

# CUSTOMERS' TRUST ON INFORMATION DISCLOSURE OF FOOD TOURISM FACTORY

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## ABSTRACT

Food safety has been an emerging issue around the world in recent decades. The ceaseless food safety scandals have destroyed customers' trust to food providers, and have affected their decision making on purchase. Rebuilding or reinforcing of customers' trust is therefore signification for food providers in order to encourage customers' purchase intention. The level of information disclosure by food providers acts one of important roles for customers' trust. Furthermore, tourism factory is a modern kind of tourist attraction; visitors can understand better regarding of the visited factory via the experience of visit. As the result, customers' trust on food safety might be enhanced by appropriated information disclosure of food tourism factory visit experience.

The purpose of this study is to examine the influence of information disclosure on customers' trust and wailing to pay (WTP). A well-known food tourism factory in Taiwan – Black Bridge Sausage Museum was chosen for the sample collection. The total number of 195 random and valid samples was collected, and will be analyzed by the methods of regression and PROCESS.

The results of this study are to figure out the influence of information disclosure on customers' trust; to evaluate the degree of WTP towards the level of customers' trust; to examine the mediation effect between information disclosure and WTP. The findings of this study provide a significant reference for both the government and the food providers for the consideration of proper and sufficient information disclosure to customers.

**Keywords:** customers' trust, food safety, information disclosure, tourism factory

# EMPLOYABILITY SKILLS: GULF BUSINESS STUDENTS' PERSPECTIVES POST WORK PLACEMENT EXPERIENCE

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## ABSTRACT

Employability skills of university graduates remain an ongoing topic for discussion and debate. Numerous studies highlight the expressed concerns of governments and industries about higher education's ability to develop workforce ready graduates. An often cited solution is the use of internships to equip students with necessary employability skills. The literature is well documented with studies from the perspectives of multiple entities including employers and university faculty, mostly in the western world. Fewer studies examine the perception of students, and even fewer studies are based on students in Gulf countries. This paper assesses the status of employability skills from the perspective of students within a UAE institution based on their completion of a half semester long work placement experience. Using a largely qualitative instrument, students reported the essential skills needed in the workplace, classroom activities that most prepared students to use such skills in the workplace, and the various challenges they encountered. Implications for academic and professional practitioners are discussed. Findings and recommendations are informative for curriculum development as well as economic and workforce development agencies.

**Keywords**—employability skills, work placement experience, Gulf countries, workforce preparedness, work placement

# HEALTH EXPENDITURE AND ITS PLACE IN ECONOMY: THE CASE OF TURKEY

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## ABSTRACT

While health is the source of welfare for the individuals, it is also the most important determinant of economic growth. Health, increasing the productivity of individual, contributes to economic growth. Therefore, the countries should give the necessary importance to health services. The primary aim of this study, examining the historical development of health services in Turkey, is to analyze the change occurring in the health services. In this scope, the second aim of our study, with moving from the data regarding health expenditures, is to reveal the place of health expenditures in Turkey.

As a result of analyses, in which the dataset regarding the period 1999-2013 is considered, in the period dealt with, it was determined that some increase occurred in health expenditures and that the share of health expenditures in GDP increased too little. On the other hand, analysis results point out that in financing health expenditures, public sector is at more front row compared to private sector.

**Keywords**—Health, Health Service, Health Expenditures, Turkey

# DEMAND FORECASTING METHODS IN SUPPLY CHAINS AND APPLICATION OF AN ARTIFICIAL NEURAL NETWORK BASED FORECASTING MODEL

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## ABSTRACT

Today's business environments is focused on Supply Chain Management which has become the one of the most competitive area for enterprises. Hereafter, this competition tends to be among supply chains instead of enterprises. Therefore, supply chains should be managed effectively. Supply Chain Management is delivery of products and services which includes storage and movement of raw materials, work-in-process inventory, and finished goods from point of origin to point of consumption. The main aim is to provide the required products or services at the right time, at the right amount with minimal cost. Demand management is one of the most important components of supply chain management for better service level. In this paper, artificial neural network method is used for demand forecasting. Performance of the method is inspected with a real life application.

**Keywords:** Demand Forecasting, Supply Chains, Artificial Neural Networks

# SEX AND WORK ENGAGEMENT: A STUDY ACROSS 27 SOUTH AFRICAN COMPANIES

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## ABSTRACT

According to literature, employees who display vigour, dedication and absorption in their work are deemed to be engaged, resulting in increased productivity. Engagement, as well as the unbiased measurement thereof, may therefore be considered as a matter of interest and importance in the workplace. The Utrecht Work Engagement Scale (UWES-9) is the most widely used self-report measure of engagement and has been validated in many countries. However, no empirical studies aimed at identifying sex-specific outcomes associated with the UWES-9 could be found. The aim of this research was to determine whether sex differences in work engagement exist, including sex-based differences in the psychometric properties of the UWES-9. A cross-sectional survey design was used. Data were collected independently on two occasions. Initially, employees from 10 companies ( $N_1=750$ ) were surveyed. During the second research session, employees from 17 companies ( $N_2=864$ ) participated. In both cases men and women were almost equally represented. In the case of the first sample, at an item level, sex bias was detected in four of the nine items of the UWES-9. However, the factorial structure of the UWES-9 for men and women appeared similar. Correlation coefficients between UWES-9 scores and other related constructs differed along sex lines. Men obtained practically significant higher mean scores than women on the UWES-9. Similar, but not identical, findings were reported with the second sample. The results indicated sex bias at item level, but structural equivalence at scale level was found. Men scored higher than women on the scale and the overlap between UWES-9 scores and other measures taken at the same time was statistically larger for women compared to men. Users of the UWES-9 are cautioned against conducting mean score comparisons across gender lines and using the instrument in correlative studies as the measured constructs may have different meanings for men and women.

**Keyword:** phrases sex; gender; employee engagement; work engagement; UWES-9.

# FROM OBSTACLES TO OPPORTUNITIES – A SUSTAINABILITY MODEL FOR SMALL ISLAND HOTELS

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## SUMMARY

On December 11<sup>th</sup>, 2015 climate change negotiations came to a close after the COP21 –2015 United Nations Climate Change Conference in Paris. The stakes were high for Small Island Destinations (SIDs) as they anxiously awaited the results of the largest diplomatic meeting to take place in France since 1948 (Peralta, 2015). Across media channels and climate protests the event was referred to as “the last chance summit”, which is all too realistic for SIDs (The Guardian, 2015). The cultures, food and water security and livelihoods of people on small islands are dependant of sustainability action both on- island and internationally (van Seville, 2015). In some cases, sea-level rise resulting from melting ice caps is even threatening to wipe out entire island nations (Climate Students, 2015). The Prime Minister of Aruba, views the unique position not only as an obstacle, but also an opportunity: “Small island nations can be laboratories to demonstrate how a successful transition to a greener and more sustainable way of living can occur in all countries” (Climate Students, 2015). As the main economic pillar for many SIDs, these goals cannot be achieved without the tourism industry (UNSD, 2015). Therefore, the SIDS Accelerated Modalities of Action (SAMOA) Pathway called for the development and implementation of policies that promote sustainable tourism (UNSD, 2015). SIDs are depending on the world and the world is depending on SIDs to become a model for sustainability. This is however, unachievable without the tourism industry and its key players – namely hotels. Therefore, a sustainable development model needs to be designed and applied in the hospitality industry to create opportunities out of obstacles. Sustainability is extremely complex and is dependent on how social and economic activities relate to environmental processes. This is especially true on small islands characterized by vulnerabilities such as fragile ecosystems, natural resource scarcity, import dependency, isolation from economies of scale and increasing demand. Therefore, the goal of this paper is to lay the foundation for the development of an environmental management system addressing the specific needs of Small Island Destination Hotels (SIDHs). Several questions need to be answered: How can existing theories be combined into a model that guides and evaluates the progress of sustainability initiatives? Which unique features of SIDs need to be addressed in the development of a SHM framework? How can hotels on small islands practically apply sustainability to ensure the long-term success of the tourism industry? The assumption is that hotels on small islands can create a sustainable tourism industry by consistently combining social and economic capital throughout hotel operations to create environmental gains. Three management areas have been selected as most important. They are: Energy, Water and Waste. These areas were chosen because (A) they are fundamental to every hotel department and, (B) sustainable management requirements differ significantly on SIDs compared to mainland destinations.

Without a reliable flow of energy, hotels cannot function. This is particularly important on small islands where energy resources are scarce and expensive. The inefficient use of energy in hotels results in a direct decrease in profits. Therefore, the focus here must lie with the harnessing and responsible deployment of self-sufficient renewable energies. The second category is water. This valuable resource tends to be severely limited. Aside from rainwater, some islands have no fresh water at all (Tapper, et al., 2011). For many small island hotels, a healthy aquatic ecosystem is the primary attraction upon which the business heavily relies. Waste is the third key management area.

However, very few SIDs have advanced recycling facilities that can efficiently and effectively deal with the influx of waste from tourism. Furthermore, isolation from economies of scale makes it economically unviable for many islands to export waste for proper processing. Even when opportunities exist, the

exporting of waste inevitably leads to more container-ship traffic and associated ecological hazards. Therefore, sustainable waste management (WM) is not an option but a must.

Numerous examples exist of how increased sustainability in one key management category can create a domino effect in all other areas. The same is however true of mismanagement and the resulting negative influences. Therefore, it is critical for hotel managers to practice whole-systems thinking and critically analyze the far-reaching impacts of everyday decisions.

A review of the origins of sustainability and advancements in relevant theories and concepts provides an understanding of the grounds upon which the model was built. Subsequently, the model is presented and its application in the field.

# MURALS IN YAHYA HAYATI PASA MANSION

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## ABSTRACT

In the history Ottoman Empire, the era starting from the period of Ahmet III. (1703-1730) and involving the 19<sup>th</sup> century is accepted as the “Westernization Period”. It is a period when new interpretations were sought in place of the salient and mature art understanding of 16<sup>th</sup> and 17<sup>th</sup> centuries. The westernization movement that started in this period had affected Anatolia in a short time. The classical Ottoman understanding and pleasure changed in time, and some novelties emerged in artistic styles. Decorative figures of European styles such as baroque, rococo and empire which were looked nicer and spirited than classical Ottoman ornaments were started to be used in different styles in Turkish art. These styles added a different dimension to Turkish painting art. Murals led this change in Turkish art.

Murals that expanded to Istanbul and other parts in Anatolia can be seen in buildings in Izmir and its surroundings. Some of them are the enlarged miniatures that have no aim to copy the outer world as it is, while the others feature naturalism and its subtitles such as perspective, light and shade, which are western concepts. Among the artworks in Yahya Hayati Pasha Mansion in Izmir, there are murals of westernization period. The ornaments in the mansion become intense in dining room and hall. Today, the mansion is wracked and experienced a fire, whose cause is still unknown. After the fire, the majority of the mansion was ruined, top layer and some of the walls were devastated, and the majority of murals were damaged.

This study aims at examining the murals in Yahya Hayati Pasha Mansion in terms of style. After the murals are assessed in terms of artistic elements and artistic style of the period, restoration suggestions and computer-assisted restoration samples about the ruined murals will be presented.

**Keywords:** Murals, Westernization, Restoration.

## INTRODUCTION

The period known as the Westernization Movement, when the Ottoman Empire turned towards the West, is the 18<sup>th</sup> century. The empire underwent a variety of changes in this period. The westernization movement wasn't limited to only military or technics, but it also affected culture and art (Renda, 2002: 265-283). A new art environment was created first around the court, but then outside of the court. Western art elements were tried both in architecture and art. The biggest novelty in the ornament of religious and civil buildings during this period was the introduction of murals (Arık, 1999: 423). Being seen in the capital city of that period – Istanbul - for the first time, murals were used in architectural works both in Anatolia and Balkans (Arık 1999: 424).

However, the murals of that period were technically different from the ones in the West. The murals were painted on wet plaster in Europe while they were painted on dry plaster using ochre in Ottomans (Öndin, 2000: 199). In these murals, the colors were used skillfully in dark-light shades, and perspective and light-shade trials were performed (Arseven, 1983: 620; Renda, 1977: 26). Being a part of architectural ornaments, these murals can be seen in Yahya Hayati Pasha Mansion in Izmir.

Yahya Hayati Pasha Mansion is located in İzmir, on the coastline of Bayraklı between Altın Road and Anadolu Avenue in 1643<sup>rd</sup> Street. It is among the 19<sup>th</sup> century mansions in İzmir, and Greek architect Andon Gavano was employed by Yahya Hayati Pasha to build this mansion (İpekoğlu, 2003: 81).



Photo 1: Yahya Hayati Pasha Mansion (Taken by A. Çetin)

The mansion is on 4000 square meters land. The double-wing gate through the yard was made of iron, and this grating gate is sliding and has a locking system. There are high walls and bars around the land. Geometrical designs made of white-black sea stones can be seen on the ground of the yard (Degerli, 2010: 153). There are single-story main building in the north and double-story main building in the south of the mansion, which was constructed as row housing style (Kuyulu, 2012: 530). The construction of the mansion took seven years to be completed, and there are three different dates mentioned as the starting date of the construction; 1863, 1868 and 1873 (Kuyulu, 2012: 530; Akçamlı, 1997: 40; Akçamlı, 2000: 37, 87).

The mansion was designed as “haremlık” and “selamlık”. The Harem part is double-story while selamlık and mabeyn are single-story. Between the harem and selamlık, mabeyn is composed of two narrow corridors, which provides the transitions to harem and selamlık (İpekoğlu, 2003: 82).

Yahya Hayati Pasha Mansion is an example of 19<sup>th</sup> century civil architecture. The effects of European style can be seen in terms of architecture and ornamentation. The murals on ceiling and walls are far from the classical style, and they demonstrate a free painting principle. The ornaments are mostly located in dining room and hall (Degerli, 2010: 155).

This mansion has historical and architectural values in terms of its original characteristics. The construction technique and materials reflects the technology of the period (İpekoğlu, 2003: 86). As mentioned by Kuyulu (2012), the mansion underwent fires in 2004 and 2010 repeatedly and was damaged more during the second fire. The murals inside the mansion was nearly destroyed.

## MURALS

The ornaments are mostly located in dining room and hall. The murals in dining room are in still life style while sceneries and flowers were described in hall. These murals are located in circles and medallions on large curbs on the edges of the ceiling and their surroundings were ornamented in baroque and rococo styles.

The hall is located in the second floor of the mansion. The ornaments of the room was painted on dry plaster. Each mural is inside a medallion frame. Six sceneries and six still life paintings are located on the

edge curbs of the ceiling in living room. The still life paintings here are composed of flower descriptions. Moreover, in the center of the ceiling, there are two ornamentation compositions of dragon figures (Photos-2)



Photo 2: Ceiling ornament



Photo 3: Yahya Hayati Pasa Mansion

In one of them, there is a brown boat and a black sailing ship on the sea. Both of them have red Turkish flags on them. On the right of the ship, there is another small boat inside which there is a figure. A human silhouette can be seen on the other boat on the left of the ship. On the left central position, an Islamic social complex can be seen. The mosque here has four domes and four minarets. Two of the minarets have single balconies and the other two of the have two balconies. The dome on the near end is described much higher and bigger than the rest. In the far end, the mountains or an island can be seen, which shows that the perspective was applied well in the mural (Photo-4).



Photo 4: Mural in the living room



Photo 5: Mural in the living room

On the other mural, there is a wavy sea, on which white, blue, grey and dark smoke colors were used, and a sailing ship, which is nearly lost between the waves. The smoking chimney of this wooden ship can be seen on the mural. There are two big trees on a piece of land depicted on the right of the ship (Photo-5).

In another medallion, there are three boats on the light blue calm sea. In the boat in front, a human silhouette with a hat can be seen. On the right, a piece of land stretching through the coast and a sitting man holding a fishing rod whose feet are in water can be seen. In this composition with too many details, the reflections of the man and the boat can be seen on the water. At the center of the mural, there is a structure and a tower with a red flag on top. There is a figure in front of the structure. What he does cannot be understood. On the right, there is a high tree. The same sort of this tree is also seen on the left of the structure, but its trunk is located inside the walls of the structure. In the background of the mural, a range of mountains is seen. The color perspective on these mountains are applied well. The sky is painted with light blue (Photo-6).

