

Animation Media Development: Myths and Beliefs of Poy Sang Long Buddhist Ordination by Thai Yai Ethnicity in Mae Hong Son Province *



Nattawat Somdee

Silpakorn University, Thailand.

Corresponding Author's Email: nattawat_som@g.cmru.ac.th

Abstract

The objectives of this study were 1) to develop animation media to present the legends and beliefs inherited in the Poy Sang Long tradition and 2) to study the satisfaction of those who used animation media about legends and beliefs of Poy Sang Long tradition. The data collection instrument was a questionnaire. The researcher divided the question into three sections: part1 , personal information of respondents; part 2 , satisfaction in using animated media about the legends and beliefs of Poy Sang Long tradition and part 3, benefits and feedback to animated media about legends and beliefs of Poy Sang Long tradition.

The results showed that 1) This media development was done using 2.5D or a 2D animation technique with three depths. The effect of media usage on cognitive achievement could be achieved by positive reinforcement objectives. Users interacted with the media and would like to learn information on their own and also extend the learning to the content development model in learning cultural traditions. 2) Students, professionals, and people in the community had a high level of satisfaction with using animated media to present stories, legends, and beliefs inherited from Poy Sang Long tradition ($\bar{x} = 4.26$ S.D = 0.68). The quality of the animated media was assessed using the Poy Sang Long AR presentation of the stories, legends, and beliefs of Poy Sang Long tradition. It was found that the subjects could understand their local customs, resulting in pride in local culture and traditions. In addition, these media helped to preserve and carry on the cultural identity of the Tai Yai ethnic group in Mae Hong Son Province.

Keywords: Animation Media; Digital Painting; 2.5D Technique; Augmented Reality (AR) Technology

*Received November 8, 2021; Revised January 21, 2022; Accepted January 31, 2022



Introduction

In terms of the efficiency of using animation media to present the legends and beliefs of the Poy Sang Long tradition in Mae Hong Son Province, the researcher aims to develop technology materials to support access to information and learning related to the Poy Sang Long tradition. This is to promote publicity to the local people as well as the general public. The problem of accessing information in the traditional form is the inability to see dimensional images and animation, thus lacking enjoyment in viewing. To reach legends of ancient and complex traditions, it can be solved by making smart use of technology and information. The use of AR technology, which can be used on smartphones, is a great convenience and an important learning tool about the Tai Shan traditions.

Ordination is an important tradition of the Tai Yai. Most popular monks are ordained from the age of 7-12 years, usually in March, April and May of every year and the work is scheduled for 3-7 days. This Naga ordination ceremony in Tai Yai language is called "Poy Sang Long". Poy Sang Long is a ceremony to celebrate the ordination of a novice in Buddhism of Thai people of Shan lineage found in Mae Hong Son Province and in some districts of Chiang Mai Province. "Sang" means a novice, Long or "Along" (Uam-in, 2012; Chotisukrat, 1969). Such beliefs and faiths have been passed down and become legends based on the history of Buddhism. In collecting data from told by the Tai Yai community leaders in Pai District, Mae Hong Son Province, and the abbot of Wat Jong Klang, Muang District, Mae Hong Son Province, they obtained relevant and consistent information. In addition, searching for information from textbooks, it was found that there were 4 expressions of the legend of the Poy Sang Long ritual. All four of these tried to create a connection between the patterns of action to reach salvation by following the way of the Buddha and the disciples as a model. It emphasized the importance that leads to liberation or to be born in a better life as a result of the present action (Sriratanaban, 2019). The researcher had selected expression 3 that is described as at one point in Varanasi, wealthy men held their children's ordination ceremony and a grand celebration. There was a widow in that town who had an ugly son but had faith to ordain in Buddhism. Due to monetary poverty, when she heard the news that the wealthy man would hold an ordination ceremony, the son and his mother hugged each other, crying because of regret in fate. Knowing this, Indra came down to bring the ugly boy into the pool and washed it with holy water, giving him a beautiful and elegant figure. When Brahma came to know him, he created the Bodhisattva-style costume and accepted as the host for the novice ordination. From the aforementioned legend, it is the origin of the word "Sang Long" because Brahma in

