were likely to accept using Prompt pay if the risk was less

2. Factors on marketing mix on communication affected decision making to use electronic True Money Wallet of students of Kasetsart University Si Racha Campus, Chon Buri province which was consistent with a study by Supawadee Pincharoen and Nittana Thanitnakon (2017) who investigated marketing through online social media and acceptance of technology which affected decision making to use restaurant service through consumer's mobile application in Bangkok. It was found that factors on marketing mix through online social media affected decision making to use the restaurant service through mobile application in the website. The pictures or sound media helped consumers understand the information and know how to use including helping entrepreneurs to be able to provide information and response to their needs, and give answers to questions quickly.

3. Factors of marketing mix on consumer's cost to satisfy affected decision making to use the service of electronic True Money Wallet which was in congruence with a study by Cholkank Petchsut (2018) on the quality of application service of Krung Thai Bank in Yala province which found that the majority of customers emphasized the quality of service on consumer's cost. They would be satisfied with the application that could decrease the cost in using the service and time saving.

4. Factors of marketing mix on service image affected decision making to use the service of electronic True Money Wallet of students of Kasetsart University Si Racha Campus, Chon Buri province which was in line with a study of Sangduan Vanichdumrongsak and Apirada Suthisanont (2012) entitled perception of image, and service quality, a case of Kiat Nakin Bank, Bangkok Metropolitan Region Branch, which stated that perception of the bank image had relation with perception of the quality of the bank service at the highest level, and the relation was in the same direction, that is a good service quality would result in a good image; if service quality was not good, it would affect the image accordingly.

## Suggestions

### Suggestions for the Study

1. At present, technology has been adjusted quickly; therefore, there has been a gap in security. The information of service users would be leaked; therefore, entrepreneurs should use security factors as the tools to help develop more security system such as require the service users to change their code every three months, or enter the code by scanning their faces. However, the entrepreneurs should publicize the information through online social media so that the consumers would perceive it and have advantages, and have more realization of security in using it.

2. Using True Money Wallet would help users to save time, especially during rush hours, but technological errors may occur; therefore, entrepreneurs should make use of factors on technological acceptance to check correctness in order to decrease the errors.

### Suggestions for Future Study

This study investigated only the samples who used the electronic True Money Wallet specifically in Kasetsart University Si Racha Campus, Chon Buri province. The results of the study would reflect only the opinions of those samples. Therefore, in the future, the entrepreneurs or interested people should investigate the users in each region, particularly the province which is the center of the region, as to compare their opinions affecting decision making to use the electronic True Money Wallet.

### References

- Ajzen, I., & Fishbein, M. (1972). Attitudes and normative beliefs as factors influencing behavioral intentions. *Journal of personality and social psychology*.
- Borden, N. H. (1964). *The concept of the marketing mix*. *Journal of advertising research*.
- Camarero, C., Antón, C., & Rodríguez, J. (2013). Technological and ethical antecedents of e-book piracy and price acceptance. *Journal of the Electronic Library*, 32(4), 542–566.
- Chatpong Choosaengnil. (2019). *Cashless Society*. Retrieved August 15, 2020, from <https://www.scimath.org/article-technology/item/9094-2018-10-18-08-04-19>.
- Chawisa Phumdontree. (2016). *Factors Affecting People's Acceptance of Prompt pay Service in Bangkok Metropolitan Region*. Independent Study, Bachelor's Degree. Thammasat University.
- Cholkanok Petchsut. (2018). *Quality of Krung Thai Next Application Service in Yala Province*. Retrieved August 13, 2019, from [http://www.ba-abstract.ru.ac.th/AbstractPdf/2561-5-6\\_1565863962.pdf](http://www.ba-abstract.ru.ac.th/AbstractPdf/2561-5-6_1565863962.pdf)
- Kotler, P. (2015). *Marketing Management: Analysis, Planning, and Control*. (6<sup>th</sup> ed). Englewood Cliffs, New Jersey: Prentice Hall.
- Parasuraman, V.A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of marketing*, 49, 41-50.
- Pattarat Wongwaikul. (2019). *e-wallet, Payment Assistant for People Begging to Work*. Retrieved August 13, 2019, from <https://positioningmag.com/1249545>
- Rogers, E.M. (1983). *Diffusion of innovations*. (3 ed.). New York: Free Press of Glencoe.
- Sangduan Vanichdumrongsak and Apirada Suthisanont. (2012). *Perception on image and service quality: a case study of Kiatnakin Bank at Branches in Bangkok metropolitan region*. Faculty of Business Administration, Rajamangala University of Technology Thanyaburi.
- Sasiporn Mueansichai. (2012). *Factors Affecting Acceptance of ERP Software of Accounting Users*. Master's Degree Thesis. Thammasat University.
- Siriporn Witsanumahimahachai. (2008). *Building Excellence Proactive Service*. Retrieved August 20, 2019, from <http://mkpayap.payap.ac.th/siriporn/pdf/pyupdf3.pdf>.
- Singha Chawisuk and Sunantha Wongjaturapat. (2012). *Theory of Acceptance of Information*. Doctor's Degree Dissertation. Lad Krabang Institute of Technology.
- Supawadee Pinchareon and Nittana Thanitnakorn. (2017). *Marketing through Online Social Media and Technological Acceptance Affecting Decision Making to Use Restaurant Reservation Services through Mobile Application of Consumers in Bangkok*. Independent Study, Bachelor's Degree. Bangkok University.
- Taro Yamane. (1973). *Statistics: An Introductory Analysis*. (3<sup>rd</sup>ed). New York: Harper and Row Publications.

Thikamporn Intarakasem and Soawarot Sisutto. (2020). *Promotion of Transactions through Mobile Phones ABC-Mobile Banking for Customers of Bank ABC, Nakorn Ratchasima*. Independent Study, Bachelor's Degree. Rangsit University.

---

# Influencers Affecting Consumers' Purchase Intentions through VDO Advertising on TikTok Online Social Media in Chonburi Province

Sasipon Cantawee<sup>a</sup>

Ngamsiri Witoonphan<sup>b</sup>

Touchakorn Sammasut<sup>c\*</sup>

<sup>a</sup>Faculty of Management Science,

Kasetsart University Sriracha Campus,

<sup>b</sup>Faculty of Business, Rangsit University

<sup>c</sup>Marketing Program, Faculty of Management Science,

Kasetsart University Sriracha Campus, E-mail: [ajgolfmk@hotmail.com](mailto:ajgolfmk@hotmail.com)

## Article Info

Received 6 August 2021

Revised 28 August 2021

Accepted 29 August 2021

Available online 31 August 2021

## Abstract

Nowadays, variety of news accessibility among consumers is not the same, causing changes in consumers' behaviors until marketers have to develop a particular style of communication, a form of online video advertising to be more attractive to consumers. The objectives of the study on influencers affecting consumers' purchase intentions of Video (VDO) advertising through TikTok online social media in Chonburi province were attempted to: 1) investigate whether VDO advertising on TikTok online social media affected consumers' intention to purchase or not; and 2) investigate which influencers had the greatest effect on consumers' purchase intentions from watching VDO ads on TikTok social media in Chonburi province. The sample group consisted of 400 people aged between 17-35 years old with TikTok application accounts in Chonburi province. The research instrument was a questionnaire about consumers who had TikTok application accounts. The statistics used in data analysis were test values, data distribution, mean, and standard deviation. The findings revealed that the Macro influencers, namely the VDO advertising through TikTok online social media which had a big number of followers affected consumers' purchase intention most when the consumers had engaged or participated in the advertising content presented in the TikTok online social media with statistical significant at  $\alpha$  0.05

**Keywords:** Influencers, VDO Advertising, TikTok, Consumers' Purchase Intention

## Introduction

Nowadays, the world has completely stepped into the digital age resulting in necessity for marketers to develop marketing communication instruments, advertising in particular. In the past, advertising was not able to make customers to be interested enough in the merchandise. (Nantanatch Rattanaporn and Yurapong Owatsathit, 2010). Therefore, it is the duty of the marketer to look for new marketing strategies as to reach customers the most. The studies on customers' behaviors of internet users in Thailand revealed that there was an increase of 160% of users and the range of the internet using was 11 hours and 20 minutes

(Narongyod Mahittivanicha, 2020). Another fact is that advertising through online has low expenses, with no time limit, being able to specifically reach customers and with variety of forms (Frank, 2017), resulting in that businesses become interested to present plenty of useful information for customers through online media.

Considering the advertising financial budget of Thailand, it is expected that in 2020 the value of the budget will be more than 77, 124 million baht, around 15-20 % decreased from 2019. On the contrary, however, the customers' behaviors in using media is on the increase. Thus, the online advertisement is continuing to grow (Saranya Thongthab, 2019) and that currently advertisement online media grows up to 40 % both in Facebook, YouTube and online social media like TikTok (Phawat Ruengdechworachai, 2019). When considering the information on audience retention of the VDO online, it is found that the customers' interest varies according to the length of VDO. The length of the VDO the customers are interested in watching until the end is 24 seconds or about 42% followed by 1 minute or 27% of the survey (Narongyod Mahittivanicha, 2018), and Nielsen's survey found out that more than 84% of customers would accept the information and suggestions from the people nearby, famous people or people who are also customers more (Fayossy, 2015). For this reason, the amount of money spent on online advertisement has increased since 2016 resulting in that entrepreneurs foresee that making VDO advertising through an influencer marketing strategy is able to communicate with customers and create reliability more. Doing marketing through influencers has two forms, namely: 1. Macro Influencers, making contents as occupation which has about 50,000-1,000,000 followers, and 2. Micro Influencers, being a group of blockers who favor or specially have expertise in a particular area which has about 10,000 – 50,000 followers (Sarun, 2020).

Regarding the use of VDO online media in 2019, the tendency is that consumers can see more advertising VDOs (Kanokwan Kankate, 2019) including information on audience retention of online VDO media. This indicates that consumers' interest will decrease when the time of VDO increases. This is why online social media TikTok presents each VDO clip in less than one minute. In 2019, Thailand had a growth in a number of users up to 100% which is the highest in the ASEAN group (Pakorn WattanaChalermwuttikorn, 2020), resulting in having the influencer on online social media favorably called "Dao TikTok" which presents the content in each area differently.

Based on a study on factors affecting consumers' intention to purchase from VDO advertising media through the influencers on online social media (Lada Ampai Kimkeo, 2017), it was known that which factors made the consumers to have intention to purchase through VDO advertising on social media. The independent variables which had influence on the consumers' intention to purchase the researcher selected to for the study were the influence of direct references, influence of Macro Influencer, influence of Micro Influencer, advertisement by a company or owner of the product, and consumers' participation in the content of online VDO. For this reason, the researcher was interested to further investigate influencers of the consumers' intention to purchase through VDO advertising on TikTok online social media in Chonburi province in order to find which influencers affect the consumers' intention to purchase through VDO advertising on TikTok online social media in Chonburi province. It is believed that this study would be beneficial for those who are studying, entrepreneurs, and marketers to apply the finding in selecting the instrument which has the influence on intention to purchase the product via TikTok or VDO on online social media efficiently.

## Objective

1. To investigate whether VDO advertising on TikTok online social media affect the intention to purchase or not.
2. To investigate and find out which influencers affect consumers' intention to purchase through VDO advertising on TikTok online social media most in Chonburi province.