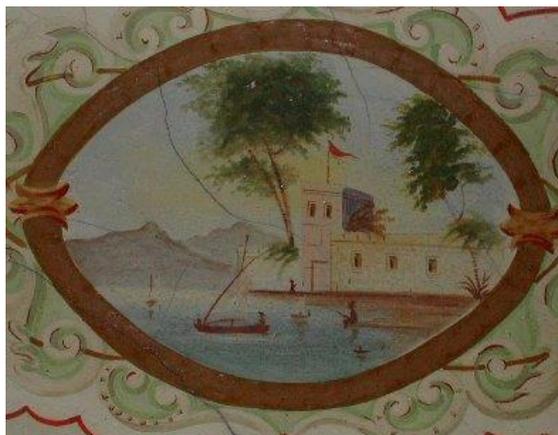


Photo 6: Mural in the living room



Photo 7: Mural in the living room

In the scenery description located in the right edge of the living room, a small sailing ship with double poles, in which there is a sitting human silhouette, can be seen on the sea. At the center of the mural, a piece of land in the middle of the sea was depicted. There is a white windmill made of stone and a bastion like a castle on this land. Some trees resembling the cypress rises from the castle. Around these structures are green grass and weeds. A red flag flutters on the bastion. A human silhouette with hat leans against the windmill's barriers and faces towards the flag. A bridge connects this island with the land on the right. There are high plants on the end of the bridge. In front of the plants is a human figure who holds a fishing rod and has his feet in the water. On the left of the island, a sailing ship with smoking chimney can be seen. Also, there are other sailing ships on the right of the island. The background of the mural is composed of majestic mountains. Light-shade plays are seen on the mountains on the right while no such plays are in the mountains on the left. However, color and line perspective is seen for the whole mural (Photo-7).

### RELATED WORKS

The most detailed studies on Ottoman Period murals in Istanbul and Anatolia were conducted by R. Arık and G. Renda. With these two fundamental studies referenced frequently, it can be said that the number of researches on murals has been increasing in recent years. The book called *Westernization Period Anatolian Description Art* of R. Arık has been the primary reference in our study. This publication is the basic book which focused on the murals in Anatolia collectively for the first time. On the other hand, G. Renda focused on the development of murals since 18<sup>th</sup> century based on the capital city. As a result, the foundation of the current study was based on these two sources.

Obviously, the presence of murals painted by both Turkish and foreign artists in Anatolia has added a richness. In this direction, the studies of A. Arel and İ. Kuyulu are remarkable. The studies on murals conducted by İ. Kuyulu especially in Western Anatolia Region have become an important source in our descriptions and evaluations.

### **METHODS**

A qualitative data collection method was used in our study. Qualitative research can be defined as a research approach for which a qualitative process was followed so as to reveal the perceptions and cases objectively and comprehensively in their natural atmosphere, by using qualitative data collection techniques such as observation, interview and document analysis (Yıldırım, & Şimşek, 2000, p.19). A descriptive research method in screening model was used in this study.

This study aimed at describing some of the murals in living room in İzmir Yahya Hayati Pasha Mansion. After the murals were described, some suggestions about the restorations were made.

### **EVALUATIONS AND CONCLUSION**

Today, Yahya Pasha Mansion is mostly ruined. It has experienced a big fire recently, of which cause is unknown. After the fire, the majority of the mansion was devastated, cover coat and the walls fell down, and nearly all of the murals were destroyed.



Photo 8: Yahya Pasha Mansion after the Fire



Photo 9: Yahya Pasha Mansion after the Fire

For the restoration of the murals, the surfaces, where the murals are located, should be consolidated and removed from the walls and put under preservation by the experts during the restoration of the building. The damaged pieces should be cleaned in a laboratory environment and the designs should be returned to its previous condition. The appropriate software in computer should be used in order to complete the missing parts of the murals. At this point, it is important to use the photos taken before the fire. After the restoration of the building is completed and the stiffness of structure and ground is accomplished, the

ornaments should be placed in their original locations. This restoration should be conducted by competent experts using original materials and colors.

#### COMPUTER SUPPORTED RESTORATION EXAMPLES



Photo 10: Mural in the living room (before)



Photo 11: Mural in the living room  
(after – by Ahu Simla Değerli)



Photo 12: Mural in the living room (before)



Photo 13: Mural in the living room (after)  
(after – by Ahu Simla Değerli)



Photo 12: Mural in the living room (before)



Photo 13: Mural in the living room (after)  
(after – by Ahu Simla Değerli)

## REFERENCES

- Akçamlı, A. (1997). *Bir Zamanlar Bayraklı*, İzmir: Bayraklı Matbaacılık Ltd. Sti.
- Akçamlı, A. (2000). *Uygarlığın Anıtı Bayraklı*, İzmir: Bayraklı Matbaacılık Ltd. Sti.
- Arık, R. (1988). *Batılılaşma Dönemi Anadolu Tasvir Sanatı*, Kültür ve Turizm Bakanlığı Yayınları, Ankara.
- Arık, R. (1999). “Osmanlı Sanatında Duvar Resimleri”, *Osmanlı-Kültür ve Sanat*, S. XI, Ankara.
- Arseven, C., E. (1983). *Sanat Ansiklopedisi*, Çeşitli Maddeler, I-V, İstanbul.
- Değerli, A., S. (2010). *İzmir Türk Mimarisinde Duvar Resimlerinin Korunması ve Restorasyon Sorunları*, Ege Üniversitesi Sosyal Bilimler Enstitüsü TDAE Türk Sanatı, Basılmamış Yüksek Lisans Tezi.
- İpekoğlu B., Çizer Ö., Reyhan K. (2003). "İzmir’de Tarihi Bir Konak – Yahya Paşa Konağı’nın Tanıtılması ve Koruma Sorunlarının Değerlendirilmesi", *Yapı Dergisi*, S.263, s.81-87.
- Kuyulu-Ersoy, İ. (2012). “İzmir Bayraklı Yahya Hayati Paşa Köşkü: Kül Olan Resimler”, *Uluslar arası Katılımlı Ortaçağ – Türk Dönemi Kazıları ve Sanat Tarihi Araştırmaları Sempozyumu*, Sivas 18-20 Ekim

- Öndin, N. (2000). “Türk Manzara Resmi”, *Muğla Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, Cilt: 1, Sayı: 2, 199-211.
- Renda, G. (1977). “Batılılaşma Döneminde Türk Resim Sanatı 1700-1850”, *Hacettepe Üniversitesi Yayınları*, Ankara.
- Renda, G. (2002). “Yenileşme Döneminde Kültür ve Sanat”, (C. 15, s.265-283), Ankara: Yeni Türkiye
- Shaw, W. (2011). *Ottoman Painting, Reflections of Western Art from the Ottoman Empire to the Turkish Republic*, I. B. Tauris, London.
- Toprak, F., A. (2013). “Kılıczade Mehmet Ağa Camii’nde bulunan bir manzara resmindeki ağaç tasvirlerinin batı tarzı resme geçiş bağlamında değerlendirilmesi”. *Süleyman Demirel Üniversitesi, Güzel Sanatlar Fakültesi Hakemli Dergisi*, ART-E Mayıs-Haziran, Sayı:11
- Yıldırım, A. ve Şimşek H. (2000). *Sosyal Bilimlerde Nitel Araştırma Yöntemleri*, 2. baskı, Ankara: Seçkin Yayıncılık

# EXAMINING TOURISM AND HOSPITALITY PERSONNEL FOR COMPETENCY DEVELOPMENT IN CHIANG RAI, THAILAND

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## ABSTRACT

Tourism in ASEAN is significantly growing. The development of tourism Mutual Recognition Agreement (MRA) for tourism professionals, which facilitates tourism professional mobility, can create both opportunity and challenges for local tourism and hospitality personnel. Delivering good quality tourism and hospitality service is a key for tourism development in Chiang Rai where its location marks Thailand's northern-most city. There are challenges of tourism resource development and particularly in the shortage of skilled personnel. This paper examines the competencies of tourism and hospitality personnel. It reports the level of tourism and hospitality personnel competencies in Chiang Rai, Thailand. It further suggests the vital training need and competency development for tourism and hospitality personnel. The study constitutes a starting point for more analysis in advancing tourism industry in the future. The results can contribute to tourism personnel development for sustainable career development.

The questionnaire was designed by applying common core and generic competency items from ACCSTP. Empirical data was collected from tourism and hospitality personnel in Chiang Rai, Thailand. The highest three levels of tourism and hospitality competencies are providing service to customers, working effectively with colleagues, and promoting tourism and hospitality products and services. The lowest three levels of competencies are maintaining tourism and hospitality industrial knowledge, performing basic-first aid procedure, and speaking English at a basic operational level. This discovery also indicates that lines of communication among public, private, and tourism-hospitality personnel are discrete. It is not fully open and clear. The importance and benefit of mutual recognition is not greatly in personnel awareness. The findings underline the need for training to improve competency of tourism and hospitality personnel and hence good tourism and hospitality services.

**Keyword** Tourism and hospitality personnel, Competency, ASEAN tourism

## INTRODUCTION

Tourism in Thailand has a great potential to grow. The emerging ASEAN community has become one of the reasons of growing as it denotes an imperative sector of the ASEAN economy. According to the World Travel and Tourism Council, Asia and the Pacific region will become a popular destination among tourists from all over the world and will continue to grow with a direct contribution of 6.2% over the period of 2014-2018. Thailand is ranked one of the top five fastest growth destinations with 18.5% growth rate (PATA, 2016). Thus, many cities in Thailand have incorporated tourism as one of their strategic development plans for the area, and that includes Chiang Rai. Chiang Rai is a province which--located in the northern part of Thailand-- is gateway to the Greater Maekong Sub-region Countries (GMS). Not only that its strategic location as Thailand's northern-most city located adjacent to borders with Myanmar and Laos People's Democratic Republic (PDR). The government has announced the Chiang Rai Special Economic Zone to be in its second phase, spanning 21 sub-districts in 3 districts consisting of Mae Sai district with the potential of being a trading city; Chiang Saen with the potential of being a port city; and Chiang Khong with the potential of being a logistics city (Bureau of Public Relations, 2016). This led to training focused on developing the work forces' readiness, both

in terms of quantity and quality, especially competency development coupled with organizational development in Chiang Rai.

ASEAN has developed many plans to promote tourism in the region including the ASEAN Mutual Recognition Agreement (MRA) for tourism professionals. Tourism planning and development are needed for both physical resources and human resources. Thus, personnel tourism and hospitality is focused, as it is believed that tourism and hospitality personnel can stimulate competitive advantage to the industry. Hence, the organizations need highly competent personnel (Lertwannawit, Serirat, & Pholpantin, 2009). ASEAN MRA was established to facilitate tourism professional mobility. That is to say tourism personnel in one country can work in other ASEAN countries if they hold a certificate proving that they have achieved the ASEAN standard. As a result, this can create both opportunity and challenges for local tourism and hospitality personnel in Chiang Rai province unavoidably. To deal with this tourism opportunity and challenge in ASEAN countries, this paper seeks to reveal the level of competencies of tourism and hospitality personnel in Chiang Rai. The examination then can be used as a foundation to plan for human resource training and development in Chiang Rai.

## LITERATURE REVIEWS

Tourism and hospitality have been considered a labour intensive industry. Chiang Rai is one of the renowned tourist destinations in Thailand and received approximately 3.07 million visitors in 2015 with 7.3% increase from 2014. (Department of Tourism, Ministry of Tourism and Sports, 2016). To enhance the Chiang Rai tourism industry's competitiveness, tourism personnel need to be focused and managed effectively. Competency development encourages better and effective workmanship and equips employees with the skills needed for successful completion of their job responsibilities (Abou-Shouk, Abdelhakim, & Hewedi, 2014). In addition, competencies were claimed to have casual effects on service quality, customer satisfaction and performance (Chand, 2010). As the world today is more complex, Solnet, Baum, Robinson, & Lockstone-Binney (2015) predicted that the requirements of human resource competencies will be greater. In other word, quantity and quality (skills profile) of the workforce will affect products and services in the industry. Owners and management are now striving to meet these requirements through focusing on human resource functions, especially development practices within their local labor market. The more availability of a competent labor market, the higher the level of services that a hotel is able to offer to the marketplace (Solnet *et al.*, 2015).

Competencies are essential factors of performance (Weinland, Gregory, & Petrick, 2016) and it can be strengthening over time when individuals become familiar with jobs (Koeningsfeld, Perdue, Youn, & Woods, 2011). Some competencies are innate or take longer to develop; others can be developed through human resource development and on-the-job training (Jotikasthira, 2014). The concept of competencies includes knowledge (K), skills (S), and attitudes (A) that individuals must have to perform effectively at work (Weinland *et al.*, 2016; Jotikasthira, 2014). Several studies have been undertaken to investigate human resource competencies in tourism and hospitality. Most of the study focuses on tourism and hospitality graduates competencies to meet industry expectation through several training methods such as internship and experiential learning (Jack, 2011; Abou-Shouk *et al.*, 2014) to prepare them to serve the labour market need in tourism. An example of a research in Hong Kong, the competencies that tourism and hospitality shall have is a positive service-mind and commitment to the industry with a certain degree of working experience (Chan & Coleman, 2004). In Chan & Coleman's study, employers perceived these were important components to success for every member of staff, rather than having a good educational background. It is noticeable that different countries have their own preference for human resource competencies.

Abou-Shouk *et al.* (2014) commented that standards, laws, and regulation could govern the development of the competencies of manpower so that the destination would be in a single direction. In Asia, tourism is growing very fast in this region, the job market and human resources mobility see new trends and demands evolving as more companies adapt to changing conditions in the domestic and regional economies (Sadi, 1997; Denicolai *et al.* 2010). Although the economic growth of South East Asian countries, in particular the ASEAN region, is faster than other regions of the world, it is encountering lots of challenges. The shortage of skilled manpower, especially in the tourism industry, is an example (Sadi, 1997). As a consequence, ASEAN secretariat (2012) has introduced ASEAN Common Competencies Standards for Tourism Professional or ACCSTP and was developed to facilitate human resource management for the tourism industry in ASEAN. The framework is based on a

competency concept. The competencies employed in the ACCSTP Framework consisted of three related groups of skills which are core competencies, generic competencies, and functional competencies. The framework clarifies further that core competencies are essential to be achieved. These core competencies are agreed to by the industry, particularly by division. Generic competencies are transferable skills or life skills. Functional competencies are specific to roles or jobs within the division, and include the specific skills and know-how knowledge to perform effectively. The commonly agreed six labour divisions include Front Office, Housekeeping, Food production, Food and Beverage service, Travel Agencies and Tour operations. It can be seen that this standard considered the knowledge absorption capability theory when making this standard. Todorova and Durisin, (2007) defined absorptive (adoptive) capacity as a dynamic capability to improve skill of an individual. They further noted that the effective development of a knowledge translation capability requires attention to tailor-made content that fit the specific skills needed in each sector in the tourism industry (Todorova, & Durisin, 2007).

Relevant research on competency standard and human resource development are examples Mohd Salleh (2007) and Hidayat, (2011). In Malaysia, the perception of human resources toward the competency standard was positive. There was a strong correlation of competencies in their development process and organizational performance (Mohd Salleh, 2007). However, the lack of clarity and understanding about competencies makes human resources unable to determine which competencies are perceived important for the workers in the organization. Mohd Salleh, (2007) add that the good standard should guide how the knowledge, skills, and abilities are going to be measured in order to encourage a strong determination on standard adoption. This is in contrast to the following study in five star hotels in Jakarta, Indonesia which reflects that the MRA does not appear to be of interest to them and it is perceived as negative activity (Hidayat, 2011). Hidayat (2011) further explains that the obstacle of MRA includes lack of public knowledge of MRA, limited assessor resources, poor media optimization, financial issues, and resistance from hotel owners. (Hidayat, 2011) In other words, transferring international standards from international organizations such as the ACCSTP Framework comes with challenges, many of which result from differences in the characteristics of elements involved in the information transfer process: differences in the characteristics of the sender and receiver, varying types of content, and differences in external context characteristics (Popescu, 2010). Furthermore, ASEAN – Australia Development Cooperation Program identifies ten significant gaps which impact the MRA on tourism professional implementation among Asian Member States. They are National Tourism Professional Board and Tourism Professional Certification Board; awareness of the MRA's principles and benefits; regulatory framework for MRA implementation; English language communication for tourism; attracting and retaining suitable tourism trainers; training facilities; coordination of government; competency based training in vocational education and training; awareness of uptake and use of ASEAN tourism toolboxes; and tourism industry as a profession and career path of choice. These gaps are ranked in order to their important from highest priority respectively (Hickman & Irwin, 2013).

## METHODOLOGY

This study is exploratory in nature. The data collection instrument used for this study is comprised of a self-administered questionnaire survey delivered to tourism and hospitality personnel in Chiang Rai. A sample size of 400 was selected from popular tourist destinations in Chiang Rai by convenient sampling. The questionnaire survey was employed. It consisted of items regarding respondents' personal information and general interest, and a set of items used to evaluate a person's competency. The competency items were applied from common core and generic competency items from ACCSTP (ASEAN Common Competency Standards for Tourism Professionals) which is an ASEAN Mutual Recognition Arrangement for Tourism Professionals. The questionnaire used a five-point rating scale to capture respondent information. Tourism and hospitality personnel were asked to indicate the extent of their individual perception of each competency. The scale points ranged from 1 strongly disagree to 5 strongly agree. The questionnaire was a pre-test to enhance the accuracy of the survey instrument.

