

The Survival of Traditional Thai Puppet Businesses -Hun Lakorn Lek: Emphasis on National Culture and Competitive Advantage Strategies

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Abstract

The purposes of this qualitative research were: 1) to explain the history of Hun Lakhon Lek and its performance and strategies from the past; and 2) to represent new strategies by focusing on national culture and competitive advantage strategies to value creation and sustainable development in the future. Data collection and analysis employs by firstly, using secondary data from documents, news, academic research, and using focus group by a participant and MBA 8 of Rajamangala University of Technology Phra Nakhon (RMUTP)-12 persons. The results explain history and performance of traditional Thai puppet business compare with contemporary Thai puppet business. Additionally, it also represents the business strategies by using concept of national culture and competitive advantage strategies.

Keywords: Traditional Thai Puppet Business, National Culture, Competitive Advantage Strategies, Resource-Advantage Theory, Living Cultural

Introduction

Currently, many countries have succeeded in economic development and effective technology with high speed and completeness information to decision making timeliness. People in these countries are making their effort to improve their skills and competencies for gain more incomes and their lifestyles with high technology to facilitate their own. However, omission in art and national culture from generation to generation is caused to lose their own identity and histories. Prosperity in the arts, culture and traditions, lifestyles of people in society and community is changing together with modern technology. Rich and valuable in arts and culture is disappearing as the past. The way to sustain the living Thai nation culture has a variety methods by respective owners bring together the culturally-dynamic, urban-blended community, learning how to create arts; lifestyle; and classical history or poetry from generation to generation. Additionally, the collaboration of many parties especially government, Thai community and society are very essential.

Thai theatrical arts such as Khon, Lakhon, Fonram, Rabam, and Puppetry are famous in Thailand and other countries since Sukhothai period (Jirajarupat, 2009). From the past in

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the region of King Rama to present, Thailand houses is a famous of variety of combination in art and culture which is uniquely splendid (Tawalwongsri, 2010). Thai puppets and Puppetry performance can be categories such as Hun Luang or Hun Yai (the great puppet, present is the collection of puppets in the National Museum in Bangkok); Hun Wang Na; Hun Krabok, Nang Talung; Nang Yai (Dancing puppeteers); and Hun Lakorn Lek (Virunrak, 2000). The creative choreography for Nang Yai is one of traditional Thai shadow puppet theatre which famous show such as poetry of Ramakien or Ramayana. However, in the late 20th century and the early 21st century Nang Yai perform at theatre festivals and fear of its extinction is no longer so acute (Miettinen, 2014).

This paper aims to explain only one Traditional Thai puppet performance, Hun Lakorn Lek or Thai theatrical puppetry or Thai puppet theatre. Firstly, it is only one of Thai puppet performance still operates in the present but only few private groups such as Nattayasala Hun Lakhon Lek by Jo Louis Puppet Group, Aksara Hun Lakorn Lek by King Power Group, Hun Lakhon Lek by Thumnai Group or Baan Silapin at Klong Bangluang, Pasicharoen district, Bangkok. Secondly, recent new on September 30, 2016 present that Nattaya Burapa Group perform by Thai citizens won the best carnival performance with best citizen price at Aladin Theatre, Poland. These rewards reflect the creativity, beautiful delicate balance between arts and national culture. The content reflects the virtues, grateful sacrifice, discipline and tolerance as essential for humanity. One question for us “what is the reason why the Thai youth have little interest in it while it reflect the glory and greatness of Thailand culture from the past to present”. Finally, this article learn about its history and focus on new business strategies for Thai puppets performance by focusing on national culture and competitive advantage theory to value creation and sustainable development in the future.

Purposes of the Study

1. To explain the history of Hun Lakhon Lek and its performance and strategies from the past to
2. To represent new strategies by focusing on national culture and competitive advantage strategies to value creation and sustainable development in the future.

Literature Reviews and Theoretical Foundation

Concept of Puppetry (Hun Lakorn Lek)

Puppetry is a form of theatre or performance that involves the manipulation of puppets-inanimate objects, often resembling some type of human or animal figure which manipulated by a human called a puppeteer. Such a performance is also known as a puppet play. Puppeteer uses their movements to control puppet with their arms, hands, rods or strings to move body of puppet, and employ their voice to speak sounds follow puppet character include synchronizes the movement of puppet mouth with this spoken part (Wikipedia, 2016). Puppets, universally appealing, poke fun, chase one another in hilarious synchrony, argue with authority and communicate clearly with and without words. They confront human fears and conflicts, problem solve and move audiences to new worlds (Pemsler, 2008).