## Literature Review

### 1. Related literature on Online Social Media

Online social media is a digital media connected with the internet system as a medium for sending information among people in a wide scope within the same network (Win Rattanatorn, 2010). Online social media is, therefore, a huge channel of marketing, especially online advertising (Ratnadolsite, 2016). Later on there has been advertising development called connotation advertisement in order to decrease consumers' attitude without the feeling of being insisted (D'Astous and Chartier, 2000), and the use of connotation advertisement is likely in the form of online VDO because of its high popularity, particularly TikTok online social media (Kanokwan Kankate, 2019). Thus, as to have efficient online communication, there should be an understanding of a process of receiving the message of the receiver, so that we can choose an appropriate advertising tool on TikTok without a negative attitude toward the consumer.

### 2. Literature Review and Related Study on Social Influencers

Social influences are conforming ideas or actions (Lamb, Hair and McDaniel. 1992) that lead to imitating behaviors which could explain consumers' behaviors toward the influencer by a theory of information source. The theory states that the reliable influencer has expertise and can attract as well as interest consumers to participate in the advertisement (McCracken, 1989). The researcher, therefore, is interested in investigating the influencers relating to marketing groups, namely direct reference group: Micro Influencers and Macro Influencers, owners of branded merchandises, and consumers having influences on one another through engagement. The reference group which may affect the intention to purchase will be used as variance in the study in order to investigate which group has impact on the intention to purchase most.

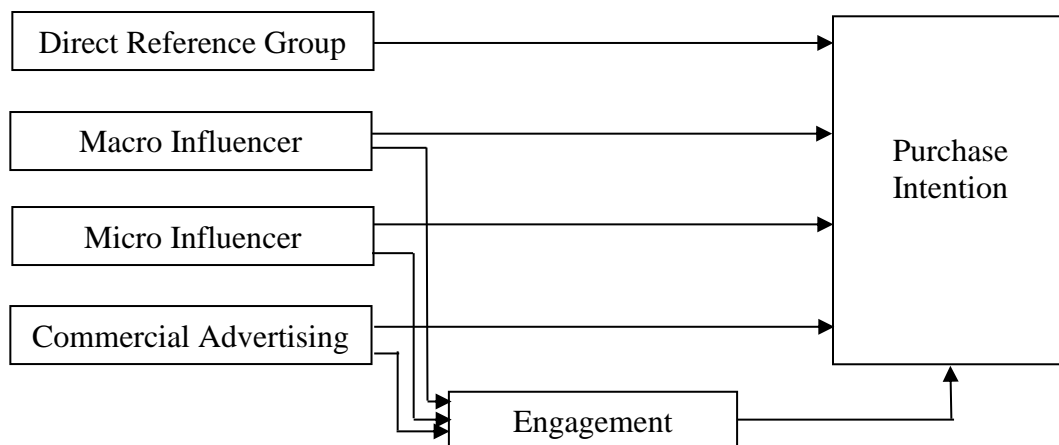
### 3. A Theory of Planned Behavior: TPB

Intention to purchase is a mental process through a medium in communicating information in order to make intention to purchase (Howard, 1994). The researcher, therefore, choose to investigate influencers functioning in communicating the information that create intention to purchase on TikTok online social media by using a theory to explain this idea. That is, a theory of planned behavior: TPB to explain subjective norm from the influencers which have direct impact on consumers' purchase intention (Ajzen & Fishbein, 1975) through VDO advertising on TikTok online social media. The relation of direct reference variances, Micro Influencers and Macro Influencers, and owners of branded merchandises which have impact on purchase intention would be explained. The second theory to be used is the Stimulus Organism-Response: S-O-R MODEL. This theory can explain the variance which is a stimulus that results in indirect impact on organism in the form of an engagement and on the response (Olney et al, 1991). That is, VDO advertising on TikTok online social media of Micro Influencers, Macro Influencers and owners of branded merchandises resulting in consumers' involvement that makes the consumers to have influences among themselves. As a result, they

have purchase intention which could be explained that the consumers' involvement derived from the engagement in terms of content through online network. It is stated that social influencers are stimulus that creates responses from the consumers because the information from the influencers has relation with the consumers and creates the consumers' response through online media by pressing Like, Share, and Follow, and expressing some opinions (Thitanant Chaikositpirom, 2017). This is the theory used as a basis to investigate the relation of the variances stated in the objectives of the study.

### Conceptual Framework

Based on the literature review and related study on influencers toward purchase intention through VDO advertising on TikTok online social media in Chonburi province, a conceptual framework can be made as in figure 1.



**Figure 1:** Conceptual framework of the influencers toward consumers' purchase intention through VDO advertising on TikTok online social media in Chonburi province



## Research Methodology

This is a quantitative research the samples of which were both male and female users of TikTok online social media residing in Chonburi province calculated by using Cochran's theory (1977 cited in Kalaya Vanichbancha, 2007). Since the exact number of population was not known, thus the reliability level was set at 95% and 5% was reserved for loss of questionnaires and the calculation formula was  $n = \frac{Z^2}{4E^2}$

given      n      represents size of the sample group

            Z      represents reliability level set at 95%

                    With  $\alpha = 0.05$  or  $1 - \alpha/2 = 0.975$

            E      represents level of discrepancy set at 0.05

Based on the formula, it can be represented as:

$$n = \frac{1.96^2}{4(0.05)^2} = 384.16 \text{ or } 385 \text{ samples}$$

It can be seen from the formula that there were 385 samples and 15 of which were reserved in case of loss of the questionnaires. For accuracy and completeness of the returned questionnaires, the researcher set the sample size at 400 samples as to create reliability (Kalaya Vanichbancha, 2007). The researcher selected the sample group without using probability but the samples were purposively selected only from those who had account of TikTok online social media in Chonburi province. The questionnaires were collected online by convenience sampling because most samples mainly used the internet including secondary information on literature review and related literature.

The questionnaire consisted of four parts. Part 1 was about the general demography information of the samples. Part 2 were close-ended response questions in the form of a check list on behaviors of using online VDO. Part 3 was close-ended response questions surveying the opinions of users of online VDO about the variances whether they were related or not and at what level. The questionnaire was a five-level Likert rating scale ranging from 1-5, strongly agree to strongly disagree. Part 4 was on opinions and suggestions. As to have a quality study the questionnaire was examined by experts and its validity was tested to find the index of item objective congruence (IOC) if the questionnaire items were in line with the study objectives, and it was found that the IOC was more than 0.50. That is the questionnaire was consistent with the objectives and could be used to test the validity. Pertaining to the reliability of the whole questionnaire so as to find whether there was relation between the study variances or not, and to what extent, the Cronbach's Alpha Coefficient was used. It was found that the reliability was higher than 0.7 so that the questionnaire could be used to collect data from the samples. For data analysis, the following statistical procedures were used: percentage for describing general demographical information of the respondents and their behaviors on using online VDO; mean was used to describe their opinions on the study variances; and standard deviation to analyze the relation of the variances. The inferential statistics, that is multiple regression analysis was used to analyze the relation between the variances, the Pearson's correlation coefficient was used to find the relation between two variances from the sample

group, and to find the relation value of mediators using Process Macro SPSS program to test whether the mediators have impact on the relation between independent variables and dependent variables by changing the dependent variables or not. In this study the researcher wished to know if every variable could explain the influence that affected the dependent variable appropriately.

## Research Findings

Based on a study of the influencers affecting consumers' purchase intentions through VDO advertising on TikTok online social media in Chonburi province from 400 samples, it was found that most of the respondents of 319 were female (79.75%), 330 of whom aged between 17-22 (82.50%), 395 being single (98.75%), 310 holding bachelor's degree as highest education level (77.50%), 330 being pupils/students (82.50%), and 222 having an income less than 10,000 baht a month (55.50%). The behaviors of consumers' purchase intentions through VDO ads on TikTok online social media showed that most samples, 140 people (35%) spent 31 minutes to 1 hour watching the online media by choosing the VDO with 15 second long, 205 people (51.25%) gave reasons that they watched the program for entertainment and fun, 380 people (95.00%) accepted the ads in the middle of not more than 5 seconds, 201 people (51.25%) had seen the merchandises advertised in the VDO before, namely, garments, bags and shoes. There were 237 people (59.250%) who never searched online VDO to purchase particular merchandises; 176 people (44%) never bought the merchandises inherited in the ads through online VDO; 261 people (65.25%) never bought the merchandises from 205 people (51.25%) following the online VDO. Upon analyzing the average of the factors affecting the consumers' purchase intentions, it was found that the majority of the samples received the influences directly from the group who tended to believe the suggestions of the family and friends more than the online VDO ads with the mean 3.99.

With regards to the influences from the Macro Influencer group, it was found that merchandise ads through the Macro Influencers in online society brought about good attitude toward the merchandise with the mean 3.65, and the influences from Micro Influencer group, after having seen the VDO reviewing the merchandise, creating the purchase intention with the mean 3.95. It was also found that receiving the influences from the ads by the company and the owner of the branded merchandise through viewing online VDO made the consumers to be interested in the merchandise with the mean 3.61. The influences from engagement in the advertising content by pressing Like in the TikTok VDO clip had the mean 4.21, and the TikTok VDO clip stimulated the consumers to have purchase intention with the mean 4.46.

**Table 1** Correlation coefficient between influencers on TikTok online social media consisting of direct reference groups: Macro Influencer, Micro Influencer, ads by owners and engagement in the content affecting purchase intention of the sample group (n= 400)

Variable	Ref	Macro	Micro	Brand	Engagement	Intention
Direct Reference	1.000**					
Macro Influencer	.421**	1.000**				
Micro Influencer	.408**	.783**	1.000**			
Brand	.250**	.518**	.528**	1.000**		
Engagement	.364**	.529**	.496**	.382**	1.000**	
Intention	.338**	.652**	.666**	.488**	.646**	1.000**

\*\* significant at  $\alpha$  0.01

From Table 1, the correlation coefficient between the influencers on TikTok online social media consisted of direct reference groups, the Macro Influencers and Micro Influencers, ads by the owner and engagement in the content which affected the samples' purchase intention, it was found that the independent variables had correlation between 0.33-0.66, not more than 0.80. Considering the value of VIF, it was found between 1.23-2.77, not more than 10, and the value of Tolerance was found between 0.36-0.80 which was between  $0 > 1$ . It could be concluded that the coefficient of the factors on every aspect was related in the same direction with statistical significance at the critical level 0.01, causing no multicollinearity and that the data could be further tested using multiple regression analysis.

**Table 2** Relation between influencers on online social media directly affecting the purchase intention

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.487	.246		-1.980	.048
Ref	.069	.071	.038	.976	.330
Macro	.385	.079	.290	4.907	.000
Micro	.432	.074	.346	5.854	.000
brand	.200	.058	.146	3.426	.001

\*\* significant at  $\alpha$  0.05

Table 2 shows that the Macro Influencers and Micro Influencers, ads by the owner of the merchandise had correlation in the same direction of the purchase intention with statistical significance at the critical level 0.05 except the reference group with reverse correlation with the purchase intention with statistical significant at the critical value or  $\alpha$  0.05. As the Macro Influencers and Micro Influencers, ads by the owner of the merchandise had variables in the middle, there need to be tested using the Process Macro Spss in order to find value  $\beta$  (beta). Thus, the correlation of the direct reference group once again.