## RESULTS

Overall, 400 questionnaire surveys were received from tourism and hospitality personnel in Chiang Rai, Thailand. Of the responses received, 41.7% of the respondents were male and 58.3% were female. The majority of respondents were of an age group 21-30 years of age with 41.5%, 31-40 years of age with 28.5% and 41-50 years of age with 14.5%. In term of education, most of the respondent graduated from primary and secondary school (42.3%), diploma degree (18.5%), and bachelor degree (34.5%) while only 3.1% received their postgraduate degree. 41.1% of the respondents report their monthly income between 5,000-10,000 Baht and 26.6% earn between 10,000-15,000 Baht. Table 1 summarizes the demographic information gathered from the respondents.

Table 1 Demographic information

Characteristic		Frequency (N=400)	Percentage (%)
<b>Gender</b>	Male	167	41.7
	Female	233	58.3
<b>Age</b>	Below 20	28	7
	21-30	166	41.5
	31-40	114	28.5
	41-50	58	14.5
	51-60	30	7.5
	More than 60	3	0.75
	Not specify	1	0.25
<b>Education</b>	Primary and secondary	172	42.3
	Diploma degree	74	18.5
	Bachelor degree	138	34.5
	Post graduate degree	12	3.1
	Not specify	4	1.6
<b>Income</b>	5,000 Baht and below	34	8.5
	5,001-10,000 Baht	166	41.4
	10,001-15,000 Baht	106	26.6
	15,001-20,000 Baht	43	10.8
	More than 20,000 Baht	51	12.7
<b>Type of business</b>	Hotels/accommodations	121	30.3
	Travel agency/ tour operator	38	9.4
	Transportation/Car rental	21	5.3
	Souvenir shops	84	21
	Restaurants	100	25
	Spa/Massage	25	6.3
	Others	11	2.7
<b>Position in business</b>	Owner and manager	53	13.3
	Owner	76	19
	Manager	21	5.3
	Staffs	250	62.4

The majority of respondents work in hotel and lodging businesses (30.3%), restaurant businesses (25%), and souvenir shops (21%). Other businesses such as travel agency/ tour operator, transportation/car rental, and spa all together accounted for 21% of the response. Besides, some respondents indicated "Others" as they are working in many tourism and hospitality businesses. This result may reflect a pattern of occupation in the local area where many people have no permanent full-time jobs. For instance, one may work in restaurants and also a hotel as casual staff. In terms of position level, 62.4% were employees, 53% were manager and owner, 19% were owners, and 5.3% were managers respectively.

Table 2. Competency of tourism and hospitality personal

Competency of tourism and hospitality personal	Mean	S.D.
1). Work effectively with colleagues.	3.94	0.80
2). Perform effective customer service	3.98	0.81
3). Work in socially diverse environment	3.81	0.79
4). Implement occupational health and safety procedures	3.82	0.79
5). Comply with workforce hygiene procedures	3.83	0.83
6). Maintain tourism and hospitality industry knowledge	3.37	0.97
7). Communicate effectively on the telephone	3.70	0.90
8). Promote tourism and hospitality products and service	3.89	1.69
9). Perform basic clerical procedures	3.58	0.93
10). Use common business tools and technologies	3.43	1.09
11). Access and retrieve computer-based data	3.43	1.15
12). Develop and update local knowledge	3.52	0.97
13). Manage and resolve conflict situations	3.55	1.33
14). Speak English at basic operational levels	3.11	0.98
15). Perform basic First Aid procedures	3.21	0.84
16). Handle customers' comments	3.65	0.87
Total	3.61	0.60

The findings reveal the level of competency range between 3.11-3.98 as moderate to high level. The top competencies include: perform effective customer service, work effectively with colleagues, promote tourism and hospitality products and service, comply with safety procedure, comply with workforce hygiene procedures, implement occupational health and safety procedures, and work in socially diverse environment, respectively. The lowest three levels of competencies are: maintaining tourism and hospitality industry knowledge, performing basic First Aid procedure, and speaking English at a basic operational level. The average competency was 3.61. Overall, the levels of competencies have not yet achieved the highest. The results indicate that there are rooms for human resource training and development for tourism and hospitality industry.

Furthermore, a test of differences among positions of tourism and hospitality personnel's perceived levels of competencies are presented in Table 3. One way ANOVA test shows that there were significant differences on the level of competencies among position in business in seven competencies. They were: perform effective customer service, perform basic clerical procedure, use common business tools and technologies, access and retrieve computer-based data, develop and update local knowledge, speak English at basic operational levels, and handle customers' comments. Another nine competencies show no significant differences.

Table 3. Competency of tourism and hospitality personal – test of differences by positions

Competency	Position	Mean	F	Sig.
1) Work effectively with colleagues	Owner and manager	4.21	2.51	0.059
	Owner	3.84		
	Manager	3.86		
	Staffs	3.93		
	Total	3.94		
2). Perform effective customer service	Owner and manager	4.32	4.77	0.003*
	Owner	4.00		
	Manager	4.19		
	Staffs	3.89		
	Total	3.98		
3). Work in socially diverse environment	Owner and manager	4.06	2.30	0.077
	Owner	3.71		
	Manager	3.86		
	Staffs	3.78		
	Total	3.81		
4). Implement occupational health and safety procedures	Owner and manager	3.94	0.94	0.424



15). Perform basic First Aid procedures	Owner and manager	3.30	1.12	0.341
	Owner	3.07		
	Manager	3.33		
	Staffs	3.22		
Total		3.21		
16). Handle customers' comments	Owner and manager	3.98	5.23	0.001*
	Owner	3.72		
	Manager	3.95		
	Staffs	3.54		
Total		3.65		

It is notable that open-ended questions display that a few residents recognize the tourism MRA among ASEAN countries. More than half the respondents agreed that ASEAN community could generate positive impacts. They realized the value of community and ASEAN Economic Community, but are not aware of the opportunities and challenges from the MRA on tourism professionals. They also did not worry about the ASEAN community and this agreement. The most mentioned was the need for more support from the government, especially in financial support, and training. The demand for government support was inevitable. In addition, the respondents also indicated the knowledge that they want to learn to further their knowledge in many areas related to their work. The results show that the most interesting topics the respondents would like to learn are marketing for tourism, service quality, and food and beverage service. Ecotourism, cultural tourism, local tour guide and tourism business management were also of interest.

### CONCLUSION AND FUTURE WORK

The ASEAN community creates opportunities for tourism and hospitality business in the region. However, the opportunities come with challenges; this people industry is facing a shortage of skilled personnel. This study highlights that the industry encounters a lack of skilled personnel, management skills, and inadequate training. The findings of the study are consistent with (Lertwannawit *et al.*, 2009) where they point out that employees should develop more skills in computer and language, tourism and hospitality knowledge.

The findings of this research contribute to foundation of tourism and hospitality personnel competency development in Chiang Rai, Thailand. Overall, the level of competency was moderate to high indicating the need for training in many particular areas. Specifically to the lowest three levels of competencies that are maintaining tourism and hospitality industry knowledge, performing basic first aid procedure, and speaking English at a basic operational level. The top three high levels of tourism and hospitality competencies are: providing service to customers effectively, working effectively with colleagues, and promoting tourism and hospitality products and services. Although, these competencies mark the highest top three, there is a need for ongoing competency development for better tourism services. Results are parallel with gap analysis report on MRA implementation. It suggests four priority gaps for Thailand which are: regulating framework for MRA implementation and promoting genuine commitment for the MRA process, enhancing English language communication for tourism; attracting and retaining suitable tourism trainers; and providing more training facilities, respectively (Hickman & Irwin, 2013). Furthermore, competencies training can be distinguished between superior and other players. The results demonstrate a significant difference in the level of competency among owners, managers, and operational staff. This is due to the level of absorptive learning and job description of each position. As a result, the organization/ government may provide some competencies training, such as English at operational 'levels' and 'handling customers' comments', that are suitable for different position levels for their competency development. Whereas, some training to improve competency items such as 'work in socially diverse environment', and 'perform basic first aid procedures' can be arranged for all positions in one training.

In addition, the discovery indicates that lines of communication among public, private, and tourism and hospitality personnel are discrete. It is not fully open and clear. The importance and benefit of ASEAN mutual recognition on tourism professionals is not greatly in awareness. ACCSTP framework is ideal and beneficial but it requires gradual development. This program may be too

complicated and complex for all 32 jobs in six divisions at the initial stage. Thus, it is suggested that the local authorities may want to create a training and development program where common competencies are shared. Information and research outcomes may enable a better understanding in related organizations of tourism and hospitality personnel competence development. The government agencies should set out a priority order and time-lines to familiarize themselves with the ACCSTP. Future work should be developed around the competency development for each position level. It should assist in raising the benefit, awareness of ASEAN MRA on tourism professional to promote genuine commitment, tourism and hospitality competencies, and perhaps more achievable version of competencies training and development. It is hoped that the findings from this study can be used to make recommendations on how to advance tourism and personnel competencies in the Chiang Rai region that will lead to better service, and more tourism development.

## REFERENCE

Abou-Shouk, M. A., Abdelhakim, A. S., & Hewedi, M. M. (2014). Factors Affecting the Development of Target Competencies Among Final-Year Tourism and Hospitality Students in Egypt. *Journal of Hospitality & Tourism Education*, Vol.26, No.4, Pp.178-187.

ASEAN (2012). Guide to ASEAN mutual recognition arrangement on tourism professionals. <http://www.aseantourism.travel/documents/asean-tourism-documents>

Bureau of Public Relations (2016) *Ministry of Labor Joins with Chiang Rai on "Civil State" in AEC Support* <http://www.mol.go.th/en/content/ministry-labour-joins-chiang-rai-civil-state-aec-support>.

Chand, M. (2010). The impact of HRM practices on service quality, customer satisfaction and performance in the Indian hotel industry. *The International Journal of Human Resource Management*, Vol. 21, No.4, Pp. 551-566.

Chan, B., & Coleman, M. (2004). Skills and competencies needed for the Hong Kong hotel industry: The perspective of the hotel human resources manager. *Journal of Human Resources in Hospitality & Tourism*, Vol.3, No.1, Pp. 3-18.

Denicolai, S., Cioccarelli, G., & Zucchella, A. (2010). Resource-based local development and networked core-competencies for tourism excellence. *Tourism management*, Vol. 31, No.2, Pp. 260-266.

Department of tourism: Ministry of tourism and sports (2016). Visitors statistic in Thailand, Retrieved from <http://www.tourism.go.th/home/details/11/221/24246>.

Hidayat (2011). Analysis of the adoption of ASEAN recognition agreement (MRA) on tourism professional at Jakarta five star hotel, towards human resources global competitiveness. <http://dx.doi.org/10.2139/ssrn.1971463>.

Hickman, & Irwin, (2013). Program gap analysis on implementation of MRA on tourism profession by ASEAN – Australia Development Cooperation (AADCP) Phase II. <http://aadcp2.org/category/technical-reports/page/3/>

Jack, K. (2011). The role of experiential learning in nurturing management competencies in hospitality and tourism management students: Perceptions from students, faculty and industry professionals.,

Jotikasthira, N. (2014). Increasing tradeshow and exhibition industry competitiveness through competency-based hiring and promotion: A sales executive perspective, *International journal of business tourism and applied sciences*, Vol.2, No.2, Pp. 45-60.

Koeningsfeld, J. P., Perdue, J., Youn, H., Woods, R. H. (2011). The changing face of competencies for club managers, *International Journal of Contemporary Hospitality Management*, Vol. 23 Np. 7, Pp. 902 – 922.

- Lertwannawit, A., Serirat, S., Pholpantin, S. (2009). Career competencies and career success of Thai employees in tourism and hospitality sector, *International business and economics research journal*, Vol.8, No.11, Pp.65-72.
- Mohd Salleh, K. (2007). Human resource development practitioners' perspectives on competencies: An application of American Society for Training and Development (ASTD) Workplace Learning and Performance (WLP) competency model in Malaysia.
- PATA (2012) Asia Pacific Visitor Forecasts 2014-2018 Report. <http://www.mekongtourism.org/key-findings-preliminary-asia-pacific-visitor-forecasts-2014-2018-report/>
- Popescu, D. (2010). *Determinants of effective information transfer in international regulatory standards adoption*. The George Washington University.
- Sadi, M. A. (1997). Dealing with the Manpower Crisis in the ASEAN Tourism Industry. *Journal of Hospitality & Tourism Education*, Vol.9, No. 2, Pp.41-48.
- Solnet, D., Baum, T., Robinson, R. N., &Lockstone-Binney, L. (2015). What about the workers? Roles and skills for employees in hotels of the future.*Journal of Vacation Marketing*, 1356766715617403.
- Todorova, G., & Durisin, B. (2007). Absorptive capacity: Valuing a reconceptualization. *Academy of management review*, Vol., 32, No. 3, Pp.774-786.
- Weinland, J. T., Gregory, A. M., & Petrick, J. A. (2016). Cultivating the aptitudes of vacation ownership management: A competency domain cluster analysis. *International journal of hospitality management*, Vol.55, 88-95
- World Travel and Tourism Council (2015). Travel and tourism economic impact Asia Pacific 2015. <http://www.hospitalitynet.org/news/4069673.html>

# TO CONSERVE THE SIGNIFICANCE VALUE OF THE BIG PAGODA AT WAT RAJBURANA, PHITSANULOK AS HISTORIC HERITAGE

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## ABSTRACT

This study is to introduce the big pagoda of Wat Rajburana, which has significantly declined over time due to the lack of maintenance and ineffective in management, such activities as clearing plant roots, dirt stains in bricks, and weeds in fissures, bases and floors. Also, it shows an ineffective management and lacks of an appropriate interpretation, both on-site and off-site. The old temple of Phitsanulok, Wat Rajburana dates to the early Sukhothai era. Phitsanulok had once been the capital of Siam for 25 years. Wat Rajburana is situated on the bank of the Nan River and in the center of Phitsanulok, a northern province of Thailand. The pagoda of Wat Rajburana was originally built as a Buddhism sanctuary tower. Its big pagoda symbolizes a spiritual center for Buddhist community. The architectural structure of the pagoda conveys its history, shows aesthetics, and tells the story of the local people who built and used it in the past. The purpose of this study is to investigate a preservation guideline that will leave its unique characteristics and heritage significance intact. In additions, this study is intended to raise an awareness of the significance of the pagoda, which is regarded as an invaluable treasure of the community and its neighborhoods. Such priceless a historic heritage should be preserved for the next generation as a pride and an important spiritual epicenter of the community.

**Keywords** – 1, Historic heritage 2, Big Pagoda 3, Significance value

## INTRODUCTION

Wat Rajburana constructed in the early Sukhothai era is a very old temple of Phitsanulok, a province that had once been the capital of Siam for 25 years. The temple is situated on the bank of the Nan River and in the center of Phitsanulok in a northern part of Thailand. It is a Buddhist temple of Mahanikaya sect<sup>1</sup>.

The temple is about 382 kilometers from Bangkok and 5 kilometers from the southern part of Phitsanulok. The total area of temple is about 23,900 square meters and can be divided into two sections. The first section is on the west of the temple and called "*Buddhawat*". The *Buddhawat*, including the pagoda itself, the church, a large pavilion, a wooden hall storing sacred scrolls, and an ancient boat of the King Rama VI, is where many religious services were held. Located at the south and some parts of the west of the temple is the

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<sup>1</sup> Generally, there are two sects of Buddhism that are important role in Thailand. The first is Mahanikaya sect and another one is Thammayut sect. Thammayut Sect is stricter to the precepts of Buddhism as laid down by the Buddha. Any practice that does not follow the original rules must be avoided. Monks must maintain the rituals and learn the meaning of their Pali chants (Nilladech, 1989: p26).

second section called “*Sangkawat*”. Sangkawat is a section of monks’ living quarters, a little vihara, and monk’s cells. (Nilladech, 1989: p25).

Wat Rajburana is an ancient monastery and is believed to be built in the Sukhothai period, prior to the Phya Lithai’s period. Its historical background can be traced by the following evidence:

1. On the temple’s wooden name sign reveals the name “Wat Rajburana”, which can be traced back to 1000 years before the restoration commissioned by the King Lithai. Because of the restoration under royal patronage, the temple is also known as Wat Rajburana.

2. The letter mentioning the area of Phitsanulok written by Somdej Chaopha Kromphraya Narissaranuwattiwong (1963), suggests the existence of the monastery, its Obosot (Hall), fine traditional crafts and telling-stories wall paintings.