Process on the construction of the puppets Hun Lakorn Lek is an ancient art form in Thailand, and has differentiated construct from Hun Krabok because Hun Krabok has only head and two hands, while all components of Hun Lakorn Lek and its movement similar as a human but has mini scale (Wikipedia, 2016). Firstly, all the structures and head of puppets are molded from mold clay to generate a character with a human-like such as Hanuman (monkey), male and female. These clay pieces are covered with paper and allowed to dry in the sun. The part of arms and legs are made from fabric which is filled with cotton. Wooden

foldable joints are attached so limbs have a lifelike movement. Hands and feet are carved from Thong Lang wood which is lightweight and carved easily. The pieces are painted and the costumes are made using handmade cloth and sewed methods by hand according to traditional Thai sewing methods. Styles and colors of clothing or dressing depend on the specific characteristics of the puppets. Finally, the face of the puppet is painted with colored clay to match the color of human skin. Eyes and lips are painted with poster paint.

Performance technique for Puppeteers To perform the puppet-Hun Lakorn Lek, Three puppeteers have their responsibility to do difference functions. First, they need to know about the basic concept of Khon dancing and do their ability with their teamwork and more practicing. They are required to perform together on one puppet. The first puppeteer controls the head and the right hand of the puppet. The second puppeteer controls the left hand of the puppet. The third puppeteer controls the feet of the puppet. Finally, They must be skillful and experienced enough with practicing to control every part in unison to produce a perfectly coordinated character (Wikipedia, 2016). It is very important for puppeteers to understand specific characteristic of any puppet for controlling and dancing step with moving their puppet.

National Culture Impact

Prior research (Chui, Lloyd and Kwok, 2002) ,national culture and legal issues has impact on major business activities. Additionally, organizational culture is one impact factor that plays important on motivation, behavior, and firm performance. (Chow, Harrison, MacKinnon, and Wu, 2002). Culture's ability can be used as mediator, moderator, independent and dependent variable (Gray, 1992). Most of conventional and traditional Thai puppet businesses represent the most popular stories used in the shows-Thai Ramakien (the episode from Mahabharata and Ramayana). Some of puppets have characteristic from heroes or heroines in Thai stories. National culture represents a unique culture and traditions of their reflecting the identity of them and could sharing to other nations to understand the art and diversity of values (Ratanatada et al., 2011) combines with puppet characteristic, puppeteers dancing, system architecture, scenes, music instruments and sounds, and costumes.

The Resource-Advantage Theory

The resource-advantage theory (R-A theory) is a combination of two theories which are 1) the heterogeneous-demand theory or comparative advantage theory of competition focus on market orientation and strategy, explanation of the greater abundance in market-based economies on the basis that rewards, time; and is efficient and effective by expanding the kinds of resources to include such intangible ones as organizational culture, knowledge, and competencies, and 2) the resource based view theory of the firm (Hunt and Madhavaram, 2006a).

In the resource based view focus, the presence of competitive advantage is normally inferred from sustained above-average periods (Reed and DeFillippi, 1990) in which strategists and scholars must look for the source of sustainable competitive advantage. The key of the resource based view approach to strategy formulation is to understand the relationship between resources, capabilities, competitive advantage, and profitability, and understand the mechanisms through which competitive advantage can be sustained over time.

Competitive Advantage strategy

Competitive advantage strategy (Porter, 1985) is the art and science of identifying suitable method or planning and marshaling resources for their most efficiency and effectiveness in operate business which can have over its competitors include create greater value from their target customers, new products and services with suitable price for customer

perception. This result is the reason to create customers brand loyalty and intend to use more products and services which could make business more gain and lead to survival business. These strategies, such as cost leadership strategy; differentiate strategy; and focus strategy, are employed and combined in business plan to make effort over its competitors and make its better performance.