**Table 3** Relation between Direct Reference group affecting the purchase intention

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	1.307	.280		4.659	.000
Direct Reference groups	.609	.085	.338	7.161	.000

$R = 0.338$   $R^2 = 0.114$  Adjusted  $R^2 = 0.112$  S.E. = 1.04276  $F = 51.275$

Table 3 shows that the Macro Influencers and Micro Influencers, ads by the owner of the merchandise had correlation in the same direction of the purchase intention with statistical significance at the critical level 0.05 except the reference group with reverse correlation with the purchase intention with statistical significance at the critical level 0.05. As the Macro Influencers and Micro Influencers, ads by the owner of the merchandise had variables in the middle, there need to be tested using the Process Macro SPSS in order to find value  $\beta$  (beta). Thus, the correlation of the direct reference group once again.

**Table 4** Relation between influencers on TikTok online social media directly affected the purchase intention

Model	Total Effect		Direct Effect		IV- I <sub>1</sub>		I <sub>1</sub> -DV		Indirect Effect		P = 0.000
	C		C'		A1		B1		A1*b1		
	b	SE	b	SE	b	SE	b	SE	b	SE	
Macro Influencer	0.868	0.051	0.574	0.053	0.519	0.042	0.566	0.054	0.294	0.042	0.000
Micro influencer	0.831	0.047	0.572	0.047	0.457	0.040	0.568	0.051	0.260	0.040	0.000
Commercial Advertising	0.668	0.060	0.387	0.053	0.385	0.047	0.729	0.053	0.281	0.046	0.000

## Conclusion/Discussion

### Conclusion

As mentioned earlier, a study of the influencers affecting consumers' purchase intention through VDO ads on TikTok online social media in Chonburi province revealed that the majority of samples were female aged between 17-22 years old, being single, studying a bachelor's degree, being pupils/students, with income less than 10,000 baht a month. Their purchase intention behavior through VDO ads on TikTok online social media was watching the ads from 31 minutes to one hour and usually chose to watch the VDO with 15 seconds long. The reason for watching was for entertainment and fun and it was accepted that they also viewed the ads in the middle of not more than 5 seconds. They had seen the merchandises advertised in the online VDO before such as garments/bags/shoes but they never searched the online VDO to buy these particular merchandises, and never bought the merchandises imbedded in the ads through online VDO. Besides, they never bought the merchandises from the people following the online VDO.

An analysis of the relation among the factors leaded to an answer and the researcher's set objectives that every independent variable resulted in the purchase intention, and that the variable resulting in the purchase intention most was consumers' engagement in the owner's advertising content. This means that the owner of the merchandise once presented the advertising content through online social media, then the consumer engaged in the ads by pressing Like, Share, and expressing some opinions and so on. That most consumers engaging in the ads influenced making purchase intention on the part of the influencers on TikTok online social media the most. That is, the Macro influencers affected more than the Micro influencers with the difference in Standardized coefficient of 0.002, and with the critical value 0.05. This was against the finding of the research model tested on YouTube online social media which stated that the Micro influencers affected more than the Macro influencers did, because TikTok online social media was a VDO clip which presented the VDO content in a very short period of time, making the consumer perceive more through the Macro influencers than the Micro influencers. This is because consumers would be interested and open their mind to accept VDO presentation of this group of influencers. Besides, both studies had explained the influencers differently. For instance, the Macro influencers in YouTube had mainly popular super stars and

famous people. However, the Macro influencers in TikTok had approximately 50,000-100,000 followers. Additionally, there were other influencers affecting purchase intention such as the ads by the company or owner of merchandises and a direct reference group that could provide opportunity for the consumers to have purchase intention in the subsequent order.

### Discussion

Based on the conclusion above, it can be seen that every independent variable affected purchase intention and the one that affected it most was engagement in the advertising content of the merchandise owner. This means that once the owner of the merchandise presenting the advertising content through online social media, there were consumers participating by pressing Like, Share, and expressing opinions and so on. The fact is that most consumers who participated in the social media influenced one another to have purchase intention and had most influences in TikTok online social media. This is in line with a study of Roobina Ohanian (2013) who found that using influencers to communicate with consumers would convince the consumers to change their attitude and incline to have intention to buy the merchandise ( $\beta = 0.574$ , Sig.=0.000) which was in line with the set hypothesis. Therefore, hypothesis two (H2) was accepted. Based on hypothesis five (H5), the influence of Macro influencers would positively affect toward engagement in the advertising content in the same direction, and it was statistical significant at  $\alpha 0.05$  which was in congruence with a study by Assael (1988) that claimed that consumers had a high level of relation because of significance of merchandises toward the consumers ( $\beta = 0.519$ , Sig.=0.000). This was also consistent with the set hypothesis. Thus, hypothesis five (H5) was accepted. For hypothesis eight (H8), the influence of Macro influencers engaging in the online VDO would positively affect the purchase intention in the same direction. This had a significant value 0.000 at  $\alpha 0.05$ , and was consistent with a study of Roobina Ohanian (2013) which asserted that using the influencers to communicate with the consumers would convince the consumers to change their attitude to incline and lead to a purchase intention to buy merchandises ( $\beta = 0.574$ , Sig.=0.000). This was consistent with the set hypothesis. Therefore, hypothesis two (H2) was accepted. As for hypothesis five (H5), the influence of Macro influencers would positively affect the engagement in the content in the same direction with the significant value 0.000 and statistical significant at  $\alpha 0.05$ . This was also consistent with a study of Assael (1988) which stated that consumers with a high relation derived from the fact that the merchandises were important for the consumers ( $\beta = 0.519$ , Sig.=0.000) and this finding met the set hypothesis. So hypothesis five (H5) was accepted. Regarding hypothesis eight (H8), the influence of Macro influencers that engaged in the content of the online VDO would positively affect the purchase intention to buy merchandises in the same direction. This had the significant value 0.000 and statistical significant at  $\alpha 0.05$ , and was consistent with a study by Anupong Chantorn (2019) which claimed that Micro influencers could convince consumers by a promotion and recommendation of merchandises through online VDO in order to motivate the consumers to have purchase intention ( $\beta = 0.568$ , Sig.=0.000) as the set hypothesis. As a consequence, hypothesis 9 (H9) was accepted. Regarding hypothesis 4 (H4), the advertisement through an account of the company would positively affect purchase intention in the same direction. Its significant value was 0.008 with statistical significant at  $\alpha 0.05$  which was in line with the set hypothesis. As a result, hypothesis four (H4) was accepted. For hypothesis seven (H7), advertisement by the company or the owner of merchandises would positively affect the consumers' engagement in the content of the advertisement in the same direction. Its significant value was 0.000 with statistical significant at  $\alpha 0.05$ . Thus, hypothesis seven (H7) was accepted.

## **Suggestions**

### **Suggestions for Business Application**

1. Business circle can make use of the findings in the sense of making the target group watch the the online VDO and engage in the advertising most. That is, the or owner of the merchandise has to present the content relevant to interest of the target group, so that they would have the feeling of involvement with the content. The content should be easy to understand, appropriate and have adequate details. The length of online VDO mostly watched by consumers is 15 seconds and they also accept advertisement in the middle of not more than five seconds. Therefore, a useful advertising content would stimulate interested customers to have purchase intention better.

2. Advertisement using Macro Influencer group could stimulate purchase intention better than the Micro Influencer group on TikTok and would be an alternative choice the company could use to promote sales.

3. VDO with entertaining content could engage onlookers and most of them who wanted to buy merchandises were usually interested or already knew the merchandises. This was probably because they were kept informed by the direct or indirect group, or by searching for useful information for purchase decision making. Thus, making useful information available was important and necessary.

4. Currently most consumers watch online TikTok for entertaining and fun. It is, therefore, suggested online TikTok present exotic contents with interesting tricks in response to the consumers' desire in order to make purchase intention easier, have more perception and engagement in the online VDO so as to bring about consumers' purchase intention easier. In addition, rating of online VDO contents should be made such as contents for children, or for people of more than 20 years of age and above. As such, it would increase reliability of the influencers and help owners of companies to have more opportunity in promoting sales.

### **Suggestions for Future Study**

1. As this study focused on independent variables, namely the Macro influencer and Micro influencer and the company's advertisement that affect customers' purchase intention, the next study should focus on other independent variables such as whether perception of merchandise brands affects consumers' purchase intention or not.

2. The location of this study was limited in Chonburi province, a future study should be conducted in other province or provinces.

3. The sample group in this study was purposively selected and the questionnaire was conveniently distributed, the sample group might not be so reliable. For future study, the sample group should be made by quota sampling in order to be more accurate and adequate in terms of the data collect.

4. The samples in this study were mostly female students who had an income of 10,000 – 15,000 baht per month. If we could have both male and female in approximately the same number, the result would have been different from this study.

5. Since the TikTok application has just been popular in Thailand, the researcher was not so certain in this platform. In the future, if this application is further developed, it would make consumers to be more confident and make decision to purchase the merchandise on TikTok application.

6. This study investigated the influencers affecting consumers' purchase intention through VDO advertising on TikTok online social media. The next study should investigate other dependent variables so as to have additional data and different findings.

## References

- Anupong Chanton. (2019). *Marketing in the Era of Three Search “Real” by “Micro Influencer”* Retrieved August 15, 2020, from <https://www.prachachat.net/ict/news-359432>
- Ajzen, I., & Fishbein, M. (1975). A Bayesian analysis of attribution processes. *Psychological bulletin*, 82(2), 261.
- Assael, Henry. (1998). *Consumer Behavior and Marketing Action*. (6<sup>th</sup> ed.). Cincinnati, Ohio: South – Western College Publishing.
- Cochran. (1977). *Specifying Sample Sizes for Research*. Academic Service Center. Institute of Research Promotion and Innovation Development.
- D' Astous, A., & Chartier, F. (2000). A Study of Factors Affecting Consumer Evaluations and Memory of Products Placements in Movies. *Journal of Current Issues and Research in Advertising*, 22(2), 31-40.
- Fayossy. (2015 ). *5 Digital Marketing Trends for the Year 2015*. Retrieved August 15, 2020, from <https://www.marketingoops.com/news/5-digital-marketing-trends-2015/>
- Frank. (2017). *Diversity of Online Media at Present*. Retrieved August 11, 2020, from <http://www.aspathailand.com/?p=14476>
- Howard, J. A. (1994). *Buyer behavior in marketing strategy*. Englewood Cliffs, NJ: Prentice Hall.
- Kalaya Wanichbancha. (2007). *Statistic Analysis: Statistics for Management and Research*. (10<sup>th</sup> ed.). Bangkok: Chulalongkorn Press.
- Kanokwan Kankate. (2019). *Conclusion!! Ways of Creating VDO for Popularity through Channel TikTok*. Retrieved August 17, 2020, from <https://stepstraining.co/social/how-to-be-famous-video-creator-in-tiktok>
- \_\_\_\_\_. (2019). *Video Marketing Ep.01: Updated Statistics on Video Marketing for 2019 that Markets Should not Miss*. Retrieved August 17, 2020, from <https://stepstraining.co/content/video-marketing-ep-01-stat-2019>
- Lada Ampai Kimkeo. (2017). *Factors Affecting Consumers' Purchase Intention from VDO Advertising through Online Social Influencers*. Pathumthani: Thammasat University.
- Lamb, Hair & McDaniel. (1992). *Principles of Marketing*. New Jersey: Cengage South-Western.
- McCracken, G. (1989). Who is the celebrity endorser? Cultural foundations of the endorsement process. *Journal of consumer research*, 16(3), 310-321.
- Nantanatch Rattanaporn. (2010). *The Impact from Conflict Status of Famous People between Merchandise Certifiers and Merchandise Users*. Bangkok: Kasetsart University.
- Narongyod Mahittivanicha. (2018). *Data Confirm that Facebook Appropriate for Only Short VDO*. Retrieved August 11, 2020, from <https://www.twfdigital.com/blog/2018/11/facebook-video-should-be-short/>
- \_\_\_\_\_. (2020). *Behaviors of Internet Users in Thailand in 2020*. Retrieved August 11, 2020, from <https://www.twfdigital.com/blog/2020/04/thailand-internet-user-profile-2019/>
- Olney, T. J., Holbrook, M. B., & Batra, R. (1991). Consumer responses to advertising: The effects of ad content, emotions, and attitude toward the ad on viewing time. *Journal of consumer research*, 17(4), 440-453.