3. The Royal record includes the visit of the King Chulalongkorn (King Rama VI) on 16<sup>th</sup> October 1800 who mentions that “*There are no any houses between Wat Nang Phraya and Wat Ratburana. This monastery consists of the Ubosot hall and a large Vihara all of which is close to the big pagoda sitting near the river. The octagon pagoda was heavily derelict. And, there are twelve wooden pagodas on the top of the Pagoda built in Phraprang style*”.

From the evidence shown above, it can be presumed that the age of the temple might have started from the Sukhothai period and there had been a restoration occurred in the reign of the King Pramahathumaracha (King Lithai). The wall painting style in the temple also shows that the restoration was done in the reign of King Rama IV of Chakri Dynasty. Later, the pagoda became such an important sanctuary of the country and once hosted a great royal tradition for the king in which he walked around the pagoda, stopped and paid homage to it by offering candles and joss sticks (Nilladech 1997: p.64).

The pagoda of Wat Rajburana was originally built as a Buddhism sanctuary tower. It was carefully surveyed, restored to stabilize its structural integrity in 1985, and registered as a National Heritage. The shape of pagoda is similar to a bell commonly found in the Sukhothai period. The influence of Sukhothai art is also evident on the pagoda. Being kept in the pagoda and sitting on the shrine are the relics of the Buddha. The Fine Arts Department came to renovate the large pagoda and kept the Buddha’s relics in the octagon caskets made from the silver and bronze found in the pagoda. The department had a belief that the relic was the biggest in the country. It was the Sukhothai style and probably renovated in the Ayutthaya period. The date of the construction is unknown (Nilladech 1997: p.65). This round pagoda made of brick is located on the west side near the Nan River. On the top of it are four small pagodas. The main pagoda sits in the middle (Tongsukdee 1979, p.271). The base of pagoda extends engulfing an angle. The temple is located in the place where most of local people could have come to perform religious activities in which a monk was selected to be the head.

Up to now, the main causes leading to the decline of the the Big Pagoda at Wat Rajburana are the weather, temperature differences, natural disasters, the wear of the materials and the old building technics not mention to direct or indirect invading of animals, microorganism, and human causes. Consequently, the author hopes that this study contributes to an awareness of those problems, thus developing a guideline for an effective management at the big pagoda at Wat Rajaburana.

## LITERATURE AND THEORY

The following review comes from a literature source under the Fine Arts Department Regulations on Preservation 2528 B.E. (1985A.D), international charters, the documents that identify the significance of Big Pagoda at Wat Rajburana and the process of the preservation.

In 1985, the Fine Arts Department established the Regulations on Preservation in Thailand based on the Venice Charter. Since then, the organization has been in charge of restoring many monuments and now is an institutional member of ICOMOS. These regulations also define the word "preservation". Preservation means to take care of and to maintenance monuments, and retain their values. Such activities are prevention, protection, preservation, reconstruction and restoration. Hence, "Preservation" is an inclusive term that covers all methods of the preservation and maintenance of a monument. It is the Fine Arts Department which sets up the standard and can be divided into seven steps basing on the degree of involvement: preservation from deterioration, preservation, consolidation, restoration, replication, reconstruction (including anastylosis method) and rehabilitation.

To establish the values of the place and heritage significance, the author studies the procedures done by some commissioned international charters, such as the Burra Charter (Australia ICOMOS), and China Principles (China ICOMOS), and identifies the issues involved. Additionally, the Hoi An Protocols (2005) that is specifically designed for Asia and could be applied to the Big Pagoda is an emphasis on proving the authenticity and integrity of the information sources. As Ken Taylor (2002-2003) noted in his Cultural Heritage Management: The Role of Charter and Principles is that charters set out to assist us define this critical notion of significance, of which we must try to embrace both the tangible and intangible, even though the significance related to the meaning of places can be slippery nations. Moreover, the Burra Charter (The Australia ICOMOS Charter for Place of Cultural Significance 1999) also provides guidance for the preservation and management of places of cultural significance. This charter contains guidelines in the context of cultural significance preservation policy, procedures for undertaking and code of ethics coexistent in conserving significant places. It proposes that the aim of preservation is to retain the cultural significance of a place. The appropriate way to preserve a place is caring for the existing fabric, use, associations and meaning. Traditional techniques and materials should be preserved to ensure continuity of significant fabric. If it is necessary to reinforce the structure to retain its fabric, new techniques and materials can be acceptable. It is important to understand cultural significance of place and other issues affecting its future such as stakeholders' need, resources, external constrains and its physical condition. Preservation may include these circumstances such as reintroduction of a use, retention of association and meanings, maintenance, preservation, restoration, reconstruction, adaptation and interpretation. The Burra Charter recommends a procedure for assessing the cultural values of a place. It classifies four types of values: aesthetic, historic, scientific, and social. Aesthetic value is sensory perception to the place. Historic value associated to history that place has influenced or has been influenced some events or activities in the past. Scientific value related to the data in doing research. That place may have some parts being the essential information for acknowledging something that is very rare to see or something is a masterpiece work. Social value associated with some groups of belief or some ethnic groups.

Furthermore, Taylor (2004) supported that additional evaluation and statement includes interpretative value and association value. Interpretation value is the ability of place to inform and enlighten on social history, promote a sense of place feeling, created to link with the past. Associative value is the ability to interpret this value to build a sense of a link with the past, maintain the resulting virtues and encourage the people to live and be proud of such heritages. Thus, this research, taking both the tangible

and intangible of a place into consideration, is a guideline outlined from the Burra Charter to propose recommendations of conserving the historic site.

### **RELATED WORKS OR DISCUSSION**

A qualitative research was undertaken to explore history and assess the values of the big pagoda of Wat Rajburana. As a result, the local community perceived and understood its values, and the historical acknowledge as well as the precious perception is crucial to explaining their behaviors. The result of study corresponded to a research done by Suwannarit in which he studied the cultural and heritage values of Suansunanha. The first objective was to investigate tangible and intangible cultural and heritage values of Suansunandha and leading elements affecting the cultural heritage values of Suansunandha. The result of the study showed that those elements would help stimulate stakeholders' interest; which in turn, it would contribute to cultural heritage preservation and continuity. Furthermore, the stakeholders can enhance the understanding of the cultural values, thus increasing the awareness of cultural heritage values in Suansunandha.

Besides the requirement of interpretation signs of the big pagoda at Wat Rajburana, the display of the place should help the public understand the relationship of the heritage place in the site. Siriporn's thesis in 2006 was to study the nature and development of the management of archeological resources in Thailand with a special reference to preservation and restoration of the ancient town of Chiang Saen in northern Thailand and to propose deadlines for the preparation planned for future preservation, interpretation and management. The thesis showed that an interpretation approach will be most effective if it is used with an appropriate public audience. Hall & McArthur (1998) also suggested that an interpretation is a co-ordination and inspired through learning. It provides a way of discovering different aspect of the display, leaving people moved, challenging their assumptions and stimulating their interests to learning. Thus, the target audiences should be able to follow the interpretation signs and easily get all the messages the place intends to communicate to the public with. The interpretation signs can give the visitors more understanding the meaning associated with the heritage place. In additions, knowing the history and meaning of the heritage place can enrich the experience of visitors or those who come use it. In turn, the impressed visitors would help spread the message of the values of the heritage place. The interpretation signs also encourage the visitors to follow the regulations, an attempt to preserve the heritage place to the next generations.

### **METHODOLOGY**

The research methodology steps done in this study include population/sample designs, research instruments, and data collection and analysis. The information obtained was used to study the previous preservation done with the big pagoda at Wat Rajburana. The methodology this study used was the qualitative method generating the framework of the study and involved a descriptive analysis of data obtained from semi-structured interviews with a group of 10 people who came from the area.

#### **Population / Sample**

Booth, Colomb, & Williams (2003) state that the primary guide to the target or site population is generally obtained from research questions. The research questions in this study are exclusively made for those who played some parts in the Wat Rajburana Area, Phitsanulok province, with the aim of studying their preservation methods. Consequently, the population of this study consisted of 10 people: three monks; one community leader; one municipal head and five locals.

## Research Instrument

This study used in-depth interviewing as the most appropriate instrument to gather information and collect data from the representative samples, which were designed for the primary purpose of describing and/or predicting certain circumstances to understand the significance of factors affecting the preservation attempts. Salah (1975) summarized that the interviewee of the interview method is valuable to the point where they are commonly taken to be the gold standard of qualitative research. Thus, the interview questions were designed in an open-ended format to encourage interviewees to freely offer comments and present their perspectives about suitable management processes likely to be beneficial to the preservation of Big Pagoda.

The data collection process started with making appointments with the groups of 10 samples and setting appropriate dates and time for the interviews. The data collected lasted from January to October 2015. Before the interview session began, the permission to record their voices (and accompanying "field" notes of the conversation) were granted. The interview took approximately 15-30 minutes. The answers the interviewee gave during the interview session were created in a word processing document file and subsequently separated into individual files by the researcher.

## Analysis of Data

According to Salah (1975), there are two processes of qualitative data analysis to extract the data. The first process was the fact-finding collection. The second was the procedure design for the preservation of Big Pagoda. Consequently, the outcome of the data analysis showed a great potential guideline for the preservation.

Before the fact-finding collection began, the data were managed and systematically organized for later transcription and coding. The systematic data were analyzed according to Berg (2001) in the stage of qualitative analysis. The first part of finding-fact procedure was managing and organizing the recorded tape, and the second part the transcription procedure. In this stage, the data were transcribed as a verbatim report. Next, the researcher analyzed the obtained data in order to find any possible alternatives for the preservation of Big Pagoda. This step also involved a data analysis achieving through the disciplinary and principle research and in-field strategy with the help of applied theories, techniques, ideas, and concepts, and related studies. The final output is the conclusion and suggestion for this study.

## Results

The result of the study has shown that, apart from the aesthetic aspect, the architecture of the pagoda plays an important role of conveying messages from the past about the history and the society of the local people who built and used them. According to a diagrammatic model of the Burra Charter Process (Australia ICOMOS 2000, pp. 10-13), the value of this heritage place are listed as followings.

### 1. Historic Value

The architecture of the pagoda is a crucial evidence of ancient arts dating back to the Sukhothai period. The shape of the pagoda is similar to a bell from the Sukhothai period, and the influence of Sukhothai art is unmistakably evident on the pagoda. The style of pagoda is also matched the description recorded in written documents and inscriptions about the Sukhothai era, the appearance of King Pramahathumaracha (King Lithai), the sixth king of Phraruang's dynasty of Sukhothai, his commission of restoring and developing the pagoda and its surroundings to be an impressive Buddhism temple, and his ordination occurring here. The architecture also presents a transgression of the artistic works from each period to the

next. The artistic influences of Sukhothai, and the early Ayutthaya periods showed how unique the art in each period was and how they were changed over time and blended into one while their value have still existed to these days. The distinctive bell shape of the pagoda was conceived in the Sukhothai capital in the late Sukhothai period, making it a unique and truly Thai art, and a historic building worth of the preservation.

## **2. Aesthetic value**

The main technique used to build the bell shape of pagoda and reduce the size of one angle at the base was a molding, a flexible, creative, and skillful method. The craftsmen carefully designed and created the patterns of the pagoda. Any unsatisfied patterns were easily corrected. The finished work contained an aesthetic from old age eras and presented an elite art from the Sukhothai era, an invaluable professional-aspect value.

## **3. Social value**

The pagoda was constructed based mainly on the belief of the Buddhism. It is a significant evidence to confirm that there was a flourishing era of the Mahayana Buddhism practiced by the locals in this region who also maintained and restored the pagoda before it was left in ruins in the Ayutthaya era. Today, the pagoda symbolizes the spiritual belief in Buddhism of the community as their ancestors did in the past. The pagoda is highly revered and regarded as an important cultural heritage of the community. The existence of the pagoda and its settings also encourages a common sentiment and pride among the Buddhists of the community.

The previous problems can clearly be seen in the preservation practices at the big pagoda. The problems diminished the authenticity of pagoda and its values. The followings are the current issues threatening to the values of the big pagoda. Firstly, it lacked proper maintenance: for example, in the brick areas, there is an accumulation of dirt moisture, rainwater, sunlight and garbage, and led to damaging chemical effects. Secondly, there were weeds and mosses in fissures, at the base, on ground floor, and around the pagoda areas. Furthermore, the investigation result showed that, between the joints of the pagoda and its base, there were cracks and fissures caused by roots of young plants, and at the plastered area, there were cracks, fissures, and cavities damaging the internal structure. Lastly, it showed the lack of a suitable interpretation both on-site and off-site. The interpretation signs were both in Thai and English, and included the picture of the big pagoda at Wat Rajburana.

According to the Fine Arts Department and the Burra Charter, policies applied to the big pagoda of Wat Rajburana are set as follows.

1. The big pagoda must be used for historic purpose only without any changes of its characteristics, whereabouts, and the environment. All physical works and changes intended to be done to the big pagoda and its settings must be granted by the Fine Arts Department before any further action is taken. The Fine Arts Department is government agency that legally monopolizes the administration of archaeological resources in the country. The Fine Arts Department has been taking full responsibility for site preservation and maintenance since 1985. Thus, the Fine Arts Department is the principal agency responsibility for site security and maintenance both in routine and preservation-oriented perspectives.

2. The standard of preservation is divided into seven steps according to the degree of involvement: preservation deteriorations, preservation, consolidation, restoration, replication, reconstruction (including anastylosis method) and rehabilitation. Thus, the committees must take the

standard into account and use seven steps respectively in order to find the most appropriate method. In addition, information recording all the preservation processes should be made. However, the local people are likely to assist in protecting the site as long as they feel that it has value. The community would be willing to participate in the Fine Arts Department site development and protection activities. Hence, the cooperation in activities concerning the protection and development of the site between the Fine Arts Department and local community was made easily. It may be that the Fine Arts Department, as the principal legally responsible agency, will have to take initiative in seeking cooperation from the public and other local government agencies in the area, such as Mueang Phitsanulok Municipal office, and Nai Mueng District office. These people and agencies are a key to success in both short and long term protection and maintenance.

3. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials must be avoided. Cleaning the surface of the structures, if needed, must be undertaken with a gentle care.

4. Any changes affecting the structural stability of the big pagoda and its environment must regularly be monitored, especially when a new construction around the big pagoda area is to be taken.

5. Any study conducted to gain important information and have insight into the originality of the big pagoda and its characteristics beneficial to new additions, exterior alterations, or new construction works must not damage any of the historic materials that characterize the big pagoda. Any new additions must make differences from the old visible and be compatible with the original mass, size, scale, and architectural features to protect the integrity of the historic big pagoda and its environment.

6. Interpretation technique should enhance the understanding of the overall significance of the big pagoda, and follow the regulation correctly, for instance, the Fine Arts Department or the managers of Wat Rajburana who have direct authority should set up signs of prohibition: "No Enter", "Please do not touch", or any written signs in front of big pagoda to draw the visitors' attention. However, there should be other interpretation signs in order to assist the visitors more understanding about the site because the interpretation help to create an awareness of the preservation to the public, especially local community, should be through the understanding of the values of the big pagoda and its surroundings, making it a proud national heritage and preserving them for the next generations.

7. Empower the local communities who make important decisions, give them an exclusive right to protect the historic heritage, and encourage them to assist one another by exchanging ideas and information.

### **CONCLUSION AND FUTURE WORK**

In conclusion, the Big Pagoda of Wat Rajburana has the historic and heritage values, but the lack of an effective management and inappropriate interpretation has resulted in a decline of the big pagoda. Other causes were the weather, temperature differences, natural disasters, the wear of the materials, the old building techniques, direct or indirect invading of animals, microorganism, and human causes. First of all, a researcher should be selected to assess and analyze its values, and the model of the Burra Charter is the key to achieving the objective of study. Next, the study should include collecting information from key persons, and its result should be used to set up policies that must conform to those of the Fine Arts Department, which is the head of its preservation and maintenance since 1985, and the principles of the Burra Charter. The main role of the Fine Arts Department is to be responsible for setting up routine site security and maintenance and encouraging a preservation-oriented perspective. The preservation should follow the standard of preservation, and the community will likely to participate in the Fine Arts Department site development and protection activities. Lastly, the future maintenance should include cleaning up the surface which is damaging the historic materials. Any changes that would possibly compromise the structural stability must be avoided. New additions, exterior alterations, or any new construction works must not

damage any historic material. Furthermore, interpretation technique should enhance the understanding of the overall significance of the big pagoda, and the local community should gain the empowerment to make decision for protecting the historic heritage.

#### Suggestion for further research

The author proposes that a further research be done in term of finding the effective techniques of preservation and a support form the community because such a monumental site maintenance and management needs a wide, full cooperation from both people and organizations (both private and public).