Cost leadership strategy concerns about volume and a price value to the customer with lower cost for customer perception in reasonable price and quality. Company has earned suitable income by comparing its revenue and cost include can add value to the customers via transfer the cost benefit to them. This strategy is suitable price for a large amount of people such as Thai people to concern about their own rich and valuable in arts and culture. Contrast with Differentiate strategy, it concerns about perception value of quality, luxury, comfortable for customer views. Sustainable Business has ability to create innovative new ideas, or leader of products and services with strong development and design. These improvements lead customers to pay their money to receive these benefits, while company increases customer satisfaction to earn more profit in the future. Traditional Thai puppet business have earn more capabilities and competencies to create innovative new ideas for foreigners satisfaction who willing to pay more income to company. Focus strategy concentrates few target markets rather than trying to target everyone and suitable for smaller business to operate their resources and ability to run business. It sometimes called the segmentation strategy to focus of target market or niche market. It is better for small business to consider their target group to serve their products and services to create more customer satisfaction and earns more profit between comparing cost and benefit under restricted of resources. Target costing method is a modern strategy to help business planning in volume, cost and target profit with satisfaction both of customers and business.

Additionally, two basis strategies, survival and advancement of knowledge, have different parts (both short-run and long-run) to play in a role unique to the firm and provide competitive advantage. Survival strategy relies on the effective utilization of existing assets and resources with the existing level of knowledge. It attempts to gain success in organization known business environment. Thus, firms can use suitable decision making for solving problem or strategic planning. The advancement of knowledge are directed towards securing future profitability and strength in a market that aims to competitive advantage (Miller and Ross, 2003; Kaneko et al., 2013). A creative approach is needed to be adopted survival thinking mode both two strategies and concentration on the needs, development, and implementation of strategies.

History of Hun Lakorn Lek and its performance

Nattaya sala Hun Lakorn Lek Thai puppet shows, a Thai cultural heritage, has performed more than 300 years. It was invented by Kru Krae Suppawanich in 1901 during the regin of King Rama IV which Hun Lakorn Lek type construct Royal Thai puppet (called Hun Laung, firstly type was shown in Royal Palace in Ayutthaya period). After World War II, He was growing older. Thus, the remaining puppets were passed to Master Sakorn Yang-Keawsot ("Joe Louis"). He was requested by the Tourism Authority of Thailand (TAT) because of his ability in performing with theatrical puppet shows-Hun Lakorn Lek for celebration 200 years of Rattanakosin. He came back to the stage again in 1985 with uniqueness of these puppets with each puppets will use two or three human-like movement and speech, classical scene, arts and povetry such as Ramayana, Pra Apai Manee, The Overture, The Myth of Rahoo and Lunar Eclipse etc. Later, the puppets changed in their structure, mechanism, and even attire, so as to appear more attractive (Posayakrit, 1986, p.85). Jo Louis Theater was granted royal patronage by Her Royal Highness Princess Galyani Vadhana and The Traditional Thai Puppet Theatre Foundation (named "Nattaya sala Hun

Lakorn Lek Foundation”) was established for continued preservation and development of Thai traditional puppetry.

The number of puppets has increased, and could be grouped into the Khon characters, from Thai Ramakien stories such as Rama; Sita; Hanuman and Rahu. Thai famous poets such as Phra Aphai Manee, including with modern characters created for new story in Thai lifestyle, The Overture, and other miscellaneous characters created to give a special ‘spice’ to the stories especially. Elvis Presley puppet and a vampire puppet are also included in the puppet shows (Jirajarupat, 2008, p. 175). Both the stories and the scripts employed in the audiences, have also been adapted. For example, The Khon stories from Ramayana (Yupho, 1968, p. 30) were originally the main stories of Thai theatrical puppetry performances. Scripts were taken from the Fine Arts Department, and were adapted and shortened to match the puppetry performances. Nowadays, in order for the theatre to attract a larger audience through a more appropriate, modern style, the stories in the shows also include those taken from contemporary movies

The manipulation style of Jo Louis theatre, for one man puppet, three puppeteers have to control the movement of puppets with dancing follow the music and character of puppet such as Pra Ram (human king of Ayutdhaya Palace), Hanuman (monkey), or Thodsakun (King of Giant Krung Longka). For female puppet such as Nang Srida, two puppeteers have to ensure the great movements of the puppets, so that unity of the dances can be achieved (Phakamas, 2009).