- Pakorn Wattanachalermwuttikon. (2020). *Entering Year 2 of 'TikTok' Thailand-Forwarding Making Income with New Ecosystem through Three Strategies*. Retrieved August 11, 2020, from <https://www.marketingoops.com/data/tiktok-focus-on-ads-new-ecosystem-2020/>
- Phawat Ruengdechworachai. (2019). *End of the Golden Era 'Ten Thousand Millions Advertisement' Covid Break Traditional Media-Online Soars*. Retrieved August 11, 2020, from <https://www.bangkokbiznews.com/news/detail/878340>
- Ratnadolsite. (2016). *Meanings of Online Society*. Retrieved August 18, 2020, from <https://ratnadolsite.wordpress.com/blog/>
- Roobina Ohanian. (2013). Construction and Validation of a Scale to Measure Celebrity Endorsers' Perceived Expertise, Trustworthiness, and Attractiveness. *Journal of Advertising*, 19(3), 39-52
- Saranya Thongthab. (2019). *Advertising Financial Budget in 2019 Up to 90,000 Millions, Strongly Coming!* Retrieved August 11, 2020, from <https://www.thebangkokinsight.com/103414/>
- Sarun. (2020). *Marketing Blog: Influencer Marketing What Is It? How to use Marketing Strategies to Bang?* Retrieved August 15, 2020, from <https://seo-web.aun-thai.co.th/blog/marketing-blog- influencer-strategy/>
- Thitanant Chaikositpirom. (2017). *Analysis of Online Content Presentation on Social Media: A Job Employment Platform Service for Online Free Lance: A Case Study of Fastwork Facebook Fanpage*. Pathumtani: Bangkok University.
- Win Rattanatorn. (2010). *Attitude toward Communication on Marketing in the form of Viral Video and Factors Affecting Sharing Intention on Online VDO of Facebook Users*. Bangkok: Thammasat University.



## Desirable Characteristics of the Students Admitted to Study Western Music in Higher Education

Ditthapong Uthetthamrong<sup>a\*</sup>

Kritsana Thipakson<sup>b</sup>

<sup>ab</sup>Department of Music,  
Faculty of Humanities and Social Sciences,  
Ubon Ratchathani Rajabhat University,  
Email: ditthapong.u@ubru.ac.th

Article Info Received 22 August 2021 Revised 30 August 2021 Accepted 30 August 2021 Available online 31 August 2021
---

### Abstract

Regarding admitting students to study music in higher education, it is necessary for students to have a good preparation both in musical theories coupled with musical skill development and general knowledge on current education situations. This article entitled desirable characteristics of students admitted to study Western music in higher education is aimed at presenting the guideline and method in developing the desirable characteristics of those who want to study Western music by means of a process conducting a study, researching for related documents, literature and texts, including exchanging ideas and experience with experts on music at the tertiary level. The desirable characteristics could be summarized into three headings, namely: 1) basic Western music theories; 2) operational skills on Western musical instruments; and 3) other academic studies.

**Key Words:** Desirable Characteristics, Admitted to Study, Western Music, Higher Education

### Introduction

In higher education, Western music is offered in both government and private universities; therefore, Western music education in higher education is for building people with knowledge and expertise on music for their career in the society, and elevating musical profession to be progressive and equivalent to other occupations. As to be in line with education reform, Western music education needs a counselor to give suggestions, including participating in various learning experiences in order to learn and practice musical skills rightly. What cannot be missed is organizing musical activities for students to participate in as creators, actors, and listeners.

With regard to the entrance examination to study Western music, it is necessary for the students who wish to take the examination to have a good self-preparation as to pass the selecting criteria. The criteria selecting students to study Western music require the students to have knowledge on theories on Western music, history of Western music, and Western musical instrument performances. In particular, Western musical instrument performances require pretty much time preparation for rehearsal of instrumental techniques, drills, and song performances until having good- enough skills necessary for admitting to study in higher education. Joseph Bowman (2016, p. 2) Has stated that preparation for taking the examination to study music in a university that currently Thailand has 76 universities offering a bachelor's

degree in music, and that many places have offered a master's degree and doctor's degree. As Thailand has entered the ASEAN community, it has affected musical occupation to rapidly expanded. Thai musicians have opportunities to show their work and perform music widely. This has interested people to study music more.

With reference to the objective of studying music in a university, it is aimed at self musical skill development up to a professional level. If this can be accomplished, it means that one can make enough incomes for oneself and family. He has also stated that although universities have their own ways of admitting students, most regulations pertaining to the entrance examination are similar. This means that to pass the examination to study music in universities is not only limited to playing good music, but also learning musical skills on other aspects

As the aforementioned, the persons who wish to continue their study on Western music in higher education should realize how they should prepare themselves as to be able to study music in the tertiary level. A good self preparation has ways and steps for learning the contents on musical theories and self preparation for rehearsals of the musical instruments they favor and other instruments included in their study.

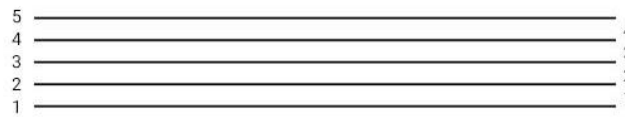
However, the writer will present some guidelines for the development of the desirable characteristics of the persons who want to study Western music at the tertiary level. To develop such characteristics, it is necessary to develop learning of musical theories along side with developing musical instrument performances. Based on a document investigation and a study by the writer, musical skill development could be divided as a guideline for self preparation for those wanting to study music in higher education as follows.

## **Basic Western Music Theory Skills**

### **Learning and Skill Rehearsals on Western Music Theory**

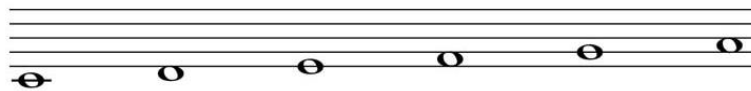
Basic Western music theory skills are necessary to study and practice to create good understanding and apply the knowledge on theories in using musical instruments rightly and appropriately. Natcha Sokatiyanurak (2006) has stated in his text "Music Theories" that studying music theories should be like music practicum. That is, learners should have an idea that music theories are skills that require rehearsals in order to create understanding and agility, because the right thinking while doing exercises is very important. The learner should do the exercises in order to have skills. The course music theories will be the most important basis in studying other courses in music related courses. The contents on basic Western music theories required for the learner are as follows:

1. Staff. This is a group of five horizontal straight lines staying apart from one another with four lanes or channels for recording song notes based on the sound level which can be shown with the height level of the notes appeared on the staff. The method of counting begins from the lowest line up until the fifth line, and the counting of the lane also begins from the lowest. The note can be recorded on the line or in the lane between the lines, above or under the line. Figure one shows an example of the staff.



**Figure 1:** the Staff

2. Note. It is a kind of symbol recorded on the staff for the five lines to show level of the sound. It is in the oval form slightly leaning to the right with its size varying with the size of the staff. It is composed of two parts, namely note head and note tail. Its main function is to convey not only the sound level but also show the value of the note (time duration). There are two methods of recording the notes: on the line and between the lines, as in the example.



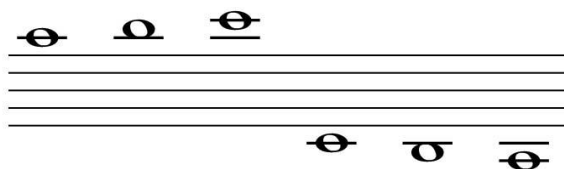
**Figure 2:** The notes recorded in the staff

3. Rest. Rest is a symbol used to represent a music sound meaning stop, a symbol for a quiet sound or stop while playing the music. It has a look like this.

ลักษณะตัวโน้ต	ตัวหยุดโน้ต	ชื่อภาษาไทย	ระบบอเมริกัน
		ตัวกลม	Whole Note
		ตัวขาว	Half Note
		ตัวดำ	Quarter Note
		ตัวเข้บ็ต ๑ ชั้น	Eighth Note
		ตัวเข้บ็ต ๒ ชั้น	Sixteenth Note
		ตัวเข้บ็ต ๓ ชั้น	Thirty Second Note

**Figure 3:** Symbols of Rest and Names

4. Leger Lines. There are some limitations of records on the staff of five lines and four lanes while a need of a note recording of each music instrument is much more. Therefore, there must have a thing called “Leger Lines” or little lines which are short horizontal lines, but a little longer than the music note, to extend recording above or below the staff. The note added with the Leger Lines will be read in addition to the staff, as in the following example.



**Figure 4:** Record of Note on Leger Lines

5. Clef is a symbol to convey the range of the sound level of the note; without clef on the staff, the note cannot be read, and only the difference of sound level can be conveyed. There are three types of Clef as follows.



**Figure 5:** Three types of Clef

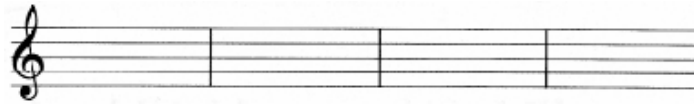
6. Calling the Note. There are two systems of how to call the music notes.

6.1 Sol-Fa System. In a Sol-Fa system, a note is called according to the sound level, from low to high, namely: Do-Re-Mi-Fa-Sol-La-Ti...

6.2 Letter System. In this system, a note is called according to the sound level, from low to high, namely: A – B- C – D – E – F – G ...

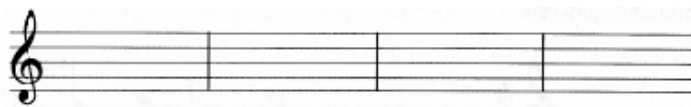
7. Bar Line. It is a vertical straight line across the staff to divide the staff into rooms for the note according to the rhythm specified by the symbol.