### REFERENCES

- Australia ICOMOS (2000), *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* 1999, Australia ICOMOS Inc., Burwood.
- Berg, Bruce L., (2001), "Qualitative Research Methods for the Social Sciences" 4<sup>th</sup> Edition, A Pearson Education Company, United States of America.
- Booth, W., Colomb, G., & Williams J. (2003), "The Craft of Research", 2<sup>nd</sup> Edition, London, The University of Chicago Press.
- Hall, M and McArthur, S. (1998), *Integrated Heritage Management: Principles and Practices*, The Stationary Office, London.
- McArthur, S. & Hall, M. 1996, *Heritage Management in Australia and New Zealand*, 2<sup>nd</sup> ed., Oxford University Press, Melbourne.
- Na-Songkhla A. (1993), "Wat Jet Yod (Chaing Mai)", Fine Arts Department, Bangkok.
- Nilladech, S. (1989), "Two Tributary of a River Yesterday", Silpakorn University, Bangkok.
- Nilladech, S. (1997), "History of Thai Architecture", *Silpakorn University*, Bangkok. Pp.53-57.
- Narissaranuwattiwong, Somdej Chaopha Kromphraya (1963), "San Somdej Laiprahath Somdej Chaopha Kromphraya Narissaranuwattiwong, and Somdejkom Praya Dumrungrachanuphap", Pranakhon, Silpakorn, Bangkok. Pp.30-35.
- Salah, W. (1975), "Tourism Management", London, Tourism International Press.
- Sawang Lertrit (1997), "The management of archaeological resource in Thailand: A case study of the historic town of Chiang Sean, Washington State University, United States.
- Siriporn Luekveerawattana (2006), "Management Plan of Historical Site for Case Study of Amphawa Community", *Silpakorn University*, Bangkok.
- Suwannarit Wongcha-Um "A Strategic Approach to Management the Cultural Heritage Values of Suansunandha" *Journal of Liberal Arts, Ubon Ratchathani University* Vol.7, No.2 July-December 20, Pp. 191-209.

- Taylor, K. "Cultural Heritage Management: A Possible Role for Charters and Principles in Asia"  
International Journal of Heritage Studies Vol.10, No. 5, December 2004, Pp. 417-433.
- Taylor, K., Journal of the Architecture Silpakorn University Vol. 19(2002-2003)
- Tongsukdee, M. 1979, *History of Phitsanulok Province*, Rajaphat Pibunsongkram, Phitsanulok.
- UNESCO Bangkok (2005), Towards the Preparation of the Hoi An Protocols of Best Preservation Practice in Asia: [www.icomos.org/australia/downloads.htm](http://www.icomos.org/australia/downloads.htm)
- Vasu Posshyanandana (2005), "Analyzing the Fine Arts Department Regulations on Preservation 1985 A.D.",  
Proceedings 2 Decades of ICOMOS Thailand: Cultural Heritage Preservation towards Thailand  
Charter on Preservation, 25 - 26 November 2005, Pp. 54 - 57
- Vines, E. (2005), "*Streetwise Asia: a practical guide for the preservation and revitalization of heritage cities and towns in Asia Bangkok*". UNESCO Bangkok

# MUSICAL SOCIAL STORIES IN THE EDUCATION OF INDIVIDUALS WITH AUTISM SPECTRUM DISORDER

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## ABSTRACT

Social stories were developed by Gray (1994) in order to teach social skills to individuals diagnosed with autism spectrum disorder and to eliminate the problematic behaviors. The aim of social stories is to define and understand the social situations and to teach appropriate social reactions to individuals. Social stories are written as short texts in accordance with the developmental level of the child by parents and teachers, and they seek answers to the questions of “where”, “what”, “who”, “why” and “when”. In many studies, it is seen that music is used with pedagogic intents for individuals diagnosed with autism spectrum disorder. These studies demonstrate the positive effects of music. Moreover, the studies prove the thought that using music and scientifically proved teaching methods together in the education of these individuals would constitute a good whole. In this direction, the aim of this study is to introduce the social stories and musical social stories that are used in the education of individuals with autism spectrum disorder and to give information about the creation of these stories. **Keywords:** Autism spectrum disorder, musical social story, social story

## I. INTRODUCTION

### 1.1. Autism Spectrum Disorder and Its Characteristics

Kanner (1943) specifies this disorder as the early childhood autism and defines it as a group of children who are relatively normal in terms of physical development but have social loneliness and communication disorder and display repetitive and obsessive behaviors (as cited in Kircaali-İftar, 2014: 19).

The term autism has replaced with autism spectrum disorder (ASD) over time. This is a complex and severe inability, and autism is a category under this umbrella term. The prevalence of ASD has been increasing in USA. According to data obtained in the early of 2014, ASD affects one out of 68 individuals. This disorder is observed two times more in males, and individuals with ASD have behavioral problems. 40% of these individuals have mental retardation at different levels; more than half of them have sleep problems; 25%-40% have epilepsy; 25% have various gastric-intestinal problems; and %40 have verbal communication issues (Tekin-İftar, 2014: 25-26).

### 1.2. The Educational Side of Music in Individuals with Autism Spectrum Disorder

Known to be effective in the development of reading, counting and imitation skills, music can decrease aggression, hyperactivity, stereotypic and disharmonious behaviors as well (Bunt, 1994: 41). The general goals of music education and music teaching, which facilitate the development and growth of the students, are mutually complementary. Researches on brain conducted in California University found that early music education could facilitate the cognitive skills of children under age three (Gordon, 2004: 170).

Music is a way to reach the goals; it is not the goal itself. Therefore, music is important for everyone, especially the exceptional ones. The characteristics and effects of the music that can be used with exceptional children are as follows:

(a) Individuals diagnosed with autism generally show interest and reaction to the music; this makes the music an excellent tool while working with them.

- (b) Music is a basic human reaction and involves all degrees of competency/incompetency.
- (c) Music is motivation and fun.
- (d) Music can target more than one developmental issues at the same time.
- (e) Music provides success-oriented opportunities for success and expertise.
- (f) Music helps gather and maintain attention; it is highly motivating and can be used as a natural reinforcement for desired behaviors.
- (g) Music can trigger the cognitive processes since it functions in both hemispheres, and can be used in improvement of some speaking/language skills (Travis, 2006: 10).

Brunk (1999) defines nine therapeutic sides of music as: a) music gathers and increases attention b) it structures the time c) it is success-oriented d) it provides a safe and peaceful environment for social skills to be practiced e) it makes the repetition and reminding exercises more enjoying f) it helps the child become successful g) it can be used to set a routine and make a job routine h) it can comply with each individual i) it can be practiced in many environments (as cited in Gadberry 2005: 4).

While some individuals with autism are unable to talk with communicative purposes, they can sing songs. Some of them know hundreds of songs with their rhythm by heart and sing them. Moreover, some can play instruments like a professional musician (Özbey, 2005: 212). Therefore, songs with music can help them learn skills and concepts (Chou, 2005: 35).

### **1.3. Social Stories**

Written with the aim of teaching social skills, reducing or removing the inappropriate behaviors for individuals with autism, social stories can become more functional both in general and in special educational environments (Crozier and Sileo, 2015: 26). Moreover, social stories can be written by anyone who has an interaction with children or live with them. These stories can be presented through music or video modelling with the help of computer-supported technologies. They can be used not only in educational settings but at home as well. The effectiveness of them with individuals with autism was scientifically proven (Norris and Dattilo, 1999: 185).

Individuals with ASD have difficulty in defining the behaviors, intentions and beliefs of others. This difficulty leads them have troubles in social communications with their environment. The traditional teaching is not successful with these individuals while social stories can be effective. At this point, social stories, which are used as written texts in social skill teaching, are stories which can help the individual understand the specific aspects of a social situation and facilitate teaching of social viewpoints (O'Hara, 2010: 8).

The benefits and effects of social stories are as follows:

1. Social stories make use of visual learning strengths of individuals with ASD (Crozier and Tincani, 2005: 150).
2. Social stories presents a concrete material that can be repeated by these individuals until they learn it (Crozier and Tincani, 2005: 150).
3. Teachers and parents view social stories as effective and user-friendly (Crozier and Tincani, 2005: 150).
4. Social stories emphasizes cognitive development, social skills, emotional capacity and self-regulation (O'Hara, 2010: 2).

### **1.4. Principles of Writing Social Stories**

Social stories written for individuals with ASD involves two-five sentences (Tekin-İftar, 2014: 399). A social story should be written with positive statements by emphasizing the behavior and positive reaction and it should define the situation from the individual's viewpoint. Social stories should include four different types of sentences. These types are: (a) descriptive, (b) directive, (c) perspective, and (d) control

(Tekin-İftar, 2014: 401). After the sentences are completed, a suitable title should be added. This title should clearly reveal the story's message and content.

(a). Descriptive sentence: These types of sentences usually begin with information about the situation including descriptions of people, and they define a setting, the steps of an activity and people (Norris ve Dattilo, 1999: 181). (e. g. "I come to school by bus")

(b). Directive sentence; they are the sentences which motivate the individual to respond to a situation appropriately (Delano, 2003: 3). (e. g. "I will wait for my teacher")

(c). Perspective sentences: These sentences describe others' reactions or responds to a situation. In the previous example, following the directive statement "I will wait for my teacher," with a perspective statement, "my teacher will be happy to see all the children in line", tells a student how her/his teacher will respond to the expected behavior (Gray ve Grand, 1993: 4). These sentences state the emotions, thoughts and beliefs of people in a situation (Tekin-İftar, 2014: 401).

(d). Control sentence: these sentences support the general goal and emphasize the messages of the story (Tekin-İftar, 2014: 401). (e. g. "listening to the teacher is a good behavior")

### **1.5. Musical Social Stories**

As an effective way to reach the aim, music was adapted into social stories and began to be used with individuals with ASD for behavior modification. According to literature review, it can be stated that musical social stories are an effective method in the education of individuals with ASD. The stories are written in accordance with principles of writing social stories, and music is added to them. Within this context, the first study using musical social stories was conducted by Brownell (2002). In his study aiming at investigating the effects of musical social stories on behaviors of students with autism, Brownell studied on four first and second graders. One social story focusing on a behavioral goal was written for each child. Then an original music was composed on the texts of the social stories as the lyrics. The independent variable of this study was one of three conditions: baseline (A), reading the story (B), and singing the story (musical) (C). The reading and singing versions of the social story were presented to the child alternately in ABAC/ACAB designs. The dependent variable of the study was the frequency of target behavior in each condition. The data were collected in 1 hour period following the presentation of social stories. Findings in all cases showed that both reading condition (B) and singing condition (C) were significantly more effective than the baseline condition (A). These findings show that the use of musical social stories are an effective and applicable option for behavior modification in this population.

## **II. LITERATURE REVIEWS**

Pasiali (2004) investigated the effects of musical social stories on problematic behaviors of children with autism. As a result of the study, it was found that musical social stories had a significant therapeutic effect on problematic behaviors of children with autism. Another research on social stories was conducted by Travis (2006). The aim of this study was to investigate the effects of social stories with music on target behaviors of preschoolers with autism. In this study, it was found that social stories and music were effective teaching materials for primary and preschoolers with autism to focus on and retrieving information. Social stories were well-matched with music in the study. Three children with autism diagnosis took part in the research. Musical social stories were written, conducted and compared in terms of pretest and posttest. T-tests yielded significant differences in two target behaviors, and significance was determined between two target behaviors of three participants. The graphs showed a trend of increasing positive behaviors and decreasing negative behaviors during the musical social story intervention. Therefore, the effectiveness of musical social stories were evidenced.

Iliff (2011) investigated the effects of musical social story on classroom behaviors of two primary school students with autism. The results showed that the musical social stories were ineffective while verbal social stories were. In his dissertation, Duffy (2012) proved that social stories and musical therapy were effective

on preschoolers with ASD. Therefore, it was required to review literature about the evidence-based social stories and musical therapy, and an in-service training program was developed with the contributions of other professionals. Also, social stories and brochures for this in-service training were prepared. In these training, 3 musical social stories of the author were examined, and the participants created their own musical social stories using PowerPoint.

The aim of the study conducted by Healy (2013) was to determine the effects of musical social story and social story intervention through iPad on social skill acquisition of children with ASD, and to compare these two interventions with the traditional social story intervention. The comparison of three different types of social stories is the main focus of the study. This study was designed to investigate the benefits of integrating social stories into music and technology. The same social story was presented to the participant in three ways: musical, through iPad, and traditional. The participants of the study were composed of four children with autism, who received therapy of applied behavior analysis at their homes. The findings showed that the social story intervention was effective on all participants ranging from medium-level to high-level. With one exception, each participant reacted similarly to social story through iPad, musical social story and traditional social story.

The aim of the study conducted by Schwartzberg and Silverman (2013) was to investigate the effects of music-based social stories on the comprehension and generalization of social skills by children with autism. 30 participants were randomly assigned to either one of the three non-musical control group (social stories were read) or one of the three experimental musical therapy group (social stories were sang) using cluster sampling technique. In accordance with the findings, the researchers mentioned that social stories can be matched with music in order to facilitate understanding, generalization and on-duty behaviors.

In the study conducted by Fees et al (2014), teachers' opinions about the effectiveness of social story songs for preschoolers with autism. The results showed that the songs were effective in behavior modification of both normally developing children and exceptional children.

### **III. METHODS**

The aim of this study was to introduce the social stories used in the education of individuals with ASD, inform the readers about the use and effects of musical social stories, review the studies on musical social stories, and make recommendations for the future study.

It is known that most of the individuals with ASD react more positively to the music-based practices (Iliff, 2011). Therefore, teaching activities involving musical social stories are considered to be effective because of a variety of reasons: they facilitate acquisition, retention and generalization; they can be used easily by parents; the music can be listened for longer periods of time. The use of musical social stories on social skills teaching is theoretically and practically considered to be important in the education and therapy of individuals with ASD diagnosis. The use of music as an alternative approach of education and therapy was proved to have a positive effect on teaching process in many researches. Therefore, as a teaching tool, musical social stories are considered to motivate the individuals with ASD in an entertaining learning environment, to increase the efficiency of education and to help the development of social skills of these individuals.

### **IV. CONCLUSION AND DISCUSSION**

Studies on musical social stories mentioned above can be observed to be conducted mostly on the effects on behaviors of individuals with ASD. The studies are related to social skill teaching and reducing or removing the problematic behaviors. The methods of social stories and musical social stories were observed to be effective on these individuals. Moreover, the studies focused on the determination of which method

was more effective. In some of the studies, the social stories were added music by the researchers while in other studies, the social stories were matched with already existing music. It can be observed that no study focused on which way was better.

In some studies, iPad was used in the presentation of the social stories while in others, PowerPoint was used. Moreover, some of the researchers just read the stories, and it was observed that all three methods were effective. It is considered that the use of the presentation of social stories through iPad and PowerPoint in future studies will contribute to individuals and this field. Moreover, it is thought that informing the parents and teachers of children with ASD about the importance and effectiveness of musical social stories will be useful. It was observed that this method helped the individuals with ASD learn social skills in an entertaining environment, reduced or removed the problematic behaviors and helped them live in the society as well adjusted people.

Social stories are written in accordance with the autistic individuals' personal needs, their level of understanding and using language, and they transfer the information about how to behave socially to the children. Social stories can be supported by visuals during presentation. The use of social stories should be more frequent because of their easiness in preparation and presentation. Gray and Grand (2003) mentioned that social stories may not be effective for every situation or every child. They also stated that the positive results could be seen starting from the first week of the intervention when it was effective. The positive effect of music on these individuals are proved by the researches, and it is considered that more researches on musical social stories with autistic individuals will be beneficial to literature, educators, parents and especially these individuals in terms of the development of social skills.

## REFERENCES

Brownell, Mike D. (2002). "Musically adapted social stories to modify behaviors in students with autism", Four case studies. *Journal of Music Therapy*, Vol. 39, No. 2, Pp. 117-144.

Bunt, Leslie (1994), "Music therapy An art beyond words", (1th Edition). London: Routledge.

Chou, Yi-Fen (2005), "The effect of Music Therapy and Peer-Mediated Interventions on Social-Communicative Responses of Children with Autism Spectrum Disorders", UNIVERSITY of KANSAS Music Education, Kansas.

Crozier, Shannon and Sileo, Nancy M. (2005), "Encouraging positive behavior with social stories: An intervention for children with autism spectrum disorders", *Teaching Exceptional Children*, Vol. 37, No. 6, Pp. 26-31.

Delano, Monica and Snell, Martha E. (2006), "The Effects of Social Stories on the Social Engagement of Children with Autism", *Journal of Positive Behavior Interventions*, Vol. 8, No. 1, Pp. 29-42.