Their instruments such as a professional light and sound system in sound control room, stages, and audience seating areas, dressing room for puppets and puppeteers, prop and setting equipment storage is considered and set up before the show begin. There are more lighting and sound effects of modern musical instruments are employed at the current Thai puppet during the show. The Traditional Thai puppet Theatre (Joe Louis) could be offered daily and locate on Suan Lum Night Bazaar. The path to the success of this theatre has not been paved with roses (Phakamas, 2009). The popularity of Thai theatrical puppetry may not be what it once was, but they hope that it will be preserved so that later generations can appreciate the beauty of our nation’s art and culture through their shows or visiting the National Museum in Bangkok.

Aksra Hun Lakorn Lek Aksra Hun Lakorn Lek operates under the supervision of Mr. Noomsake Yanavinayo (Director of Aksra Theatre). The objective is the effort to observe opportunity in conserving, developing, and creating Hun Lakorn Lek performance to answer the question among the social modernity while it can preserve Thai identity at the same time by applying the above concept and method (Ratanatada et al., 2011). Aksra Hun Lakorn Lek has developed and created new performance by taking into account the components of completeness and reality. Hun Lakorn Lek was adjusted its size to be higher and larger for spectators could see the postures of puppets clearly. Additionally, increasing in beauty and harmony of puppeteer is also improved.

The traditional Thai puppet performance has been adjusted from the Ramayana poet to combine four regions of Thailand and mixed it to fulfill the show. Furthermore, foreign cultures are fulfill in the show such as Jo Jo Sang-Japanese girl story and her culture; Arirang-the Korean traditional folk song; seven angels from Chinese show are combined and mix with Hun Lakorn Lek performance to present the arts and culture of four regions and foreign countries. This performance not only has a variety for the audience but also fulfills the completeness of the show by mixing many cultures both of Eastern and Western lifestyle. The Style and pattern of Aksra Hun Lakorn Lek employs the suitable combination and component of national culture and art such as Krabi Krabong (martial art); Thai and Western music instruments; and make good relations among puppets, puppeteers, and spectators in the show. Its concept and method employs products differentiate by reflect the difference

between the contemporary and traditional performance to sustain cultural products and represent their new different products to create customers satisfaction for sustaining. Aksra Hun Lakorn Lek staffs employ their marketing public relations to raise awareness of their cultural products and organizations to attract interest or credibility to various media. They motivate their customers or target groups with variety of shows, activities, advertisement, sales promotion, and Thai restaurant meal. They invite the spectators to explore the depths of Thai culture through the centuries with “Hoon Lakorn Lek-little puppet theatre. One of the most authentic aspects of Thai performance art to have been created, the performances display valuable lessons from Thai history in an entertaining and captivating manner while preserving the movements, mannerisms, and other little details of ancient Thai culture that have been carefully handed down through the centuries (Aksra Theatre King Power, 2016). Aksra Hoon Lakorn Lek effort is to preserve the traditional aspects of the art, which have been adapted from performance arts of the Royal Court. They said that “The puppet mechanics have been carefully thought out and painstakingly created to be close to life as possible, enhanced by the skills of the master puppeteers, along with intricate stage get ups, music, and costumes. The choreography and dances of the puppets themselves require great skill, with each puppet supported by three actors having to work in unison with one another and the mechanics of the puppet itself, each taking control of separate parts of the puppet’s body, from legs, and arms, to the body itself, and truly bringing the puppet to life.”

Methods

This article is qualitative research by firstly, collected and analyzed secondary data from documents, news, articles and academic researches and secondly, using focus group by a participant and MBA 8-students of Rajamangala University of Technology Phra Nakhon-12 persons discussion in a topic of firm sustainability: problem solving of conventional and traditional Thai puppet Business-Hun Lakorn Lek, focusing on national culture and competitive advantage strategies. Antecedents have experienced in business more than one year and have experience to be a spectator both of Jo Louis theatre and Aksara Hun Lakorn Lek. The data were analyzed using content analysis.