7.1 To divide song rooms



**Figure 6: Bar Line**

7.2 To divide the end of section or end of song part by using Double Bar Line



**Figure 7: Double Bar Line**

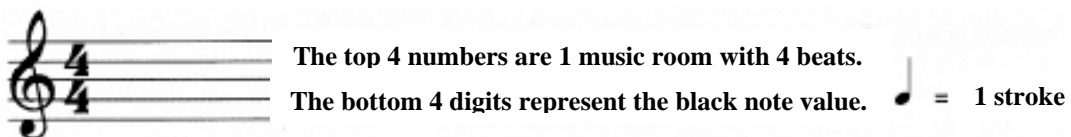
8. Adding Value of Note and Rest can be made as follows.

8.1 Dot. Adding a dot on the right of a note or rest will make the note higher half the note.

8.2 Tie. The symbol Tie is used with the note with the same sound level which will make the note to be equal two notes. The first note will be played first and then the sound will be drawn till the end where it is marked with the Tie symbol.

8.3 Use the Fermata symbol or half circle with a dot in the middle. It is recorded at the head of a note to add value of the note. The first note will be played first and then the sound will be drawn till the end where it is e note to be drawn longer with no limit depending on the player's satisfaction.

9. Time Signature. This refers to two number digits written back of the key similar to fractional numbers but without a line in the middle. The number above conveys how many rhythms are there in a room, and the lower number conveys a note with one rhythm, for example.



**Figure 8: Recording of Rhythm Symbols**

10. Time. Time refers to rate of rhythm which is a symbol that convey the rate of rhythm of a note and number of rhythms in each room. Time is a group of notes with the same beating rhythm in each room, making the pulse rhythm with heavy or light rhythm. Time group has three characteristics.

1) Simple duple time. This means that there are two beating rhythms in each song room, for example.



**Figure 9:** Simple duple time

2) Simple triple time. This means that there are three beating rhythms in each song room, for example.



**Figure 10:** Simple triple time

3) Simple quadruple time. This means that there are four rhythms in each song room, for example.



**Figure 11:** Simple quadruple time

## Practical Skills on Western Music

Western music has a variety of ways and details of skill practices depending on types and methods of playing musical instruments, but the major principles are as follows.

1. The instructor in charge of the instrument. We have to look for a good instructor or a good model in rehearsals. That is, finding an instructor who is knowledgeable, capable and has expertise in using the instrument will help us to have the right way to practice and be able to use the instrument effectively. Joseph Bowman (2016, p. 2 – 15) has said that one-to-one learning with an instructor knowledgeable and capable of musical instrument (including singing), a student has to spend a private study with the regular instructor of his major instrument in order to develop his performance. In this regard, the instructor will teach how to prepare one's self and the right way how to rehearse, practice musical scales, develop different techniques, and develop knowledge how to give the right instrumental performance, as well as

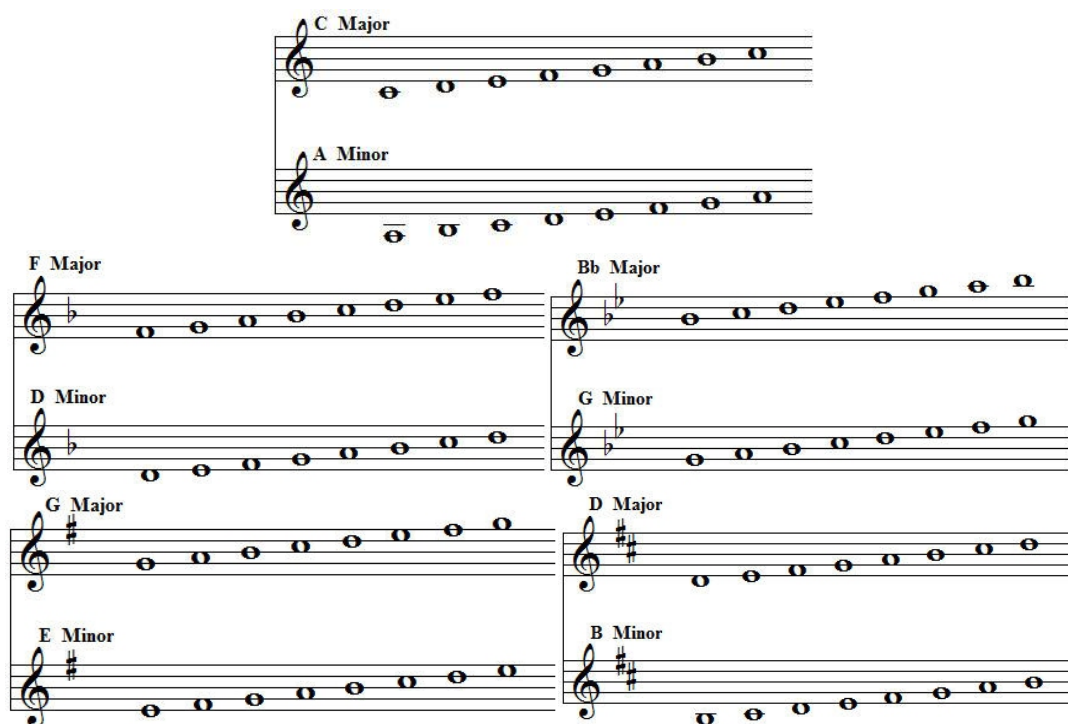


choosing standard exercises for the student's rehearsal. A private study usually takes at least 30-60 minutes per week; if it is not convenient, it can be planned to do it two times a month or as appropriate. However, a private learning should be regularly made so that the instructor can see how the student has developed his skill and be able to give suggestions and solve problems arising correctly and promptly.

2. Exercises and songs play vital parts because if we choose good exercises and songs it will lead to a right way of rehearsal and result in efficient practical skills on musical instrument.

3. Setting Timetable. Besides finding a knowledgeable instructor, having good exercises and notes, planning a timetable for rehearsal is also important. If we have a good time plan, we will be able to rehearse continuously and it will be advantageous for our musical performance. Apichai Liamthong (2002) has stated that a musician should begin from setting the goal for the rehearsal, ordering significance of objectives such as wishing to learn about the song or new technique not being to do, not good or solving a specific technical problem for musical performance, or reviewing the songs or techniques already well-done, or rehearsal for a concert, a competition or a skill test, or rehearsal to review a song in order to interpret it in a different way from original, for instance. Later on a plan should be made in advance about the time range and duration for rehearsal each day, each week or in a long term as appropriate for personal situation. As the time being, a musician should give time for rehearsal the most depending on individual differences, beginning from checking the daily life activities, and cutting unnecessary activities most. Musical rehearsals for progress and skills are a kind of training muscles in order to control playing techniques which require regular training and strict disciplines to follow the set plan, so that effective rehearsals and the set goal can be achieved.

4. Scales. Practicing scales should do both major and minor scales because they are the foundation for playing various songs, particularly the entrance examination to study in universities usually requires examinees to have a practical test on music scales. Generally, universities require the examinees to be able to perform music in the following scales.



**Figure 12:** Popular Scales Used in Entrance Examination

5. Sight Reading. This refers to reading the music note without prior rehearsal. If the student has sight reading skill, it shows that he has knowledge and understands music theories pretty much. Therefore, prompt sight reading of the note is very important for the student preparing to take the entrance examination has to realize and regularly rehearse.

6. Piano Lessons. It is necessary for the student leaning music has to take piano lessons because it will help us have skills in reading the notes with two keys, enabling us to understand structure of chords and chorus better, and helping to strengthen good listening skills. It can be seen that Western music programs in universities require the students to study piano as a secondary instrument and also Western music theories along with the primary or major instrument so as to understand and be able to learn various principles relevant to sound so that they can be applied in studying various courses of Western music.

## Other Academic Skills

Apart from learning skills on theories and practices of Western music, it is necessary for those who want to continue their study in higher education to have knowledge on others, namely:

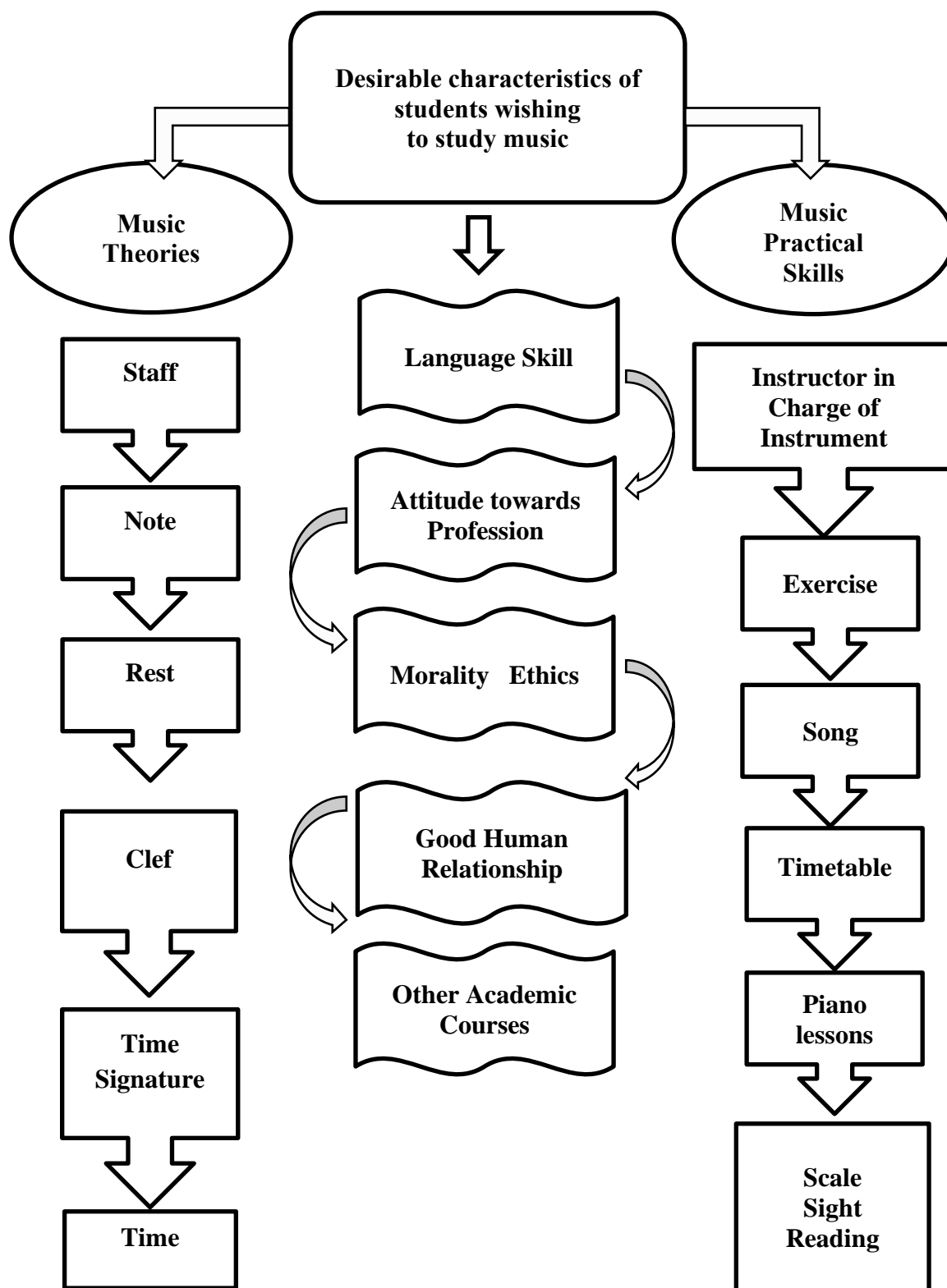
1. Language skill and good attitude towards musical profession. Language skill is very important for music studies since it is used for interpersonal and group communications. A good language skill affects good communication to follow, especially English skill in case we have an opportunity to co-work with foreigners or go to play music in a foreign country, we have to communicate in English with those foreigners. Additionally, attitude toward

profession is also important. If we have ideas in a good way toward musical profession, we will be determined to study well and be able to take music as profession in the future.