Demir, Şeyda (2014), "Otizm Spektrum Bozukluğu Olan Çocuklara Sosyal Becerilerin Öğretimi", Editors: Elif Tekin-İftar). *Otizm Spektrum Bozukluğu Olan Çocuklar ve Eğitimleri*. Ankara: Vize Yayıncılık, 367-420.

Duffy, Victoria A. (2012), "Musical Social Stories and the Preschool Child With Autism Spectrum Disorder", ALLIANT INTERNATIONAL UNIVERSITY Educational Psychology, California.

Fees, Bronwyn S.; Kaff, Marilyn; Holmberg, Teri; Teagarden, James and Delreal, Dalila (2014), "Children's responses to a social story song in three inclusive preschool classrooms: A pilot study", Music Therapy Perspectives, Vol. 32, No. 1, Pp. 71-77.

Gadberry, Anita (2005), "A Phenomenological Study of the Co-treatment of Music Therapy and Play Therapy with a Boy Diagnosed with Autism", TEXAS WOMAN'S UNIVERSITY College of Arts and Sciences, Texas.

Gordon, L. Shaw, (2004), "Keeping Mozart in Mind" (Second Edition), California: Academic Press

Gray, Carol A. and Grand, Joy D. (1993), "Social Stories: Improving Responses of Students with Autism with Accurate Social Information", Focus on Autism and Other Developmental Disabilities, Vol. 8, No. 1, Pp. 1-10.

Healy, Danielle (2013), "Using Music and Technology Social Story Intervention With Children With ASD", SOUTHEAST MISSOURI STATE UNIVERSITY Arts In the Department of Communication, Missouri.

Iliff, Janet Marry (2011), "The Effects of Verbal and Musical Social Stories on Classroom Behavior Children with Autism", KANSAS UNIVERSITY Special Education and the Graduate Faculty, Kansas.

Kırcaali-İftar, Gönül (2014), "Otizm Spektrum Bozukluğuna Genel Bakış", (Editör: Elif Tekin-İftar), Otizm Spektrum Bozukluğu Olan Çocuklar ve Eğitimleri, Ankara: Vize Yayıncılık, 17-44.

Norris, Christine and Dattilo, John (1999), "Evaluating Effects of a Social Story Intervention on a Young Girl with Autism", Focus on a Autism and Other Developmental Disabilities, Vol. 14, No. 3, Pp. 180-186.

O'Hara, Marguerite (2010), "Using Social Stories to Teach Social Skills", PITTSBURGH UNIVERSITY.

Özbey, Çetin (2005), "Otizm ve Otistik Çocukların Eğitimi", İstanbul: İnkılap Yayınevi.

Pasiali, Varvara (2004), "The use of prescriptive therapeutic songs in a home-based environment to promote social skills acquisition by children with autism: Three case studies", Music Therapy Perspectives, Vol. 22, No. 1, Pp. 11-22.

Schwartzberg, Edward Todd and Silverman, Michael J. (2013), "Effects of music-based social stories on comprehension and generalization of social skills in children with autism spectrum disorders: A randomized effectiveness study", *The Arts in Psychotherapy*, Vol. 40, No. 3, Pp. 331-337.

Travis, Denise Anne (2006), "The effect of musical social stories (TM) on target behaviors of preschool children with autism spectrum disorders: Three case studies", MICHIGAN STATE UNIVERSITY, Michigan.

# ENERGY, MATERIALS, PROCESSES AND INNOVATION: AN INTEGRATED APPROACH

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## ABSTRACT

Studies show that the current interrelated trends in technology, system requirements, and economics are creating new environments that challenge the limits of traditional engineering and business practices. Therefore, for viable product realisation and maintenance, a spectrum of novel processing technologies and materials to improve performance and reduce costs and environmental impact must constantly be addressed. One of these technologies, namely the cold-gas dynamic-spray process has enabled a broad range of coatings and applications, including many that have not been previously possible or commercially practical, hence its potential for new business implementations in areas such as aerospace, energy, manufacturing, or medical applications. Consequently, the purpose of this paper is to explore, alongside theoretical and experimental examples, how the new technology could be integrated within a framework that finally could lead to more efficient businesses. Based on the paper's qualitative findings supported by authorities, evidence, and logic, essentially it is argued that the cold spray process should not be viewed in isolation, but should be viewed as a component of a broad framework that should take into account the characteristics of the market, infrastructure, technologies, and strategies that finally lead to more efficient operations of the companies.

**Keynotes:** Business, Cold spray, Materials, Maintenance, Reclamation

## INTRODUCTION

Materials innovations have been at the core of many major engineering advances. For example, according to NASA, when flying insects get in the way of an airplane's wing during takeoff or landing, it's not just the bugs that suffer. Those little blasts of bug guts disrupt the laminar - or smooth flow of air over the airplane's wings, creating more drag on the airplane and contributing to increased fuel consumption. That is why the "bug team" at NASA recently ran several flight tests of coatings that may one day reduce the amount of bug contamination on the wings of commercial aircraft (NASA 2013).

In this context, aerospace products operate in very aggressive environments characterized by high temperature, high pressure, large stresses on individual components, the presence of oxidizing and corroding atmosphere, as well as internally created or externally ingested particulate materials that induce erosion and impact damage. Consequently, during operation, the materials of individual components degrade (Bose 2007). At the same time, there is a decreased ability to repair or replace failed components for older aircraft and their components. Reasons for this include, in no particular order, the lack of availability of replacement parts, a decrease in support available from the original manufacturers with some of them no longer in business, and even problems caused by aspects such as outdated technology (Bender and Wells, 2004). Therefore, there is a need for new aerospace materials and technologies that constantly should address issues such as viable product realisation and maintenance and so, support the efficiency of the business.

Subsequently, section 2 critically reviews a number of aerospace materials and technologies issues, formulates their problems, research gaps, and constructs the research question. Section 3 presents the methodology. Then, in section 4, hypotheses are advanced and, based on the existing body of knowledge, the paper answers these hypotheses. Finally, section 5 draws conclusions about the hypotheses and highlights its theoretical and practical implications.

## PROBLEM FORMULATION

With 21,494 commercial aircraft in service in 2011, the Maintenance, Repair and Overhaul (MRO) market was worth \$50.2bn (Meyer et al. 2011). This situation and the lack of financial resources to purchase new aircraft, lead to an increase of aircraft maintenance as a topic of study. While there is no unified agreement as to how to define the age of an aircraft, some authorities have set limits on the age of the aircraft, the number of flight cycles, and the number of engine hours, while others have set limits on the number of previous owners amongst other limiting factors such as age-related effects of corrosion (Herrera and Vasigh, 2009). For example, it was estimated that the average age of the passenger carrier fleets is approximately seven years, the average age of their cargo counter parts is approximately twenty eight years (Bender and Wells, 2004), and the impact of maintenance costs for both civil and military aircraft is at least two to three times greater than initial purchase values, and this trend is expected to increase (Cantor et al. 2001).

In order to finally support the challenges of the business, a number of manufacturing and maintenance processes have been used. However, for example, thermal spray coating processes such as oxyacetylene thermal spray, twin-wire arc spray, and atmospheric plasma spraying applied to deposit Aluminium coatings (Dong et al. 2013) showed severe oxidation, phase transformation, and high porosity characteristics that lead to unfavourable corrosion protection (Chavan et al. 2013). In addition, the traditional thermal spray methods extensively used in aerospace still lack full control of the coating's chemical and microstructural composition due to the particle heating in the reactive combustion gases (Maev and Leshchynsky, 2008) and present many environmental challenges (Villafuerte and Zheng, 2007).

At the same time, there is the new cold spray (CS) technology that applies coatings by exposing a metallic or dielectric substrate to a high velocity (300-1200 m/s) jet of small (5-50  $\mu\text{m}$ ) particles accelerated by a supersonic jet of compressed and preheated gas (Papyrin et al. 2007). Gas temperature is always lower than the melting point of the particle's material, so, upon impact with the substrate, these high-velocity 'cold' particles plastically deform and bond with the underlying material resulting in coating formation from particle in the solid state. It is this solid state which differentiates CS from the thermal spraying processes which still lack full control of the coating's chemical and microstructural composition due to the particle heating in the reactive combustion gases. At the same time, the new emerging CS process, presents many advantages such as very dense, hard, wear resistant, and corrosion resistant coatings, with minimum oxidation and phase transformations of coatings. As surface protection is expected to tremendously increase its share in future, CS advantages make it a rapidly emerging industrial coatings technology and a first world technology (Schmidt et al. 2009).

Consequently, with an increased demand for innovation in aerospace industry and other business operations, this paper explores the following

**Research Question:** Are there R&D issues which, by their consideration, could lead to more efficient business operations?

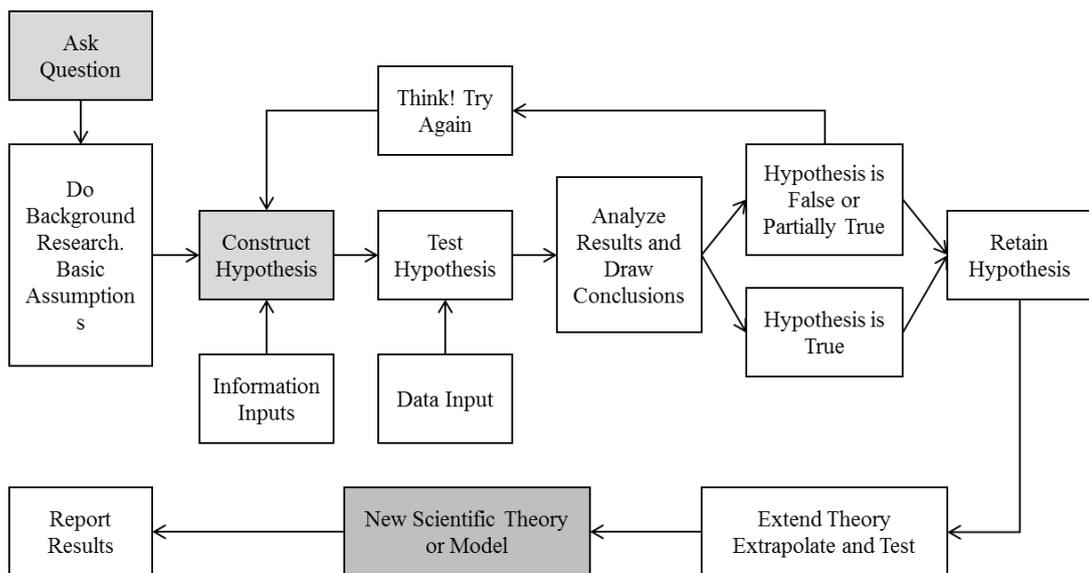
## METHODOLOGY

The scientific method starts when you ask a question about a problem that you observed and ends with a solution to the problem, so it forms a cycle (Figure 1). Dividing the main problem into sub-problems is of the utmost importance. Sub-problems approach is the means to reach the set goal in a manageable way and contribute to solving the problem.

Furthermore, to find answers to the research problem and sub-problems, a number of specific hypotheses are used in order to gather data about and so, satisfactorily solve the research problem. The term hypothesis derives from the Greek 'hypothithenai' meaning 'to put under' or 'to suppose'. Therefore, a hypothesis is a preliminary or tentative explanation for an observable phenomenon of what the researcher considers the outcome of an investigation will be. A hypothesis could be true or false.

In order for the scientific method to answer the research question, it must be about something that you can measure, preferably with a number. However, in section IV of this paper, hypotheses are constructed and answers are found by using support from authorities (research literature published by reputable international journals).

Figure 1  
Steps in the methodology approach



## PROBLEM SOLUTION

This section constructs the hypothesis and answers it by using support from authorities (research literature published by reputable international journals), evidence, or logic.

### *1.1 Unserviceable aerospace components*

**Hypothesis 1:** The new cold spray technology can be used for the remediation of the otherwise unserviceable aluminium and magnesium components critical to the aerospace operations.

Mg is the lightest of all aerospace structural metals, 35 % lighter than Al and 78 % lighter than steel. Consequently, Al and Mg alloys have been widely used in aircraft components such as gearbox housings and mast support for helicopters because of their inherent weight advantages over other metals. However, premature failure due to corrosion and inappropriate repair techniques have been the main challenges associated with these alloys which affect the safety and readiness of aircrafts (Villafuerte, and Wright, 2010). For example, crevice or pitting corrosion may occur at a higher altitude where the environment contains low levels of oxygen, or in marine environments containing a high concentration of chloride ions. The small cracks, or pits, can continue to grow even if the generating environment is removed (NATO, 2000) and so they may lead to cracks which, if left unattended, may lead to catastrophic aerospace component failure (Botef 2015).

In this respect, the cold spray technology was used to repair the corrosion pitting damage near the lower lip of the snap ring groove on an army helicopter mast support fabricated from Al alloy 7075-T73. The repair showed a density and bond strength that exceeded the minimum requirements of the application (Leyman and Champagne, 2009); a superior general corrosion resistance compared to both Al alloys and Mg alloys (Villafuerte, and Wright, 2010); and a machinability and structural integrity (microstructure, adhesion, and fatigue) of both Al and Mg materials acceptable for aerospace applications (Champagne 2008).

### ***1.2 Manufacturing and management concepts integration***

**Hypothesis 2:** Manufacturing and management concepts that also consider and incorporate other concepts will lead to a more efficient business and manufacturing enterprise.

A concept has been considered a general notion or idea derived from specific instances that bring diverse elements into basic relationship (US 2005). Also, talking about concepts, Einstein said he had always believed that the invention of scientific concepts and the building of theories upon them was one of the great creative properties of the human mind (Barnhart 1989). Therefore, if someone wants to generate new ideas, design ways forward, or understand complex situations, then you need to develop concepts (Bono 2004).

Therefore, to answer the hypothesis at an appropriate level, the support from the research literature indicates that:

- Concurrent Engineering (CE) concept minimizes the product design development and delivery time (Prasad 2000), improves quality and decreasing costs (Pham and Ji 1999), and improves coordination (Prasad 2000).
- Group Technology (GT) reduces setup times, lowers work in progress and inventory, and achieves a smooth overall operation of the system (Groover 2012).
- Modularity concept provides a responsive manufacturing through flexibility/agility within product and process (Marshall and Leaney, 1999), lowers application development and maintenance costs (Prasad 2000), and meets efficiently a broad range of customer requirements.
- Flexibility concept copes with changing circumstances in the manufacturing system (Narasimhan and Das, 2000), and includes, as a rational way (Marshall and Leaney, 1999), a modular product realisation process, and modular-based working practices.
- Just-In-Time (JIT) concept eliminates the waste such as excess inventory in all business activities, and reduces lead times in manufacturing and purchasing by applying group technology principles.

- Lean Manufacturing (LM) eliminates the complexity (Pavnaskar et al. 2003) and waste defined as anything other than the minimum amount of equipment, materials, labour, energy, defects, and time that are essential to add value to the product (Gunasekaran and Kobu, 2002).
- Agility, a natural development from LM, improves company's competitiveness (Gunasekaran and Kobu, 2002), but it requires flexibility as its first necessity (Unver and Anlagan, 2002), and
- Virtual Manufacturing (VM), an extension of the concurrent engineering strategy, brings companies together to share costs, core skills, and jointly serve one or more markets (Meziane et al. 2000).

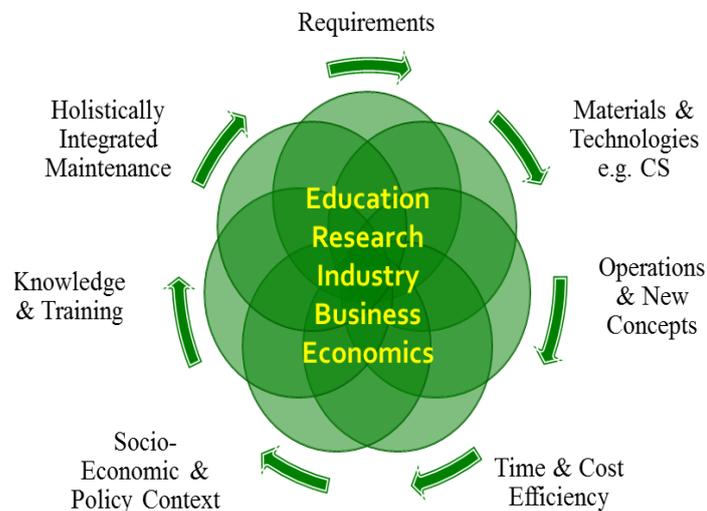
Consequently, in analysing the above, one can see that concepts build on each other and so, their unifying consideration will lead to a more efficient business and manufacturing enterprise.

### 1.3 Strategy management

**Hypothesis 3:** The proper introduction and application of the new technologies can lead to more efficient business operations.