Tai Yai dialect is called "Khun Sang" who traveled to achieve the status of Bodhisattva. In Tai Yai language, it is called "Chao Along". The boy was called "Saang Long" and later became "Sang Long" (Sriratanaban, 2019). This expression can be used to convey beliefs that differ from the central influence of beliefs that grew into the latter. It is also an expression that communicates in Sang Long's name and leads to the belief of Phor Khaam - Mae Kham, which is an important mechanism in organizing rituals. Phor Khaam - Mae Kham refers to the person who is patronized as a matriculation host and has the same status as the legendary "Brahma". It is an adjustment to the social status of Phor Khaam - Mae Kham. In addition, the Phor Khaam - Mae Kham system in Tai Yai society also creates a labor and economic network, which affects the economic status of Phor Khaam - Mae Kham and Look Kham. This is a kinship relationship of the community by using the rationale of religious beliefs in holding and implementing community practices.

According to the above information, the researcher aims to develop animation media about the legends and beliefs of the Poy Sang Long tradition in Mae Hong Son Province by referring to historical information to presenting in animation by decoding the legendary text into an image using the digital painting technique. The researcher designed the character based on the physical characteristics of the Indian people as the history of the bodhisattva at Varanasi, India and simulate the situation in a semi-realistic illustration that combines the painting to reduce the limitation of the viewing age by separating the characters and scenes to lead to some blending and animating episodes, so as not to feel boring and create the distance of the image to create dimensions by using the same technique as the 2.5 Dimension motion picture, also known as Parallax. The animation manipulation is also combined with the use of music and narration, focusing on three theoretical levels of narrative: introductory, climax, and conclusion. This theory allows people to watch the media do not feel bored and motivate them to watch the clip to the end without feeling uncomfortable because the clip is set to be in the right time for the viewer in the period of 1.45 minutes. In addition to the optimal length of the clip, it also allows the viewer to continue their imagination.

As mentioned, presenting in the legend of Poy Sang Long is also a part of presenting Poy Sang Long tradition through media. Data is collected from ordination ceremonies, legends and subtleties through the use of AR technology to access information. It is a technology medium to support access to information and learning related to the Poy Sang Long tradition and to promote publicity to local people as well as the general public. The problem of accessing information in its original form is the inability to see dimensional images and



animations, resulting in a lack of visual enjoyment. The problem of accessing ancient and complex traditions can be solved by making wise use of advances in technology and information. The use of AR technology via smartphones is more convenient and a learning tool for Poy Sang Long traditions of the Tai Yai. Therefore, researchers have developed animated media about the legends and beliefs of the Poy Sang Long tradition of Mae Hong Son Province and study the satisfaction of users to test the effectiveness of learning materials.

Objectives of the research

1. To study the development of AR technology to present the legends and beliefs inherited in the Poy Sang Long tradition.
2. To study the effect of using animation media on the legends and beliefs of the Poy Sang Long tradition in Mae Hong Son Province.

Research Methodology

1st Step: In the study of documents and theoretical concepts, the researcher had collected information from information sources and documents of government and private agencies involved, as well as research in libraries, the researcher collected data from textbooks to find historical information of the Tai Yai ethnic group, including the legend of Poy Sang Long tradition.

1) The concept of Augmented Reality (AR) technology is the integration of technology between the real world and virtual reality using various software systems and connected devices such as webcams, computers, or other related devices. Such virtual objects can be images, video, audio, or other data processed by computers, mobile phones, or small wearable technology devices and allow us to react to those simulations. Compared to Virtual Reality, Augmented Reality makes the real world more accessible. Users can view the real-world using 3D graphics or additional graphics overlaid with a view of the possibility of combining real and virtual objects, providing better access to complex information. It is also convenient to use because we can use AR applications via smartphones, which are widely used by service providers. Smartphones are considered essential devices for communication in the modern era, making accessing information through AR technology more convenient with no accessories such as VR.

2) Concepts of creating multimedia media and animation using techniques Digital Paint and 2.5D for the development of animated media in legends, beliefs, and traditions of Poy Sang Long of the Tai Yai ethnic group, Mae Hong Son Province make complex content accessible and create an interesting historical learning experience for people of all ages. The principle of using multimedia is the use of computers to convey meaning by integrating various media such as text, graphs, graphic art, audio, animation, and video.