2. Other Academic Courses. Taking other academic course are also important because it will strengthen music study to be more efficient such as time management for rehearsal and studying other subjects, building studying and responsible characteristics, taking notes and reviewing lessons, and prescribing the life goals and hopes, for instance.

3. Health. Good mental and physical health affects people on doing various functions and duties. If we can keep good health both physically and mentally, it will give good effect on our music study. That is, if we lose any part physically, it will directly affect studying of music because music skills requires several parts of the body. The same is true mentally since physics and mental are closely related. If we are not ready mentally, we will not be likely to rehearse our music. Therefore, good health is an important aspect for the musician to better strengthen music rehearsal and learning.  
and rehearsals.

In conclusion, the way for the development of desirable characteristics of students who wish to be admitted to study music in high education institutes, the students need to have knowledge and understanding on basic music theories, be able to well perform major music instrument, have good skill in reading music notes, do sight reading, have skill in both major and minor scales, have language skill-- English in particular, have good morality and ethics, and good attitude towards musical profession, including good human relationship and be able to work with others. Besides, they need to skills in other academic subjects along with studying music. If they have self preparation and training by following the aforementioned information above, they will surely have readiness to pass the entrance examination to study in higher education institutes both inside the country and in a foreign country. This can be graphically summarized as follows.



**Figure 13:** A graphic showing guideline for the development of desirable characteristics of students wishing to study music in higher education institutes

---

## References

- Apichai Liamthong. (2012). Important Principles for Music Rehearsals with Highest Effectiveness. *Rangsit Music Journal Music College*, 7(1), 29-39.
- Joseph Bowman. (2016). *Getting Ready*. Retrieved September 22, 2016, from <http://www.music.mahidol.ac.th/wp-content/uploads/2014/10/>
- Natcha Sokatiyanurak. (2006). *Music Theories*. (6<sup>th</sup>ed.). Bangkok: Chulalongkorn University press.
-



# Waste Management Behaviors and Waste Management Approaches with Community Participation in Ubon Ratchathani City Municipality, Ubon Ratchathani Province

Piyakanit Chotivanich<sup>a\*</sup>

Irada Phorncharoen<sup>b</sup>

Adunyadet Tankaeo<sup>c</sup>

Article Info  
Received 28 August 2021  
Revised 30 August 2021  
Accepted 31 August 2021  
Available online 31 August 2021

<sup>a</sup>Associate Professor, Dr., Doctor of Human Resource Management Innovation Program, Faculty of Business and Management, Ubon Ratchathani Rajabhat University, E-mail: piyakanit.c@ubru.ac.th

<sup>b</sup>Assistant Professor, PhD., Doctor of General Management Program, Faculty of Business and Management, Ubon Ratchathani Rajabhat University, E-mail: irada.p@ubru.ac.th

<sup>c</sup>Assistant Professor, Teacher of Business Data Analysis Program, Faculty of Business and Management, Ubon Ratchathani Rajabhat University, E-mail: adunyadet.t@ubru.ac.th

## Abstract

This research aims to investigate the relationship between people behaviors and waste management approaches with community participations in Ubon Ratchathani municipality, Ubon Ratchathani province, and to create waste management guidelines in which the communities in the municipality could participate. The research samples were 400 people from 106 communities in Ubon Ratchathani City Municipality selected by accidental and convenience sampling. It is a qualitative research design by using a questionnaire and interviewing 12 key informants. The results found that reduction of waste management behavior, reusing and recycling behaviors were at proper management. The centralized waste management system and waste-to-energy system were influenced by reducing and reusing behaviors. The communities in Ubon Ratchathani City Municipality participated in waste management by many aspects, for instance using fabric tote bags rather than plastic bags, sustainable containers instead of polystyrene containers, and minimizing the use of any products that cause global warming. Reusing was used instead of replacing single-use plastic bags with reusable containers, and using both sides of pieces of paper. Recycling use for recycling boxes and bags, fermenting organic waste, and purchasing recyclable products and products made from recycled materials. The proper waste management refers to solid waste disposal by sanitary landfill without creating nuisances or hazards to public health, solidified and stabilized waste disposal properly. The centralized waste management utilized both modern machinery and human labor for waste management system, landfill is restricted to sanitation laws, and odor and water treatments are used to ensure a quality surrounding project environment. Waste-to-energy is converting waste to fuel, and fermentation is used for making biogas. Responsibility and community participation could suggestion waste segregation and recycling activities. Waste-to-energy innovations such as gasification and pyrolysis are energy-intensive processes that attempt to reduce the volume of waste by converting it into synthetic gas or oil and upcycling innovation could extract value from bio-waste which is suitable for Thailand context.

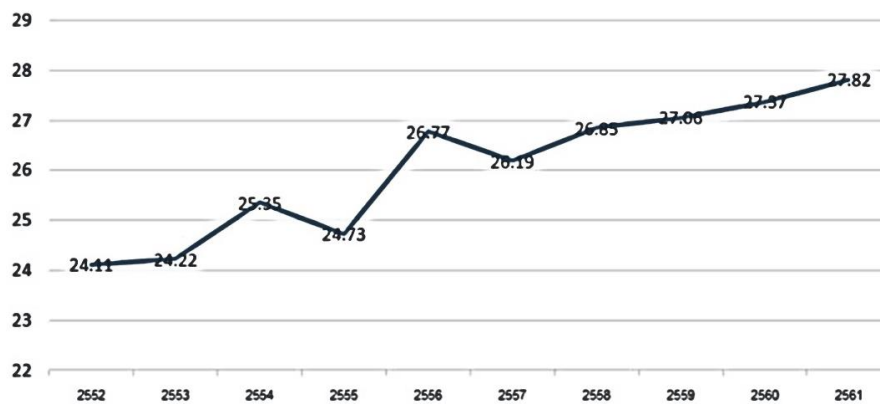
**Keywords:** Waste Management Behaviors, Waste Management Approaches, Community Participation

## Introduction

National Solid Waste Management Master Plan (2016-2021), (from training documents of the course “Fukuoka method, the semi-aerobic landfill technology” by Wijarn Simachaya (2016), director-general of the pollution control department), has explained the objectives of the plan as follows: 1) framework and direction for solving national solid and hazardous waste management problems; 2) concept of integrated solid and hazardous waste management between government agencies, private sectors, and public sectors; and 3) provinces and local government organizations provide an efficient provincial solid waste action plan that is competent for conditioned problem. The concept of the plan has essence of the 3Rs principle: Reduce, Reuse, and Recycle. The goals of proper and centralized waste management, Waste-to-Energy, responsibility and community participation plan are: 1) not less than 75% of 19.6 million tons of community solid waste should be properly managed within 2021; 2) 100% of 30.5 million tons of abandoned solid waste should be properly managed within 2019; 3) 100% of 170 thousand tons of community hazardous waste should be collected and disposed within 2021; 4) 100% of 50 thousand tons of infectious waste would be managed properly within 2020; 5) 100% of 2.06 million tons of hazardous industrial waste must enter a management system within 2020; and 6) 50% of 3,889 local government organizations has sorted and separated waste from the community source within 2021. There are 3 measures: 1) reduction measures in solid and hazardous waste production at its origin by lowering production, sorting, and reusing, producing and consuming environmentally friendly products and services; 2) improve solid waste and hazardous waste management measures by local authorities/provinces collect, transport and dispose waste before providing a total waste disposal center as cluster, provide proper technology to establish locations for community hazardous waste, industrial hazardous waste and infectious waste, and implement the legislation and regulations; and 3) promote waste management measure by initiate a referral program starting from the youth. Provide education about waste treatment and disposal technology in communities. Furthermore, database system should be developed for efficient management and cognizant using economic and social mechanisms should be created. The participation from all sectors includes: 1) local government agencies readiness; 2) laws and regulations for effective operation; 3) Ministry of Public Health enacts the centralized management of infectious waste; 4) Ministry of Industry enacts factories into hazardous industrial waste management system; 5) authorize government allocates fund and private sectors investment; 6) monitor and supervising management according to National Solid Waste Management Master Plan and action plans.

Waste management is a nationwide issue. The Pollution Control Department of the Ministry of Natural Resources and Environments reported about pollution situation in 2020 that Thailand had 27.8 million tons of waste, an average of 1.15 kilograms per person per day, as shown in figure 1 (Kapook.com, 2020):





**Figure 1:** Amount of waste from 2009- 2018  
**Source:** (Kapook.com, 2020)

From figure 1, the waste in Thailand has been increasing since the last decade. Waste has been produced by materials used from daily life that were consumed and expenditures made, for example food scraps, polystyrene boxes, plastic bottles, paper, etc. However, segregation of waste materials can produce fertilizer, feed animals, and even generate electricity. The total amount of waste in 2018 was 27.82 million tons: 10.88 million tons were disposed properly, 9.58 million tons were reused, but 7.36 million tons were treated poorly leading to many complications, for instance infections, soil and water contaminations, pollutions, environmental conditions, odors, dust, and smoke which led to unbearable and unpleasant scenery. The causes for the rapid growth in the quantity of waste were: 1) population growth increased consumption and surplus waste; 2) improper waste disposed from household such as dumping on wasteland, burning outdoor, washed or blown into the ocean, all of which caused more waste and issues; 3) low reuse and recycling have been encouraged by many organizations, but few wastes had been recycled. For example, in 2018, only 9.58 million tons of waste were recycled out of the total amount 27.82 million tons. The top 10 provinces that have the highest amount of waste in the country are shown in the following table.

**Table 1:** The top 10 provinces that have the highest amount of waste in the country

Ranking	Province	Amount (tons per day)
1	Bangkok	13,240
2	Chonburi	2,591
3	Nakhon Ratchasima	2,480
4	Samut Prakan	2,449
5	KhonKaen	1,847
6	Ubon Ratchathani	1,800
7	Nonthaburi	1,691
8	Pathum Thani	1,690
9	Songkhla	1,656
10	Chiang Mai	1,655

**Source:** (Kapook.com, 2020)

Table 1 shows that large cities with industrial estates and tourism had produced large amount of the waste. Bangkok produced the highest amount of waste at 13,240 tons per day, the second largest amount from the table was Chonburi at 2,591 tons per day, and the third was Nakorn Ratchasima at 2,480 tons per day. Ubon Ratchathani at sixth with the amount of 1,800 tons per day. Ubon Ratchathani has composed the provincial action plans to assign policies and directions for community solid waste management, called “Changwad Sa-ard” (meaning Clean Province). This “Clean Province” has been targeting indicators and expanding results to be operated at a district, local government organization, village, and community level by organizing knowledge exchanges on solid waste management between local government organizations within the province and with other provinces, alleged Best Practice project. The office of Natural Resources and Environment, Ubon Ratchathani province had managed observation programs as stated in cooperation projects to supervise and monitor the implementation of the solid waste and hazardous waste management plan for Ubon Ratchathani in fiscal year 2018. They expected the project would influence any notions to efficient development (Office of Natural Resources and Environment, Ubon Ratchathani province, 2020). The total area of Ubon Ratchathani is 15,774 square kilometers, divided into 25 districts, 239 local government organizations, containing 1 city municipality, 4 town municipalities, 54 subdistrict municipalities, and 179 subdistrict administrative organizations (SAO). The population of the province in 2018 was 82,718. The total amount of waste was 158.34 tons per day generated in the service area, waste collected for disposal 155 tons per day which was utilized 16.50 tons per day, disposed and landfilled 138.50 tons per day. The most population was in Ubon Ratchathani Municipality for 82,718 people, the second was KhamYai Subdistrict Municipality for 32,683 people, and the third was Warin Chamrap Town Municipality for 28,748 people (Pollution Control Department, 2019). Based on the foregoing statements, researchers undertake a study on the relationship between people behaviors and waste management approach with community participations in Ubon Ratchathani Municipality area to create a guideline for waste management that contains the 3Rs principle (Reduce, Reuse, and Recycle), centralized waste management, Waste-to-Energy, responsibility, and participation from all sectors according to the National Solid Waste Management Master Plan.