A strong competitive advantage in materials development that will shorter development time, reduce cost, and bring higher quality and functionality to the final product can be gained if there is an efficient iteration between education, research, and industry with a focused always on the business and its economics (Figure 2).

Figure 2  
Integration of business strategy and objectives



At the same time, it is important to recognize that today's new product requirements represent a challenge to the professionals. This is even more specific in aerospace industry where the actual knowledge envelope is permanently tested and pushed forward by new operational requirements or by new environmental regulations.

However, the new technologies, including cold spray, must be properly managed and this includes clear mission, objectives, strategy, and approach (Kestler 2011). The mission is to provide full life-cycle support to aircraft operations which should also include research, design, development, and systems engineering, acquisition, test and evaluation, training facilities and equipment, repair and modification, and in-service engineering and logistics support. For aging aircraft, the objective is to perform dimensional restoration of, for example, aluminium and magnesium components caused by corrosion, restoration of material due to wear or damage, and the ability to repair structures in place. This restoration must be reliable, maintainable, and affordable. Strategy, in line with the objectives of this paper, is to implement the cold spray technology into aerospace industry via actions that will lower technical risks associated with the adoption of a new technology, reduce the costs associated with the cold spray process, and so, transform the emerging cold spray process into an established and accepted refurbishing process for aging aircraft.

Furthermore, to implement this strategy various approaches may include: (a) decompose a complex problem into smaller more manageable sub-problems (Kochikar and Narendran, 1999); (b) separate critical requirements from desirable properties (Sha 2001); (c) replace global optimality in favour of the more realistic goals (Freuder and Wallace, 2000); (d) create the conditions for learning, adapting, optimising, and reconfiguring at various levels of the organisation (Wang et al., 2002); (e) tailor the new technology for each specific application and develop process certification procedures and methods; (f) cooperate with the best in the field from universities, services, and industry; and finally (g) transfer and support the technology implementation in industry.

## CONCLUSIONS

Using three hypotheses, the paper showed that it is both theoretically and practically possible to find solutions to important problems such as energy, materials, and business inefficiencies.

The novel cold spray process technology provides opportunities for new product development, improvements in product performance, reduction in maintenance costs and time, and a minimum environmental impact through the complete lifecycle of aerospace products. Also, the various manufacturing and management concepts should not be viewed in isolation. For example, lack of modularity leads to lack of flexibility, which will lead to lack of agility, and so to the business inefficiency. However, all these must be properly managed with clear mission, objectives, and strategies.

Based on the paper's qualitative findings supported by authorities, evidence, and logic, essentially it was argued that a new technology such as the cold spray process should not be viewed in isolation, but should be viewed as a component of a broad framework for problem solving that should take into account the characteristics of the market, infrastructure, technologies, and strategies that finally lead to more efficient operations of the companies.

## REFERENCES

- Barnhart, C. L. and Barnhart, R. K. (1989), "The World Book Dictionary", *World Book, Inc.*, Chicago, US.
- Bender, M. and Wells, D. J. (2004), "Fleet Supportability and Aging Aircraft", *Air Line Pilots Association, International*, Herndon, VA.
- Bose, S. (2007), "High Temperature Coatings". Elsevier Ltd, Pp. 1-4.
- Botef, I. (2015), "Frameworks for efficient aerospace operations", *Aircraft Engineering and Aerospace Technology Journal*, Vol.87, No.3, Pp. 260-265.

- Cantor, B., Assender, H. and Grant, P. (2001), "Aerospace Materials", *IOP Publishing Ltd.*, Bristol, US.
- Champagne, V. K. (2008), "The Repair of Magnesium Rotorcraft Components by Cold Spray", *Journal of Failure Analysis and Prevention*, Vol. 8, Pp. 164-175.
- Chavan, N. M., Kiran, B., Jyothirmayi, A., Phani, P. S. and Sundararajan, G. (2013), "The Corrosion Behaviour of Cold Sprayed Zinc Coatings on Mild Steel Substrate", *J. of Thermal Spray Technology*, Vol. 22, Pp. 463-470.
- De Bono, E. (2004), "How to have a Beautiful Mind", *Vermilion*, London.
- Dong, S. J., Song, B., Zhou, G., Li, C., Hansz, B., Liao, H. and Coddet, C. (2013), "Preparation of Aluminum Coatings by Atmospheric Plasma Spraying and Dry-Ice Blasting and Their Corrosion Behavior", *J. of Thermal Spray Technology*, Vol. 22, Pp. 1222-1228.
- Freuder, G. and Wallace, M. (2000), "Constraint technology and the commercial world", *IEEE Computer Society, IT Professional*, Jan/Feb, Pp 20-23.
- Groover, M. P. (2012), "Fundamentals of Modern Manufacturing: Materials, Processes, and Systems", Fifth edition, *John Wiley and Sons*, US.
- Gunasekaran, A. and Kobu, B., (2002), "Modelling and analysis of business process reengineering", *I. J. of Production Research*, Vol. 40, No. 11, Pp.2521-2546.
- Herrera, J. M. and Vasigh, B. (2009), "A Basic Analysis of Aging Aircraft, Region of The World, and Accidents", *Journal of Business and Economics Research*, Vol. 5, Pp. 121-128.
- Kestler, R. (2011), "NAVAIR Cold Spray Efforts", *Cold Spray Action Team presentation*, Fleet Readiness Center East.
- Kochikar, V. P. and Narendran, T. T. (1999), "Logical Cell Formation in FMS, Using Flexibility-Based Criteria", *I. J. of Flexible Manufacturing Systems*, Vol. 10, No. 2, Pp. 163-181.
- Leyman, P. E. and Champagne, V. K. (2009), "Cold Spray Process Development for the Reclamation of the Apache Helicopter Mast Support", *US Army Research Laboratory*, ARL-TR-4922.
- Maev, R. and Leshchynsky, V. (2008), "Introduction to Low Pressure Gas Dynamic Spray, Physics and Technology", *Wiley-VCH*, NY.
- Marshall, R. and Leaney, P. G., (1999), "A systems engineering approach to product modularity", *IMEchE, Proc Instn Mech. Engrs, Part B, Journal of Engineering Manufacture*, Vol. 213, Pp. 847-851.
- Meziane, F., Vadera, S., Kobbacy, K. and Proudlove N. (2000), "Intelligent systems in manufacturing: current developments and future prospects", *Integrated Manufacturing Systems*, Vol. 11, No. 4, Pp. 218-238.
- Meyer, P., Sporer, D. and Dorfman, M. (2011), "Thermal Spray Technology Trends in Aero Engine Coatings", *Sulzer Metco*, AeroMat.
- Narasimhan, R and Das, A., (2000), "An empirical examination of sourcing role in developing manufacturing flexibility", *I. J. of Production Research*, Vol. 38, No. 4, Pp. 875-893.
- NASA (2013), "Researchers to Flying Insects: Bug Off!" <http://nasa.org>, accessed November 1.
- NATO RTO-EN-14, (2000), "Aging Engines, Avionics, Subsystems and Helicopters", *Research and Technology Organization*, North Atlantic Treaty Organization (NATO).
- Papyrin A., V. Kosarev, S. Klinkov, A. Alkimov, and V. Fomin, (2007), "Cold Spray Technology", *Elsevier Ltd*, NY, US.
- Pavnaskar, S. J., Gershenson, J. K. and Jambekar, A. B. (2003), "Classification scheme for lean manufacturing tools", *Int. J. Prod. Res.*, Vol. 41, No. 13, Pp. 3075-3090.
- Pham, D. T. and Ji, C. (1999), "A concurrent design system for machined parts", *Proc. Instn. Mech. Engrs, Part B, Journal of Engineering Manufacture*, Vol. 213, Pp. 841-846.
- Prasad, B. (2000), "Converting computer-integrated manufacturing into an intelligent information system by combining CIM with concurrent engineering and knowledge management", *Industrial Management and Data Systems*, Vol. 100, No. 7, Pp. 301-316.

- Schmidt T., H. Assadi, F. Gartner, H. Richter, T. Stoltenhoff, H. Kreye, and T. Klassen (2009), "From Particle Acceleration to Impact and Bonding in Cold Spraying", *J. of Thermal Spray Technology*, Vol. 18, Pp. 794-809.
- Sha, L. (2001), "Using simplicity to control complexity", *IEEE Software*, July/August, Pp. 20-28.
- Unver, O. H. and Anlagan, O. (2002), "Design and implementation of an agent-based shop floor control system using Windows-DNA", *Int. J. of Computer Integrated Manufacturing*, Vol. 15, No. 5, Pp. 427-439.
- US Military (2005), "Dictionary of military and associated terms", *US Department of Defence*.
- Villafuerte, J. and Wright, D. (2010), "Aircraft Part Restoration via Cold Spray", *Int. Thermal Spray & Surface Engineering*, Vol. 5, No. 2.
- Villafuerte, J. and Zheng, W. (2007), "Corrosion Protection of Magnesium Alloys by Cold Spray", *Advanced Materials & Processes*, September, Pp. 53-54.
- Wang, C., Y. Zhang, G. Song, C. Yin, and C. Chu (2002), "An integration architecture for process manufacturing systems", *I. J. of Computer Integrated Manufacturing*, Vol. 15, No. 7, Pp. 413-426.

# **FACILITATION TOURISM CRISES RESILIENCE THROUGH COMMUNITY-BASED PRIVATE-PUBLIC COLLABORATION: THE SMOG PROBLEM IN NORTH**

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## **ABSTRACT**

Collaboration among community-based private–public stakeholders is an important need for crisis resilience. The aim of the study was to analyze the impacts of smog towards the tourism industry in Chiang Rai. As well, to investigate collaboration among these parties in crisis management process as to whether it works well. Specific issues were identifying roles and motives of both private and public stakeholders involved in crisis resilience. Our Investigation also includes: how well collaboration process worked in crisis preparation, and making coordinated decisions of the situation. The study focused on community-based private and public sectors including local community in the tourism industry in Chiang Rai province which is a major cultural and natural tourism destination of North Thailand. It is affected by smog during the summer season (March – May) annually. A high level of dust particles has turned the province into a crisis warning area that presents a serious risk to health to the local people and businesses, especially tourism sectors. Mixed qualitative approaches of interview and observation were used as research tools to find the answer to these research questions. A thematic analysis was used to analyze the data. The data collection was conducted during the period of January – April 2016. The researchers collected data from a total of 15 people who were purposively interviewed. There were 5 persons from the public group and 10 persons from the private group who are the tourism related business owners, academics and local people in Chiang Rai. The findings showed that public agencies tended to underestimate the private interest and involvement in crisis-preparation efforts. Their motives of their collaboration were similar: to protect their interest and to enhance sustainable development in the area—which is a sign of a common goal on crisis resilience. Their collaboration was found to be high in the stage of problem setting and implementation; and low in setting direction to overcome the crisis. This is due to the diversity of knowledge of the private stakeholders contributing to directions in response to smog containment. The public agencies have powerful control in setting the ways to prepare for crisis rather than merely having mutual agreement in direction for dealing with crisis.

**Keywords—** Tourism crises Resilience, Smog, Community-Based Collaboration

## INTRODUCTION

Tourism is a crucial industry to enhance the national economic and well being of citizens in Thailand. It was evidently the fastest growing industry in the last 20 years. According to Ministry of Tourism and Sports, in 2015 foreign tourist arrivals in Thailand totaled 29.88 million. It is expected to increase by 4.7% with approximately 2.41 trillion baht in tourism revenue. There are more than 2 million Thais directly and indirectly employed, with tourism's direct contribution to GDP an estimated 8.6 per cent, according to the World Travel and Tourism Council. Chiang Rai is one of the top ten tourism destinations in Thailand which is located in the northernmost part of the country. The vision of this province is 'Chiang Rai: Global Golden Gateway of Lanna Cultures and International Trades'. Although it is a small city it is surprisingly popular with tourists due to the abundance of natural and cultural tourism resource and diversity of land space for leisure and business travelers as claimed in its vision. However, its growing popularity makes it vulnerable to crisis. Smog happens annually during summer season (January – April) and can rapidly damage the province's appeal to tourists and well being of the local community. Although Thailand—led by Tourism Authority of Thailand (TAT) and Pacific Asia Travel Association (PATA) --has proven to have an efficient model of being a resilient tourism destination when crises occur, especially in natural crisis i.e. the Tsunami in December 2004 and flooding in 2011. However, the smog crisis in the North, as in Chiang Rai, still happens every year. Both private and public groups remain reluctant to proactively address ongoing effects to the tourism industry in this region.

Previous research on the effect of crisis on the tourism industry indicates that the impacts of crises and disaster has brought major challenges to the tourism industry on socio-economic dimension i.e the reduction of number of tourists; the reduced income they generate; and the living of the citizens (Ritchie. and Campiranon, 2014).. Research of these measurements from a capital based approach indicates that there is a need for collaboration between the private and public sector members who are the social capital in the community to manage crises and enhance the crisis resilience (Mayunga, 2007; Pennington-Gray, L., ,2014). The work of Imperial (2005) also supported that collaboration is a good strategy used to enhance governance of networks where problem-solving capacity is widely dispersed like this smog case for instance, and few organizations accomplish their missions by acting alone. Several studies have investigated factors for effective collaboration. Gray (1989) and Huxham (2003) stated that effective collaboration is likely to be achieved if collaborative members share the common value, recognize change and have a will to agree and want to be in the collaborative team. While Huxham (2003) has grouped that into five themes: 1) Common aims; 2) Powers; 3) Trusts; 4) Membership structure; and 5) Leadership. In each theme, Huxham demonstrates the importance of these aspects to collaborative success and with respect to practical issues. Although, there is increasing interest in conducting research on tourism crises resilience through collaborative strategy. However, there is such a difference in the context of Chiang Rai as a destination and smog as a case of tourism, there is a need for a study. Therefore, this research aims to explore the impacts of smog toward the Tourism industry in Chiang Rai. As well, to investigate collaboration among local private and public stakeholders in a crisis management process as to whether it works. Specific issues were identifying

roles and motives of both private and public stakeholders involved in a crisis management process—particularly on development of tourism crises resilience. Investigation also includes: how well the collaborative process has worked in crisis resilience development and factors that influence collaborative process.

## **LITERATURE REVIEWS**

### **2.1 Vulnerability of smog crisis of Chiang Rai**

Chiang Rai experiences crises that can endanger social and economic, as well as environmental resources; for example, flooding, earthquake, drought and smog. Smog is a term combined from smoke and fog, and is an air pollution containing carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), and volatile organic compounds (VOCs) (Pimpunchat et al, 2014). In Thailand there is a recorded problem of smog in Chiang Rai from forest fire; the practice of open burning of farmland mono-cropping and garbage; and from nearby provinces and borders of Laos and Myanmar ([www.chiangraitimes.com](http://www.chiangraitimes.com) ; Wiwatanadate and Liwsrisakun,2011). Tsao and Ni. (2016) defined vulnerability as the susceptibility of a tourism system being subject to disturbance events. Factors causing Chiang Rai to become vulnerable to smog has been the nature of its landscape combining with an air pressure cycle preventing the smoke from dispersing into the upper atmosphere (Pimpunchat et al, 2014). Another factor was due to the dependency on the rest and relaxation visitors that travel to nature-based and open-air cultural tourism sites. This group is highly sensitive to warning of the smog posing increased health risk. Chiang Rai Times, a local newspaper reported this year the air quality test found dust particle in the Mae Sai District dropped from 235 to 150 micrograms per cubic meter, while the average reading was 192 micrograms per cubic meter in Chiang Rai Province. Wiwatanadate and Liwsrisakun (2011) confirmed that the condition of smog caused health problem i.e asthma, cold, and pneumonia—even lung cancer. The Pollution Control Department has requested relevant units to urgently implement measures to reduce and control outdoor burning and encouraged the public to avoid burning garbage ([www.chiangraitimes.com](http://www.chiangraitimes.com)). Children, the elderly and respiratory disease patients are advised to avoid taking part in activities in smog-covered areas or use a face mask. In Thailand, there are currently 106 accumulative hot spots, including 38 spots in forest reserves, 20 in conserved forests and 48 on farms ([www.chiangraitimes.com](http://www.chiangraitimes.com)).