3) Ordination is an important tradition of the Tai Yai people, most of them prefer to ordain a monk since the age of 12. Before ordination, parents have to take their children to the abbot in order to practice reading, learn how to ordain and have to memorize the Naga and blessings. When parents see that their child has the knowledge that they can become ordained, they set up an event, usually in March, April, and May, and scheduled for 3-7 days. The Naga ordination ceremony in Tai Yai language is called "Poy Sang Long". Poy Sang Long is a ceremony to celebrate the ordination of novice in Buddhism of Thai people who are of large Tai. It is often found in Mae Hong Son Province and in some districts of Chiang Mai Province. "Sang" means a novice. Long or "Alon" means the heir. From the legend that the Tai people have inherited about the origin of the Poy Sang Long tradition, that is, ordination as a novice is for the study of Buddhism and as a substitute for the merit of the parents.

2nd step: Field research could be conducted by gathering information from interviews with academics, knowledgeable villagers, local wisdom teachers, community leaders, and people in Mae Hong Son Province.

1) The researcher interviewed academics in social and cultural fields: Dr. That Sriratanaban.

2) Data were collected from interviews with community leaders and local wisdom teachers: Headman and Abbot of Wat Chong Klang, Muang District, Mae Hong Son Province.

3) The researcher analyzed AR structure preparation, animation media production, and media experiment.

4) The media efficiency was studied and collected by using a satisfaction questionnaire from academics, experts, community leaders, local wisdom teachers, and people in Mae Hong Son Province. The researcher analyzed the sample size to be used in the research using Taro Yamane's formula. The total number of samples was 397 people.

5) The researcher summarized and presented the results of the media experiment.

6) The researcher summarized the results, knowledge, and recommendations for the sample group and stakeholders.

3rd step: This study was in-depth research focusing on interviews and focus group meetings to collect data on how to create animated media of Poy Sang Long tradition by using collective sampling. Key informants included Dr. That Sriratanaban, a social and cultural scholar and a person with expertise in ethnic Shan; the village headman, a local wisdom teacher and in charge of the Poy Sang Long tradition of the people in the community, Pai District, Mae Hong Son Province and the abbot of Wat Chong Klang, Mueang District, Mae Hong Son Province, a specialist of Poy Sang Long tradition.

4th Step: Tools and methods used in the study

1) An interview research was conducted with social and cultural scholars, community leaders, and local wisdom teachers using interview forms developed from related documents and reports to find ideas, principles, and backgrounds of Poy Sang Long tradition.

2) Small group meetings were organized for community leaders, wisdom teachers, and community representatives to develop AR media models and content collected in learning materials related to Poy Sang Long tradition.

3) There was a study and follow-up of experimental results using animated media in legends and beliefs of Poy Sang Long tradition.

Documented data and field research were collected from academics, community leaders, local wisdom teachers, and participant observations. Information about the legend, history, and form of the Poy Sang Long ritual was used to create animated media. It was then tested in the samples to measure their satisfaction with the animation and to present the stories, legends, and beliefs of Poy Sang Long tradition. We could summarize creating and checking the quality of a tool as follows.

1) The researcher analyzed the sample size to be used in the research using Taro Yamane's formula.

2) The researcher used the satisfaction questionnaire in using animated media of legends and beliefs of Poy Sang Long tradition in Mae Hong Son Province to try out.

3) The researcher took the results of the questionnaire from the sample group to analyze and draw conclusions and lead to the improvement of the format and content of the animated media.

The statistics used to find the quality of the tool were the Index of item objective congruence between the text and the issue or question element by calculating from the formula (Phatthiyathani, 2003) and the reliability of the questionnaire by calculating Cronbach's Alpha coefficient (Ekakul, 2007).

5th step: The research data collection was performed using a variety of data collection methods to get the data for the study. Information could be collected:

- 1) Data were collected from field research in Mae Hong Son Province.
- 2) Observations participant was an observation of behavior and expressions, traditions and participation of community leaders, people in the community and youth towards Poy Sang Long tradition in Mae Hong Son Province. The researchers collected information about the patterns of tradition and used them to create animated media.
- 3) The researcher used interviews with social and cultural scholars, community leaders, and local wisdom teachers to find ideas, principles, and backgrounds of Poy Sang Long tradition.
- 4) Focus group was used with key informants to study the history of the legend and the pattern of Poy Sang Long tradition held from the past to the present for animation media.
- 5) Questionnaires were collected to measure media satisfaction. The researcher divided the questions into 3 parts: Part 1: Personal data of respondents using closed-ended questions, including gender, age, and occupation. Part 2: Satisfaction with using animated media in legends and beliefs of Poy Sang Long tradition of Tai Yai ethnic groups in Mae Hong Son Province using closed-ended questions. Part 3: Benefits from using animated media in legends and beliefs of Poy Sang Long tradition of Tai Yai ethnic groups, Mae Hong Son Province, using closed-ended questions.