Results

Both the famous traditional Thai puppet performances, Joe Louis is only one of the Thai classical puppet troupe which can lay claim to being direct descendent of the founder and inheritor of the fine art of Thai classical small puppet theatre of over one century ago (Asia-Europe Foundation, 2016). Traditional Thai puppet performance has become widely known, and popularity among Thai audience and foreign spectators who visited to Thailand. Additionally, Jo Louis Theatre has been honored by various organizations both in private and government sectors such as Tourism Authority of Thailand, The Ministry of Culture, Nattaya sala Hun Lakorn Lek Foundation etc. According to the study, research papers and documents including context from focus group, the conclusion is presented in table 1 as follow:

Table 1 Thai puppet performance and strategies

	Hun Lakorn Lek-Jo Louis Theatre	Aksra Hun Lakorn Lek
Type of puppets	<ul style="list-style-type: none"> - Traditional Thai Puppets more than 40 puppets have characteristic from heroes or heroines. The new puppet was created in the show. - Ramayana collections such as Rama, Sita, and Hanuman. 	<ul style="list-style-type: none"> - Traditional Thai Puppets and Conventional Foreign puppets such as Jo Jo Sang.
Location/ site	<ul style="list-style-type: none"> - Many place: Suan Lum Night Bazar, Asiatique The Riverfront and outdoor at Pattaya, Chiang Mai Province, etc. 	<ul style="list-style-type: none"> - Aksra Theatre King Power with 600 seats for spectators per round.
Prizes / Award	<ul style="list-style-type: none"> - 2006 “Best Traditional Performance Award” at the 10th World Festival of Puppet Art held in Prague, Czech Republic, 1-10 June 2006. - 2008 , a mesmerizing performance “Best Traditional Performance Award” at the 10th World Festival of Puppet Art held in Prague, Czech Republic, 1-10 June 2006. 	
Coordination & Marketing Strategies	<ul style="list-style-type: none"> - Governance and Private sectors. - Marketing strategies by represent the demonstration of puppets, souvenir and Joe Louis Thai Cuisine. - Including on line services for booking and visiting Joe Loius Fan Page. 	<ul style="list-style-type: none"> - Private sectors with combination of marketing strategies (one stop services: travel-shopping & souvenir-hotel and Thai restaurant -shopping) Including on line services for booking.
Content of the show	<ul style="list-style-type: none"> - Thai Ramakien, Thai lifestyles, the fables with moral content, scene and musical instrument. - Some of the show has made a part of their impression on various significant occasions such as 17-20 November 2016 for The Wandrous Asean Puppet Festa 2016 at Suan Lumpini, Bangkok. 	<ul style="list-style-type: none"> - The Ramayana epic and Japanese or Korean songs include a combination of Thai traditional puppet shows and other forms of entertainment such as orchestral performances and classical dance. - Visitors can visit free of charge at Baan Silapin at klong Bang Luang 14.00-14.30 p.m. except Wednesday. - Aksra Theatre with buffet at Ramayana Restaurant, King Power Downtown Complex at 12.00-12.30 p.m. and 18.00-18.30 p.m. everyday.
Customer satisfaction	<ul style="list-style-type: none"> - Very much (e.g., delicious food at Thai cuisine, nice puppets and show, feeling in Thai lifestyle, enjoy and funny among puppet, puppeteers and spectators during and after show, wonderful and magnificent decoration with tradition Thai puppet and instrument. 	<ul style="list-style-type: none"> - Very much in all including services, They enjoy the show with have content both contemporary and traditional Thai puppet performance with sound and Orchestra instruments.
Cost / price	<ul style="list-style-type: none"> - Investment cost is very high with scene and instruments including maintenance costs. - Suitable price for foreigners and Thai. 	<ul style="list-style-type: none"> - Investment cost is very high with scene and instruments including maintenance cost. - Price includes Lunch buffet restaurant Ramayana (11.00-14.30 p.m, and 17.00-21.30 p.m).

From analyzing literature review and focus group discussion, the conclusion of this article about Traditional Thai puppet performance business history has long time over 100 hundred years. Currently, Joe Louis Theatre is promoted and got help by government and private sectors to operate its activities including coordination to create valuation of their performances in worldwide. Although, their performance is very popularity, however the ability to increase firm profitability is opposite directions. Competitive advantage is not occurred because of firm could not make sustain profit over than competitors both of short and long-run. Contrast with the view of national culture, maintaining traditional culture value for next generation is reflexed identity value with uniqueness for Thai nation. This is a heritage that is most precious and valued than accounting numbers. The collapse of the culture is a serious threat to identity and lifestyle. To earn more competitive advantage for Tradition Thai puppet businesses, suggestion for focus group as follows:

Government sectors

1) Government sector should redesign courses for Thai citizen who is interested in handy-craft traditional Thai puppet performance both creative puppet for traditional and contemporary, and puppeteers for four regions as OTOP. The growth of traditional Thai culture will not happen if it lack of acculturation from generation to next generation.