The objectives of this research were to investigate the aspects of waste management in Ubon Ratchathani Municipality area: people behaviors, community participation, and relationship between people behaviors and waste management approach, and to create community participation following the waste management guideline.

## Research Methodology

The population for this study was 79,978 people of 106 communities in Ubon Ratchathani Municipality, Ubon Ratchathani province (Ubon Ratchathani Municipality Office, 2021). The sample group were 384 people at 95 percent confidential level. Considering the chances of loss of questionnaires, the researcher decided to use 400 people as the samples for the study for greater reliability in evaluation and data analysis. The samples were selected by accidental sampling and convenience sampling from volunteer people to respond to the survey in the municipality. The researcher created, determined, and verified the consistency of the research tool by having three experts to check the questionnaire for content validity and Index of Objective Congruence (IOC). The researcher improved the questionnaire in order to have content consistency and the IOC value should be as close to 1 as possible. The researcher set the corresponding value at 0.6 or higher since this value was sufficient and statistically acceptable (Wuthichat Soonthornsamai, 2009).

As to have a qualitative study, 12 key informants being community leaders and members, municipality representatives, representatives from the Office of Natural Resources and Environment, Ubon Ratchathani province were interviewed using semi-structure for in-dept interview to supplement the information to the study.

The data collected from the questionnaire were analyzed and evaluated its reliability by software application using Alpha-Coefficient method (Boonchom Srisaard, 2002, 99-101).

## Research Finding

### Quantitative research aspect

An analysis of the behaviors affecting community participation in waste management in Ubon Ratchathani municipality, Ubon Ratchathani province started from testing the preliminary properties of the variables by analyzing the correlation coefficient between the suitable variables, and analyzing the influence of the primary and dependent variables. The results are as follows.

**Table 2:** Internal correlation coefficient between variables

	A	B	C	D	E	F
A	-	.439**	.434**	.475**	.328**	.321**
B	-	-	.438**	.414**	.255**	.242**
C	-	-	-	.355**	.119*	.150**
D	-	-	-	-	.535**	.479**
E	-	-	-	-	-	.702**
F	-	-	-	-	-	-

As shown in table 2, correlation coefficient between waste management behavior variables (Reduce, Reuse, Recycle) affecting community participation in waste management (appropriate management system, centralized management system, Waste-to-Energy) in Ubon Ratchathani City Municipality has a correlation between the variables from ascending equal to .119 - .702. These values do not exceed .800 which is in an acceptable range. This Multi collinearity is considered exceptional data and could be used for analyzing multiple regression.

**Table 3:** Multiple regression analysis of behaviors affecting community participation in waste management in Ubon Ratchathani Municipality

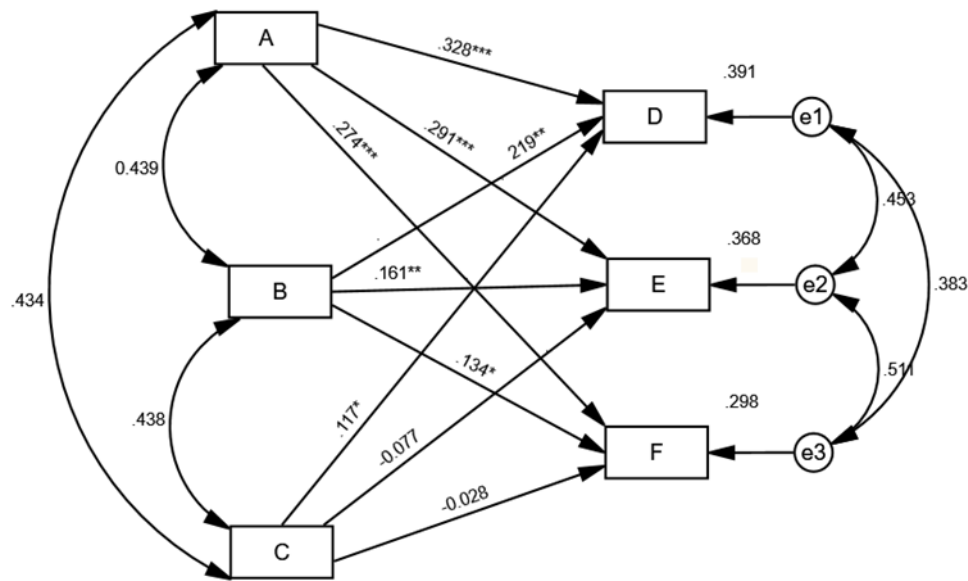
Correlation			Unstandardized		Standardized	t	p	R <sup>2</sup>
			B	S.E.	Beta			
A	⇒	D	.355	.054	.328	6.515***	.000	.391
B	⇒		.213	.049	.219	4.335***	.000	
C	⇒		.113	.048	.117	2.334*	.020	
A	⇒	E	.360	.069	.291	5.227***	.000	.368
B	⇒		.179	.062	.161	2.881**	.004	
C	⇒		-.085	.061	-.077	-1.388	.165	
A	⇒	F	.349	.071	.274	4.892***	.000	.298
B	⇒		.153	.064	.134	2.379*	.017	
C	⇒		-.031	.063	-.028	-.497	.619	

As shown in table 3, a multiple regression analysis of behaviors affecting community participation in waste management in Ubon Ratchathani Municipality showed that 3Rs (Reduce, Reuse, and Recycle) behaviors could predict the community participation in proper management system at 39.1 percent. Reduce and Reuse behaviors affected community participation in appropriated management system by statistically significant at level .000. Recycle behavior determined community participation in a proper management system by statistically significant at level .01.

In term of community participation in centralized waste management, it was affected by 3Rs behaviors at 36.80 percent. Reduce behavior had statistically significant at level .000. Reuse behavior had statistically significant at level .05.

Considering community participation in Waste-to-Energy waste management, it was affected by 3Rs behaviors at 29.80 percent. Reduce behavior had statistically significant at level .000. Reuse behavior had statistically significant at level .05.

The data and correlation of variables could be illustrated multiple regression equations of waste management behaviors affecting community participation in waste management in Ubon Ratchathani Municipality, Ubon Ratchathani province as shown below:



**Figure 2:** Multiple regression equations of waste management behaviors affecting community participation in waste management in Ubon Ratchathani Municipality, Ubon Ratchathani province

Regression equation in form of standard number

$$Z \text{ (appropriated management system)} = .328(\text{Reduce}) + .219(\text{Reuse}) + .117(\text{Recycle})$$

This equation could be interpreted as per below:

Whenever Reduce behavior is increasing 1 unit, proper management system is increasing .328 unit if other variable values are fixed.

Whenever Reuse behavior is increasing 1 unit, proper management system is increasing .219 unit if other variable values are fixed.

Whenever Recycle behavior is increasing 1 unit, proper management system is increasing .117 unit if other variable values are fixed.

$$Z \text{ (centralized management system)} = .291(\text{Reduce}) + .161(\text{Reuse})$$

This equation could be interpreted as per below:

Whenever Reduce behavior is increasing 1 unit, centralized management system is increasing .291 unit if other variable values are fixed.

Whenever Reuse behavior is increasing 1 unit, centralized management system is increasing .161 unit if other variable values are fixed.

$$Z \text{ (Waste-to-Energy management system)} = .274(\text{Reduce}) + .134(\text{Reuse})$$

This equation could be interpreted as per below:

Whenever Reduce behavior is increasing 1 unit, Waste-to-Energy management system is increasing .274 unit if other variable values are fixed.

Whenever Reuse behavior is increasing 1 unit, Waste-to-Energy management system is increasing .134 unit if other variable values are fixed.

### **Qualitative research aspect**

Key informants showed that the most common reuse behaviors were bringing back any stuffs and using it again; for example, using cleaned glass bottles to refill drinks and lime juice for refrigerator, putting things like pen and nuts in bottles, planting trees in both water and soil cultivation. Using plastic bottles for storages and decorations. Wood materials, for example wooden crates, could be used for storages. Baskets could be used for fruit or replacing handbags, paper boxes for container, worn tires for trees and vegetables planting.

The most common reduce behaviors are cutting down plastic bags and bringing cloth bags when go shopping outside houses. Minimizing the purchase of plastic products or products causing excessive waste. Informing family members to acquire products generating the least amount of waste.

The most common Recycle behaviors are meriting activities such as donating bottles caps, plastics caps, aluminum ring to make prosthetic legs, beds for patients, and desks for little children.

Proper waste management include sorting waste before disposing, separating hazardous waste (fluorescent bulbs, spray paint cans, batteries, infected waste), discussing and exchanging ideas about segregation of waste among neighbors before disposing, arranging community wet garbage bins for making fertilizer.

Suggestions for waste management approaches with community participation in Ubon Ratchathani Municipality, Ubon Ratchathani province are follows:

#### **1. Reduce**

- Using cloth bags as a substitute of plastic bags.
- Using sustainable containers instead of polystyrene boxes.
- Minimizing use of products that cause global warming.

#### **2. Reuse**

- Fabric tote bags and baskets are better than plastic bags for storing any purchase.
- Paper should be used both sides.
- Reusable containers.
- Reusable plastic bags.

#### **3. Recycle**

- Recycling paper to paper boxes and bags.
- Organic waste could be used for producing fertilizer.
- Purchasing recyclable products and products made from recycled materials.
- Plastic drinking cups could be washed and reused.

#### **4. Proper waste management**

- Properly landfilling solid and non-hazardous waste according to sanitation laws.
- Hazardous waste is neutralized and landfilled in proper area.
- Disposing waste in correct bins.

5. Centralized waste management
  - Utilizing both modern machinery and human labor for waste management system.
  - Landfill is restricted to sanitation laws.
  - Odor and water treatments utilize to ensure a quality surrounding project environment.
6. Waste-to-Energy
  - Using gasification process to turn waste to fuel gas.
  - Using fermentation to decompose organic compounds (starch, sugar, cellulose, etc.) by bacteria in anaerobic condition.
7. Responsibility and participation from all sectors
  - Suggesting neighbors to sort waste before disposing to reduce the amount of waste.
  - Engaging in community activities about separating reusable waste before disposing.
8. Waste management innovations
  - Turning plastic waste to energy. This could be fascinating innovation to turn abundant of plastic waste into many forms of energies, heat and electricity, for example.
  - Upcycling innovation could be vital part in a plastic recycling process of Thailand. This is suitable for Thailand context and inaugurates value-added.