6th step: Data analysis was performed using data obtained from interviews, focus groups, satisfaction and benefits questionnaire for using animated media in legends and beliefs of Poy Sang Long tradition, Mae Hong Son Province. The details are as follows.

- 1) The demographic data of the sample were analyzed using descriptive statistics: frequency and percentage.
- 2) Data on the satisfaction of using animated media in legends and beliefs of Poy Sang Long tradition, Mae Hong Son Province were analyzed by using descriptive statistics: mean and standard deviation.
- 3) The benefits obtained from the use of animated media were analyzed using descriptive statistical statistics: mean and standard deviation.

7th step: Conclusion and presentation was a type of descriptive presentation with photographic and descriptive presentations with narrative events related to animation media leading to the passing of local traditions to the next generation.

Research results

The 1st objective is to study the development of augmented reality technology to present stories, legends, and beliefs of Poy Sang Long tradition, the results showed that creating multimedia media and animation using techniques Digital Painting and 2.5 D for the development of animated media in legends and beliefs of Poy Sang Long traditions of the Tai Yai ethnic group, Mae Hong Son Province make complex content accessible and create an interesting historical learning experience for people of all ages. The principle of using multimedia is the use of computers to convey meaning by integrating various media such as text, graphs, graphic art, audio, animation, and video. If the user could control these media to be displayed as they want, the system was called "Interactive Multimedia" (Vaughan. 1993).



Figure 1 From illustration drawing with digital painting techniques to use 2.5D technique as if to bring pictures in storybooks to life

This media development was done using technique 2.5. D or a 2D animation with three depths: Foreground, Middle ground, and Background. The principle of creating such techniques was to create characters with Digital Painting techniques through Photoshop program by referring to characters from hearsay, legend, and research. They believed that the legend of Poy Sang Long ordination came from a simulation of Prince Siddhatha's ordination and an environment simulation from Vanasri. Once the characters were obtained, they could be animated with After Effects and added sound effects.

students, community members, community leaders and experts in Mae Hong Son Province. The questionnaires were then analyzed and processed with statistical programs.

Section 1: Questionnaire on the personal information

The results of analysis of personal information of the inquirer classified by gender, age, education level and occupation were as follows.

Table 1 shows the number and percentage of respondents by gender.

Gender	Number	Percentage
Male	134	44.5
Female	166	55.5
Total	300	100

According to the survey, the majority of the respondents were female (55.5%) and male (44.5%), as shown in Table 1.

Table 2 shows the number and percentage of respondents by occupation.

Occupation	Number	Percentage
Student	134	44.5
Community members	166	55.5
Community leader	4	
expert	3	
Total	290	100

According to the survey, the majority of respondents were 123 academic staff (41.7%), 107 students (36.3%), 53 government officials / state enterprises (18%) and 10 others (housewives) (3.4%).

Section 2: Satisfaction in using animated media about legends and beliefs of the Poy Sang Long tradition of Tai Yai in Mae Hong Son Province.

The results of analysis on the satisfaction of using animated media on the legends and beliefs of the Poy Sang Long tradition of Tai Yai in Mae Hong Son Province of a sample of academic personnel, community members, community leaders and experts in Mae Hong Son Province classified by user satisfaction characteristics were shown in Table 3.

Table 3 shows the mean, standard deviation and the satisfaction of using animated media about the legends and beliefs of the Poy Sang Long tradition of Tai Yai in Mae Hong Son Province.