2) Related departments should support for coordination among target school or university, Traditional Thai puppet businesses, and private sectors to represent national culture for Thai visitors and Foreigners. For example, special low prices for Thai student groups could pay and know how to learn about the process of creating traditional puppets, control the movement of puppets and puppeteers dancing which beautiful, popularity, and represent richness of Thai national culture with long values of history.

3) Government must set planning cost budgeting and coordination between departments and private sectors for example: Tourism Authority of Thailand, The Ministry of Culture, and Ministry for Foreign Affairs to publish and promotion continuously of Thai identity and lifestyle to international in many channels.

Private sectors

1) Private sectors play an important key roles for tradition Thai puppet businesses. Because of their ability and capability to run business with making profit, planning, control business strategy and reduce risk management. Traditional Thai puppet business has to learn about strategies and applied for competitive advantage over competitors. Its performance is recognized for creativity, identity and values of national culture with guarantee winner prizes from world festival competition.

2) Private sectors should support their resources as sharing information and connection, internet and intranet which could help traditional Thai puppet business with win-win strategies and sustainable profit over competitors.

Traditional Thai Puppet Business

1) Traditional Thai Puppet Businesses should improve their performance continuously over than competitors by create their new products and services to make customer satisfaction and intend to visit again.

2) They should employ proactive strategies than consigned in order to make more spectators impression with marketing promotion.

3) They should be preserved tradition Thai puppet and the art of acting and convey to the youth.

4) They should combine their strategies-products differentiate in both their main traditional and contemporary of products and services. Additionally, they should employ mixed cost leadership and product differentiate to set a target costing for suitable prices for customer perceived and making profit for the firms.

Reference

- Binson, B., Komkam, Komkam, P., Phaosavadi, P., & Pornprasit, K. 2014. **Keeping It Alive: Mapping Bangkok's Diverse Living Culture**. Bangkok: Faculty of Fine and Applied Arts, Chulalongkorn University.
- Hanford, R. 1976. **The Complete Book of Puppets and Puppeteering**. New York: Drake Publisher Inc.
- Inthakun, C., & Boonyasurat, W. 2013. **Management Process of Jo Louis Puppet Group for Developing and Inheriting Intention in Chiang Mai Schools**. (Article in 4th Hadyai Academic Conference, May 10, 2013).
- Jirajarupat, P. 2009. **The Survival and Adaptation of Traditional Thai Puppet Theatre (Joe Louis)**. Bangkok: Rajabhat Suan Sunandha University.
- Kaneko, P., Ussahawanitchakit, P. & Muenthaisong, K. 2013. "Strategic Target Costing Effectiveness and Goal Achievement: Empirical Evidence from Exporting Gem and Jewelry Businesses in Thailand." **International Journal of Business Strategy** 13 (3): 127-158.
- Nattayasala Jun Lakorn Lek (Joe Louis). 2008. **Performance Part Online**.
- Navikarmoon, A. 2004. **Puppets in Siam**. Bangkok: Sathaporn Press.
- Opapunyachot, W. 2003. **The Development of Nang Yai Wat Ban don**. Rayong: Rayong Province Cultural Council.
- Pannengpetch, S. 1992. **The Study on Thai Puppet Development as Folk Media in Western Region**. Bangkok: Siri wattana Press.
- Ratanatada, F., Pavaganun, C., Chulajata, R., Yanavinayo, N., and others. 2010. **Living Cultural Thai Puppet Performance: Aksra Hoon Lakorn Lek**. (In proceeding of the Joint International conference on information & communication Technology, Electronic and Electrical Engineering, Luang Prabang, Lao PDR. 21-24 December, 2010).
- Ratanatada, F., Sirichai, P., Kaviya, S., Mangalabruks, B., Pavaganun, C., and others. 2010. **Thai Puppet Performance with Projector and Light in Theatre**. (Procedure Engineering 8, page 343-347. 2nd International Science, Social Science, Engineering and Energy Conference, 2010: Engineering Science and Management).
- Pemsier, S. and the Divas, P. 2008. **Puppets: Art and Amusement**. Retrieved from www.puppetsbostonguild.org/puppetry.html.
- Virunrak, S. 2000. **Evolution of Thai Dance and Dance Drama during The Bangkok Period 1782-1934**. Bangkok: Chulalongkorn University.