## Discussion/Conclusion

Reduce, reuse, and recycle behaviors of people have been influencing community participation in proper waste management. Reduce and reuse behaviors of people have been influencing community participation in centralized waste management and Waste-to-Energy. The waste management approaches with community participation on reducing is to use fabric bags instead of plastic bags, reusable containers instead of polystyrene boxes, and minimize using products causing global warming. Reusing by using fabric bags or baskets storing goods instead of plastic bags, use both sides of paper, using reusable containers and plastic bags. Recycling is to recycle paper waste, for instance paper boxes and bags, fertilizing organic waste, purchasing recyclable products and products made from recycled materials, washing and reusing plastic drinking cups. Proper waste management is proper landfill, treat solid and non-hazardous waste in accordance with sanitation laws, hazardous waste is neutralized and landfilled in proper area. Centralized waste management is utilizing both modern machinery and human labor for waste management system, odor and water treatments are used to ensure a quality surrounding project environment. Waste-to-Energy is using a gasification process to turn waste to fuel gas, and using fermentation to decompose organic compounds (starch, sugar, cellulose, etc.) by bacteria in anaerobic condition. Responsibility and participation from all sectors are suggesting neighbors to sort waste before disposing to reduce amount of waste and engaging in community activities about separating reusable waste before disposing. Waste management innovations are turning abundant of plastic waste into many forms of energies, upcycling innovation that could be vital part and suitable to Thailand context and inaugurating value-added as stated in the study of Phisak Kalayanamit and Wachirawat Ngamlamom (2018) as shown below:

- 1) The local community waste reusing and sorting should omit or minimize consumption of certain things and reuse various products or resources.
- 2) Waste management problems from local government organizations found that they should lower the amount of solid waste, organize campaign for participation in recycling system, logistics, and mixed disposal system.
- 3) The recommendations are as follows:
  - 3.1) encourage people on reducing amount of waste.
  - 3.2) organize cooperation network between local government organizations.
  - 3.3) stimulate local organizations to prepare for management plans in both short term and long term.
  - 3.4) establish policies and regulations for local waste management.
  - 3.5) construct standard for waste disposal factories.

A study by Teerawan Boontosaeng, et al (2017) was to investigate the knowledge, attitudes and behaviors about waste management in Nanglae-Nai, Nanglae Sub District, Muang district, Chiang Rai province by comparing two groups of villagers, one is villagers living in the lowlands, and the other is Akha and Lahu ethnic villagers living in highlands. Villagers had more knowledge of types of waste and harmful materials than ethnic villagers. On the other hand, they shared the same knowledge about waste management, which is at fair level. Both had the same attitudes about waste problems, waste management, information, obstructions, community waste management, and community waste participation in the same direction. There were some behaviors found more in villagers than ethnic villagers, except that the ethnic villagers had suggestion to reduce waste than villagers. Aside from that recycling waste by selling metal waste, separating wet and dry waste, sorting bulbs and batteries, sorting plastic waste. Lastly, ethnic villagers had more participation in creating community waste disposal methods.

A study by Haroon Mumumadalee (2018) on garbage management model in Bangkok Metropolitan area had shown as follows: 1) current situation and problematic conditions of development of environmental quality case study: waste management in Bangkok metropolitan area applied waste management policy. Accelerated development emphasizes people's participation in the reduction of 3Rs; 2) Factors affecting the development of environmental quality: a case study of solid waste management in Bangkok area. Focus on adding environmental management legal measures to manage solid waste, develop plan involved in waste management, zero waste management to concrete practice; and 3) Suggestions to improve factors affecting environmental quality development in the case study of waste management in Bangkok area. The government should tackle the problem of solid waste based on the guidelines as follows: creating consciousness in waste management, participation in waste management, establishing a waste management learning center, providing a prototype area for waste reduction in Bangkok area and developing an innovation system on trash management.



A study by Patthayapon Aunrod (2021) on good practices in participatory waste management of Wiang Thoeng subdistrict municipality, Thoeng district, Chiang Rai province – Crisis Management Processes that created good practice or success factors include:

- 1) Chief executives of local administration should deliver the importance, support, and cooperate.
- 2) Local officers and municipal clerks working along with executive policies.
- 3) Collaboration in workplace should aim at the same goal: sustainable local waste management.
- 4) Organizing and monitoring projects to encourage waste reduction and segregation from the origin.
- 5) Creating learning resources about waste management.
- 6) Government agencies support network from educational institutions and private sectors.
- 7) Database system that could provide data to communities.
- 8) Legitimate and continue improvement in local policies.

## Suggestions

Reduce, reuse, and recycle behaviors of people have influenced community participation in the proper waste management. The reduction and reuse behaviors have influenced community participation in centralized waste management and Waste-to-Energy. The waste management approaches of community participation in Ubon Ratchathani municipality, Ubon Ratchathani province consisted many aspects: reduce, reuse, recycle, proper waste management, centralized waste management, waste-to-energy, responsibility and participation from all sectors. Waste management innovations should focus on collaboration and connection with other networks and agencies to expand the results of proper waste management in both former and new groups. Activities should be organized to promote reduce, reuse, recycle in order to achieve consistent and sustainable results.

## References

- Boonchom Srisa-ard. (2002). *Basic Research*, (7<sup>th</sup> ed.). Bangkok: Suweeriyasan.
- Haroon Mumumadalee. (2018). Garbage Management Model in Bangkok Metropolitan Administration Area. *Rangsit Graduate Studies Journal in Business and Social Sciences*, 4(2), 297-314.
- Kapook.com. (2020). *Garbage, the villain of human hands, reduce simple just well separated before disposal*. Energy Regulatory Commission, Power Development Fund, 2019. Retrieved April 19, 2021, from <https://erc.kapook.com/article01.php>
- Patthayapon Aunrod. (2021). *Good practices in participatory waste management of Wiang Thoeng Sub-District Municipality*. Thoeng District, Chiang Rai Province.
- Phisak Kalayanamit and Wachirawat Ngamlamom. (2018). Development Guidelines of Solid Waste Management in Local Government. *Praewa Kalasin Academic Journal*, 5(1), 172-193.

- Pollution Control Department, (2019). Handbook of practices for reducing and separating solid waste in government agencies. Retrieved April 19, 2021, from <http://e-report.pcd.go.th/pcd-erw/web/uploads/content/files/5df70be37e8f1.pdf>
- Teerawan Boontosaeng, et al. (2017). Knowledge, Attitudes and Behaviors about Waste Management in Nanglae-Nai, Nanglae Subdistrict, Muang District, Chiang Rai Province. *Kasalongkham Research Journal Chiang Rai Rajabhat University*, 11(3), 369-378.
- Ubon Ratchathani City Municipality Office. (2021). *Population in Ubon Ratchathani City Municipality, January 31<sup>st</sup>, 2021*. Retrieved April 1, 2021, from <http://www.cityub.go.th/New2017/index.php/2016-12-14-08-29-54/3081>
- Wijarn Simachaya. (2016). *The National Solid Waste Management Master Plan (2016-2021)*.
- Wuthichat Soonthornsamai. (2009). *Marketing Research and Marketing Information Systems*. Bangkok: Technology Promotion Association (Thailand-Japan).
-

## **Original Preparation Guidelines UBRU INTERNATIONAL JOURNAL**

### **Main Specifications**

1. The articles to be published in UBRU INTERNATIONAL JOURNAL must not have ever been published before or pending consideration for publishing in any other journals. In addition, the article must not have any part or information copied from other academic work. Copyright infringement is the article writer's responsibility.

2. The content and information to be published in the UBRU INTERNATIONAL JOURNAL are the writer's opinion and responsibility; the editorial staff and Ubon Ratchathani Rajabhat University do not have to agree upon or share responsibility.

3. The copyright of the articles, information of the content, pictures, and so on published in UBRU INTERNATIONAL JOURNAL belongs to Ubon Ratchathani Rajabhat University. Anyone or any organization that wishes to publish an article or parts of the article for any purposes, they must ask for permission from the university in written or make a standard academic reference.

### **Manuscript Requirements**

Those who wish to submit an article must write in Thai and in English their name-surname, designation and place of work or education institution, including contact address in a separate sheet from the article. The length of the article must not exceed 7,000 words, with a clear and concise title both in Thai and in English, and with an abstract in Thai and in English of not more than 250 words each. Besides, the article writer should make sure that the article has used refined language with correct spellings and punctuations. In addition, the writer should specify the type of article whether it be an academic article or a research paper. The components of the two types of articles are as follows:

1. The article including the title and the content should pinpoint the issue the writer wishes to present and it should be organized in an appropriate order so that it is clearly and easily understood by the reader. The issue or issues must be analyzed and summarized using academic principles. The writer may use the knowledge based on the conceptual framework and theories from various sources for a synthesis and clearly express his academic viewpoints for the benefits of the reader.

2. In case of a research article, the method and findings should be presented systematically with the following components (the topic and components may vary).

2.1 Introduction: significance and background of the study together with overall view of the article.

2.2 Objective

2.2 Literature Review

2.3 Research Methodology: steps of doing the research, samples for the study, data collection, research instrument and statistics.

2.4 Research Finding

2.5 Discussion and Conclusion

2.6 References

## References

In submitting an article for consideration, you need to write citations of other documents or the sources of information used at the end of the article. By providing references only in English and categorized in APA style, the submitter should check the correctness and completeness of the citation in accordance with the criteria specified by the journal. Any articles on topics that have a citation format that has not yet been complied with the journal will not be forwarded to a qualified reader for reviewing in the next step. The submitter must adhere to the following main guidelines.

Example of APA style: <https://libguides.murdoch.edu.au/APA>

## Review Process

The articles to be published in the journal must have been approved by the editorial board and at least three experts in the related field of study following the process below.

1. The editorial board will keep the author informed when they have received the article according to the set criteria.

2. The editorial board will jointly examine the titles and the contents of the articles whether they are appropriate and consistent with the journal objectives including their quality in terms of theories and application in humanities and social sciences.

3. In case the editorial board do not receive the article for further step, they will keep the author informed of the rejection with some seasons and brief suggestions through the e-mail.

4. In case the editorial board accept the article, they will forward it to at least three experts in the related field for peer reviews and make decision whether to accept, reject or revise it. This is a double-blind process, where the experts and the article authors will not know each other.

5. After the experts have reviewed the article, the editorial board will make decision based on the suggestions made by the experts whether it should be published in the UBRU INTERNATIONAL JOURNAL or return to the author for major/minor revision or rejection.

6. Once the editorial board have examined the article revised by the author according to the experts' suggestions, they will keep the author informed of accepting it for publishing in the UBRU INTERNATIONAL JOURNAL.

## Paper Submission

Those who wish to submit an article for review in the journal, please send the original file (Microsoft Word) in English using the Times New Roman font, size 12 point only. (Text Size: Research Topic 18, Topic in Journal 14, Journal Content 12). The channel for submitting the article is ThaiJo system. <https://so04.tci-thaijo.org/index.php/ubruij/login>