List	Mean	Standard Deviation	Meaning
1) Historical content	4.35	0.67	High level
2) Illustration design	4.53	0.54	Highest level
3) Animation and relationship of each scene	4.25	0.68	High level
4) Computer graphics techniques	4.07	0.72	High level
5) Background music	4.12	0.69	High level
6) Audio narration	4.56	0.54	Highest level
7) Understanding of content and expected benefits	3.94	0.71	High level
8) Persuasion and motivation to watch	4.18	0.70	High level
9) Accessing media using AR technology	4.30	0.54	High level
Total average	4.26	0.68	High level

From Table 3, it was found that the respondents were satisfied with the use of animated media about the legends and beliefs of the Poy Sang Long tradition of Tai Yai in Mae Hong Son Province, overall, it was at a high level. The same mean was at 4.26. When considering each aspect, it was found that the top 3 satisfaction was the highest, which consisted of the satisfaction of sound effect was the highest and the mean was 4.56, followed by the highest satisfaction in illustration design and the mean was 4.53 and the historical content satisfaction of the illustrations was at the high level and the mean was 4.35, respectively.

After considering each item, it was found that the sample group of students, community members, community leaders and experts in Mae Hong Son Province had a high level of benefit from the use of animated media on the legends and beliefs of the Poy Sang Long tradition of the Tai Yai in Mae Hong Son Province. The most useful item from the survey was that the animated media about the legends and beliefs of the Poy Sang Long tradition of the Tai Yai in Mae Hong Son Province had a positive effect. The historical significance of the important Tai Yai traditions in Mae Hong Son Province had been accessed, thus, it was in line with the use of other presentations of the Poy Sang Long tradition that made it easy to understand the content. From illustration drawing with digital painting techniques to use 2.5D technique as if to bring pictures in storybooks to life, combined with music and lectures to



create knowledge and understanding for media users. This allowed the user to access the content on their own and also promoted the knowledge and understanding of the Poy Sang Long tradition. Overall, after the use of animation media about the legends and beliefs of the Poy Sang Long tradition of the Tai Yai in Mae Hong Son Province, it was seen that the users had an effective learning experience and able to access information more efficiently from the use of modern media that corresponds to their roles in daily life.

The new body of knowledge

This research gave rise to the knowledge of the development of animation media in legends and beliefs in the Poy Sang Long tradition of the Tai Yai ethnic groups, Mae Hong Son Province. Alternative media such as Augmented Reality (AR) had been experimented with, which allowed for smarter and more convenient access to information. The experiment was done by simulating the content of the legend of Poy Sang Long both from hearsay and research through 2.5D technique. Media had a powerful effect on cognitive achievement and positive reinforcement. Users interacted with the media and would like to learn information on their own. It was also an extension of the content development model for learning other cultural traditions. It could be summarized as an AAPI model, as shown in the diagram.

Alternative media: Alternative media could be adapted to suit the era. Smart technology helped even more. AR was part of the experiment to access information and enhance the experience of creating other media.

Audience: The audience was satisfied with viewing media results in the presentation of content in sections for learning more in other areas of content as well.

Perception: Perception was an important basis for a person's learning because any behavioral response depends on the perception of their surroundings and their ability to interpret their condition. Therefore, the learning of media presented using 2.5D techniques in terms of aesthetic content and length, along with viewing content through virtual reality, enabled audiences in the community to perceive information effectively.

Interactive: Interactive media influenced learning or access to content through stimulation and challenges in accessing information. Using AR experimentation, user interaction through smartphones with User Interface was another strategy that would continue to charm the learning of historical data.



Model 1 AAPI Model

Discussion of research results

The results of the research in Objective 1 found that, Animated media could present the stories, legends, and beliefs inherited from Poy Sang Long tradition using 2.5D or a 2D animation technique with three depths: Foreground, Middle ground, and Background. The principle of creating such techniques was to create characters with Digital Painting techniques because it gave them access to complex content and creates an interesting learning history for people of all ages. Consistent with research by Purwaningsih (2017), learning through animation was more effective than learning through static images or letters.

The results of the research in Objective 2 found that, The satisfaction of users of animated media in legends and beliefs of Poy Sang Long traditions was high ($\bar{x} = 4.26$ S.D = 0.68). The quality of the animated media was assessed using the Poy Sang Long AR. The evaluation showed that the subjects could understand their local customs, resulting in pride in local culture and traditions because the content could be fully communicated. The media was diverse and interesting and could be easily and quickly accessed via your Smart Phone. Consistent with the research of Lukrak, and Singjaichuen (2020), Stop Motion media made images and sounds interesting and easily recognizable. We could visually convey information about the impact of deforestation and forest conservation practices.

Conclusion

The development of animation media in legends and beliefs of Poy Sang Long tradition of Tai Yai ethnic groups, Mae Hong Son province, it was found that students, professionals, and people in the community had a high level of satisfaction with using animated media to

present stories, legends, and beliefs inherited from Poy Sang Long tradition ($\bar{x} = 4.26$ S.D = 0.68).

The quality of the animated media was assessed using the Poy Sang Long AR presentation of the stories, legends, and beliefs of Poy Sang Long tradition. It was found that the subjects could understand their local customs, resulting in pride in local culture and traditions. In addition, these media helped to preserve and carry on the cultural identity of the Tai Yai ethnic group in Mae Hong Son Province. The researcher had adapted the animated media to maximize the benefits for accessing historically important information of the traditions of the Shan people in Mae Hong Son Province. As a result, it was consistent with the use of other presentation media of Poy Sang Long tradition and the interest of users, especially the understanding of the content. Illustrations with digital painting techniques to motion with 2.5D visual techniques were the characteristics of making the images in the storybook feel like life, combining with music and narration to increase the understanding of the media users. The results of the responses of the learners were positive way. In summary, animation media satisfied the sample group in Mae Hong Son such as students, people in the community, community leaders and professionals, as well as tourists, or people who were interested. It also made it easy to understand complex information. The effect of applying technology to its benefits was at a high level. Assessments indicate that users could understand and took pride in their own local culture and traditions. This media also helped to preserve and pass on the cultural identity of the Tai Yai ethnicity of Mae Hong Son Province to the next generation.

Suggestions

From the results of the research, the researcher has the suggestions as follows:

1. The suggestions from the research

The results of objective 1 found that the creation of multimedia and animation media using Digital Paint and 2.5D techniques makes content easy to access and creates interest in learning the history of traditions for all ages.

The results of objective 2 found that students, professionals, and people in the community had a high level of satisfaction with using animated media to present stories, legends, and beliefs inherited from Poy Sang Long tradition ($\bar{x} = 4.26$ SD = 0.68). Evaluating the quality of animation material allowed us to know that users could better understand their local traditions. Therefore, relevant agencies should establish a learning dissemination center

on Poy Sang Long culture and traditions by giving opportunities for communities or tourists to experiment with media and develop efficiency and effectiveness to make users take pride in local culture and traditions. In addition, this media helped to preserve and carry on the cultural identity of the Tai Yai ethnic group of Mae Hong Son Province to be passed on to the next generation.

2. The suggestions for future research

The future research should involve the following issues:

2.1 Subsequent research should consider other aspects of media development related to Poy Sang Long tradition which had many more relevant details and different presentation techniques should be used such as 3D animation media.

References

- Lan Na Tai Ethnics Learning Center, Social Research Institute, Chiang Mai University. (2020). *Tai Yai*. Retrieved May 10, 2020, from <http://www.sri.cmu.ac.th/~lelc/index.php/2015-11-18-16-02-19>.
- Lukrak, S., & Singjaichuen, A. (2020). Mixed Media and Animation Design for Promoting Nan's Forest Conservation. *Designeco*, 1(1), 36-44.
- Purwaningsih, A. (2017). Optimizing 2D Animation Production Time in Creating Traditional Watercolor Looks by Integrating Traditional and Digital Media. *International Journal of Asia Digital Art & Design*, 21(1-8), 57-63.
- Rungtawan, U. (2020). *Ethnography Research Database: Look at the people of Tai Sang Long*. Retrieved May 10, 2020, from http://www.sac.or.th/databases/ethnicredb/articles_detail.php?id=1177.
- Sanguan, C. (1969). *Northern Thai traditions*. Bangkok: Odeon Store.
- Somnuek, P. (2003). *Educational Evaluation*. Kalasin: Prasan Printing.
- Sriratanaban, T. (2019). Poy Sang Long: Social Symbols and Meaning of Tai Yai in Mae Hong Son Province. *Journal of Thai Studies*, 11(2), 87-112.
- Tai Yai Institute. (2020). *Tai Yai*. Retrieved May 10, 2020, from <http://www.taiyai.org/2011/index.php?page=4c2378500328311c7354592d47cc700d&r=3&id=52>.
- Thirawut, E. (2007). *Measurement of attitude*. Ubon Ratchathani: Witthaya Offset Printing House.
- Waro, P. (2008). *Research Methodology*. Bangkok: Suweeriyasan.