### **2.2 Tourism Crises Resilience Model**

Vulnerability has been discussed often in relation to resilience. The concept of resilience has emerged in recent years as an alternative to the sustainable development paradigm to provide new perspectives on community development and socio-ecological adjustments to rapid changes (Lew, 2014). Tourism crises resilience refers as an overarching framework which deals with understanding how destinations deal with risk, uncertainty and organization change (Pennington-Gray, L., 2014). Resilience is a means to understanding the impact of disturbances or shocks to the system (Pennington-Gray, L., 2014). Although it is important, the literature on individual's crisis preparation and resilience suggests that very few of tourism businesses are prepared for a crisis event, even after having experienced (Sydnor-Bousoo, et al, 2011). Smog in Chiang Rai was one example. In order to assist

Chiang Rai community to assess and mitigate risks related to smog and reduce the impact of and assist in the recovery from the crisis, a tourism crises resilience model should be taken into account. There are several models to enable destination to be more resilience as one by Mayunga (2007). Mayunga (2007) stated that in order to establish community resilience requires various forms of capital: social, economic, physical, and human. These capitals are important resources for communities to successfully perform crisis phase activities. This research focuses on collaboration between community-based private-public sectors that are regarded as the social capital to hold the knowledge to make the area resilient to smog. In the field of tourism development, there has been a significant amount of research pertaining to the reactions of local residents to tourism crises resilience (Park et al. ,2012).

### 2.3 Community-Based Public– Private Collaboration

*“Destinations that are vulnerable and have limited adaptive capacity and community collaborative management are likely to be less robust and, therefore, less resilient.”*  
(Pennington-Gray, L. ,2014)

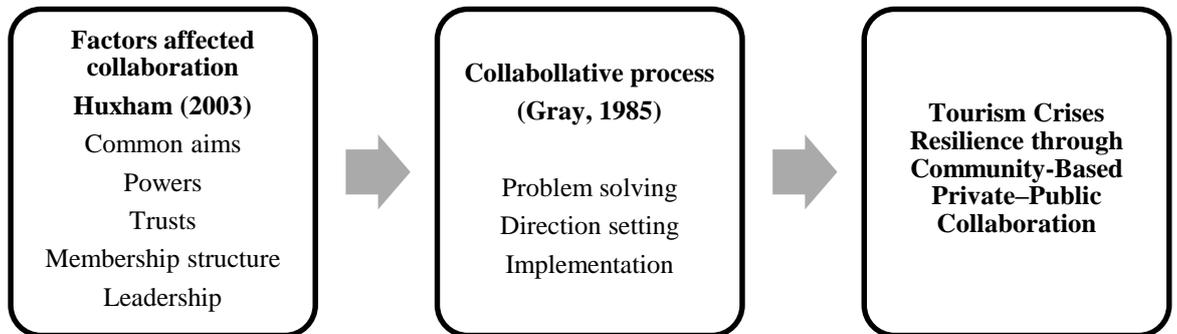
Collaboration is the process of collective action to work in association and act or decide on shared issues (Yodsuwan, 2009). According to National Research Council (US) (2011) increasing evidence indicates that collaboration among stakeholders in tourism could improve the ability of a community to prepare for, respond to and recover from crises. Tourism stakeholders are the group or individuals who can affect or are affecting the tourism industry and vital to the survival and success of the tourism development (Freeman, 2004). In this study stakeholders are public and private groups in the community of Chiang Rai. They are the local policymakers, academics, business persons and local residents in Chiang Rai. Why is collaboration needed? Crisis management requires collective efforts to make it successful and crisis resilience would benefit the entire community and create sustainable tourism development (National Research Council (US), 2011). In addition collaboration will promote understanding and knowledge-sharing among members in the society. Several studies have investigated the factors for effective collaboration namely Gray (1989) and Huxham (2003). Gray (1989) states that the effective collaboration is likely to be achieved if collaborative members share the common value, recognize change and have a will to agree and want to be in the collaborative team. While Huxham (2003) has grouped that into five themes: 1) Common aims; 2) Powers; 3) Trusts; 4) Membership structure; and 5) Leadership. In each theme, Huxham demonstrates the importance of these aspects to collaborative success and practical issues. This research thereafter attempts to investigate collaboration among local private–public stakeholders in crisis resilience as to whether it works well. Specific issues were identifying roles and motives of both private–public stakeholders involved in crisis management process particularly in development of tourism crises resilience within the community. Investigating also includes: how well collaborative process worked in crisis resilience development and factors influencing collaborative process. The overall framework of the phases in collaborative process and factors facilitating the process for the purpose of smog crisis resilience is illustrated in Figure 1

Figure 1 presents a three phased collaborative process based on Gray (1985). The process included problem setting, direction setting and implementation. This model has been accepted by

several studies; however, the effective of each process depending on contextual factors highlighted by Huxham (2003)

Figure 1:

The Model of Tourism Crisis Resilience Collaborative process and its facilitated factors



Source: Model was applied after Huxham (2003); Gray (1985) and Mayunga (2007)

## METHODS

In conducting research primary and secondary data are fundamental source of data were used. This research employed a mixed qualitative approach using in-depth interview and observation as a research tool to collect data. Justification for choosing qualitative research was due to the lack of relevant research and literature concerned with the research topic and to observe the phenomenon of collaboration on smog crisis management.

The semi-structured interviews were conducted in February to April 2016. The target population was purposely selected as being correspondent to the central aim of the research and how to develop tourism crises resilience through community-based private–public collaboration for the case of the smog problem in Chiangrai a province in the North of Thailand during January to April 2016. Each interview lasted one hour, and was recorded digitally. These recordings were transcribed then managed through a process known as ‘thematic analysis’ (King et al., 2004) which are: 1) creating the initial template; 2), revising the template; 3) finalizing the template; and 4) using software in template analysis. The researcher used NVivo version 10 which is a powerful software tool that analyzes the relationships among themes.

The observations were conducted 2 times. First one is the meeting to discuss smog problem and training the public group to prepare for smog, caused by the forest fire, arranged by Department of Disaster Prevention and Immigration Chiang Rai at Municipality Hall Chiang Rai on 16 February 2016 and the second one is the meeting of key stakeholder to discuss the topic Do or Die from Smog on 26 April 2016 at Mae Fah Luang Univesity. Observation data can be collected through watching individuals within the meeting (Remenyi, 2012). Observation has several benefits to the research in: (1) gaining an insightful view and sense of the setting, (2) providing ‘rich description, (3) discovering the

norms and values of the people in the meeting and interaction of the people, (4) capturing the respondent's experience, and (5) providing a cross-check on data obtained in the interviews (Simons, 2009)

## RESULTS AND DISCUSSIONS

The totally of 15 people were purposively interviewed. There were 5 persons from the public group and 10 persons from the private group (5 tourism business owners, 2 academics and 3 local residents). Following are the results and discussions which are divided into each research objective.

### 5.1 The impacts of smog towards the tourism industry in Chiang Rai.

The findings showed that those public agencies tended to underestimate the private interest and involvement in crisis preparation efforts. Their motives of collaboration were similar: protect their interest and enhance sustainable development in the area, which is a sign of the common goal of crisis resilience.

All respondents perceived 'smog crisis' to be a threat. The negative impact on tourism of smog was highlighted using such key phrases as the reduction in the number of tourists because of health-risk perception and the consequential loss in profitability of the tourism businesses; damage of other economic crops and wildlife; and sickness of tourism laborers. The following are examples of how a tourism crisis was defined by the majority of respondents:

*"There are five districts in Chiang Rai that highly affected Wiang Papow, Mae Suay, Muang, Mae Fah Lunag and Wiang Kan. These areas are on the same mountainous area which is the habitat of wildlife and farmlands of highlanders. The forest fire was hard to control and expanded very fast."* (Respondent 1)

*"Our province lost attractiveness to tourists from it. It looks like fog but it is a smoke. We still have to work here, risk our life."* (Respondent 4)

After comparing and reviewing these opinions of the respondents, it is clear that they all identify the economic consequences of the crises, but in different ways and or aspects of the tourism industry. Respondent 1 and Respondent 4 are examples of a vast majority focused on profits, reputation damage, image and emotional impact—i.e. health risk perception. It is noticeable that these impacts can be interrelated. These findings support previous research on the effect of crisis on the tourism industry. They indicate that the impact of crises has provided major challenges to the tourism industry on a socio-economic dimension i.e. the reduction of number of tourists, business income from them, and the living of the citizens (Ritchie and Campiranon, 2014).

### 5.2 The collaboration among local private and public stakeholders in the development of tourism crises resilience.

This section focuses on the collaboration among local private and public stakeholders on two issues, which are: 1) Roles and motives of the both private and public stakeholders; 2) the level of collaboration, particularly on development of tourism crises resilience.

#### 5.2.1 Roles and motives of both private and public stakeholders

Most of policymakers and business people stated that continuity of the tourism industry was one of their key objectives of involvement in smog crisis management. Especially this year there was the recognition of the need to establish a crisis management measure and a task force to manage smog. As some interviewees described in the following statements:

*“To manage smog is the duty of us. We need to work together for own good for our children.”*  
(Respondents 15)

*Government is doing very hard work, sending out the team to control forest fire, and install hot spots to check the level of smog.”* (Respondent 2)

All in all, it could be seen that the motives of their collaboration were similar: to protect their interest and to enhance the sustainable development in the area which is the sign of a common goal in crisis resilience.

### 5.2.3 The level of collaboration, particularly in development of tourism crises resilience.

The collaboration on smog between public and private was not always satisfactory, especially from the viewpoint of the private sector. Although, a policymaker in this study claimed that they attempted to investigate the problems of smog affect and to collaborate with private sectors. However, contributions from businesses are limited to the local community located in Chiangrai. The following is a viewpoint example from both groups.

*“ The government issues 60-day restriction on open burning from 17 February – 16 April 2016. After the restriction expired, for villagers the problem was so bad they kept their garbage to burn right after the expiration date.”*(Respondent 2)

*“I saw people burning, I went to report to an officer but they said that is not their job. I want the person in charge to do something more. We are really suffering from smog.”* (Respondent 14)

Hence, collaboration was found to be high in the stage of problem setting and implementation; and was low in setting direction to overcome the crisis. Collaboration on smog between public and private groups would be more satisfactory if all sectors involved in all stages and have a strong commitment to collaborate. The private group should be informed of the strategic purpose of what, why, and who will be involved rather than simply being ordered to follow the restriction. Sharing information and exploring the option will help to reach agreement and ensuring compliance (De Araujo, L. M., & Bramwell, B., 2002 ; Gray, 1985). Community-Based Private-Public Collaboration is a complex issue, with success or failure to its process depending on several factors. The unsatisfactory achievement of collaboration in this case was due to the diversity of knowledge of the private stakeholders to contribute to the directions for response to smog. The public agencies have powerful control in setting the ways to prepare for the crises instead of merely having mutual agreement in the direction to deal with crisis. The finding of this study supports Huxham (2003) that common aims, powers, trusts, membership structure, and leadership are crucial factor to facilitate Tourism Crises Resilience through Community-

Based Private–Public Collaboration: The smog Problem in North Thailand. This study also added that education is a crucial factor for the success of collaboration.

### CONCLUSIONS AND FUTURE WORK

The study suggested that the smog crisis clearly caused negative impacts on the tourism industry, especially the economic dimension, due to the health risk perception of tourists. It was found that public agencies tended to underestimate the private interest and involvement in crisis-preparation efforts. Motives of the public in the collaborative process were to protect public interest and to enhance the sustainable development in the area, while for the tourism business group it was to ensure that their businesses could operate profitably and local community's well-being could be good like other periods of the year. Collaboration among the two parties was found to be high in the stage of problem-setting and implementation, but was low in setting direction to overcome the crisis, especially considering that the local community was left voiceless. This was due to the limitation of two major aspects: human and political capital resources. With respect to human capital it was found that there was a diversity of knowledge of private stakeholders to contribute to the directions in response to smog. As for political capital, the public agencies have powerful control in setting the ways to prepare for the crises instead of merely having mutual agreement in the direction to deal with crisis. The implication for private and public groups in Chiang Rai after these research findings is: 1) to enhance private group's knowledge by arranging training and seminar in order to raise awareness and understanding on smog. Turning to public group--especially policy makers--they shall involve more private group participation in setting direction to overcome smog. This will enhance the common aim and power equity which are factors promoting collaboration. The recommendation for further research was to investigate the collaboration among these stakeholders on other crises both natural and those human-caused.

### REFERENCES

- (1) Chiang Rai Times (2013) Drought & Smog Still Ravage Northern Thailand (www.chiangraitimes.com)
- (2) Huxham, C. (2003). Theorizing collaboration practice. *Public management review*, 5(3), 401-423.
- (3) De Araujo, L. M., & Bramwell, B. (2002). Partnership and regional tourism in Brazil. *Annals of tourism research*, 29(4), 1138-1164.
- (4) Freeman, R. E. (2004). The stakeholder approach revisited. *Zeitschrift für Wirtschafts-und Unternehmensethik*, 5(3), 228.
- Gray, B. (1985). Conditions facilitating interorganizational collaboration. *Human relations*, 38(10), 911-936.
- (5) Gray, B. (1989). Collaborating: Finding common ground for multiparty problems.
- (6) Huxham, C. (2003). Theorizing collaboration practice. *Public management review*, 5(3), 401-423.
- (7) Imperial, M. T. (2005). Using collaboration as a governance strategy lessons from six watershed management programs. *Administration & Society*, 37(3), 281-320.
- (8) King, N., Cassell, C., & Symon, G. (2004). Using templates in the thematic analysis of texts. *Essential guide to qualitative methods in organizational research*, 256-270.

- (9) Lew, A. A. (2014). Scale, change and resilience in community tourism planning. *Tourism Geographies*, 16(1), 14-22.
- (10) Mayunga, J. S. (2007). Understanding and applying the concept of community disaster resilience: a capital-based approach. *Summer academy for social vulnerability and resilience building*, 1, 16.
- (11) National Research Council (US). Committee on Private-Public Sector Collaboration to Enhance Community Disaster Resilience. (2011). *Building Community Disaster Resilience Through Private-public Collaboration*. National Academies Press.
- (12) Park, D. B., Lee, K. W., Choi, H. S., & Yoon, Y. (2012). Factors influencing social capital in rural tourism communities in South Korea. *Tourism Management*, 33(6), 1511-1520.
- (13) Pennington-Gray, L. (2014). Developing a Destination Disaster Impact Framework. *Tourism Analysis*, 19(1), 105-110.
- (14) Pennington-Gray, L., Schroeder, A., & Gale, T. (2014). Co-management as a Framework for the Development of a Tourism Area Response Network in the Rural Community of Curanipe, Maule Region, Chile. *Tourism Planning & Development*, 11(3), 292-304.
- (15) Pimpunchat, B., Sirimangkhal, K., & Junyapoon, S. (2014). Modeling Haze Problems in the North of Thailand using Logistic Regression. *Journal of Mathematical and Fundamental Sciences*, 46(2), 183-193.
- (16) Remenyi, D. 2012. *Case study research, The quick guide series*, Reading, Academic publishing international limited.
- (17) Ritchie, B. W., & Campiranon, K. (Eds.) (2014). *Tourism Crisis and Disaster Management in the Asia-Pacific* (Vol. 1). CABI.
- (18) Simons, H. 2009. *Case study research in practice*, Sage Publications Ltd.
- (19) Sydnor-Bouso, S., Stafford, K., Tews, M., & Adler, H. (2011). Toward a resilience model for the hospitality & tourism industry. *Journal of Human Resources in Hospitality & Tourism*, 10(2), 195-217.
- (20) Tsao, Chien-Yu & Ni, Chin-Cheng (2016) Vulnerability, resilience, and the adaptive cycle in a crisis-prone tourism community *Tourism Geographies* 18(1), 80-105
- (21) Wiwatanadate, P., & Liwsrisakun, C. (2011). Acute effects of air pollution on peak expiratory flow rates and symptoms among asthmatic patients in Chiang Mai, Thailand. *International journal of hygiene and environmental health*, 214(3), 251-257.
- (22) Yodsuwan, C. (2009). *Effective Tourism Stakeholder Collaboration and Member Satisfaction* (Doctoral dissertation, Griffith University).

# **TOURISM POLICY AND SERVICE QUALITY MANAGEMENT IN BUSINESS CONFERENCE TOURISM: A CASE STUDY OF SAUDI ARABIA**

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## **ABSTRACT**

The study is based on research topic which aim to assess tourism policy and service quality management in business and conference tourism in the Saudi Arabia. The literature regarding this study is surrounded by concept of address the potential of Saudi Arabia to become a destination for business tourism and international conference travel (Ali, 2010). The Kingdom is persistently focused on developing new employment opportunities and sources of national revenue. This aim can be achieved by Saudi Arabia because it is constantly seeking adequate ways to liberalise its markets and open to foreign participation (Al-Kawaz, 2005). Another aim presented with this study is to raise public awareness of the Kingdom's efforts in expanding the possibilities for business tourism. Although research about Saudi Arabia's business tourism has been inadequate, there is a hope to overcome gaps in the field with the current study. Therefore, one of the most important aims introduced by the researcher is to undertake a literature review on the business tourism industry. Different factors that tend to influence this industry sector are considered while undertaking the literature review. In turn, this may facilitate Saudi Arabia's policy makers to address tourism and travel opportunities in the Kingdom.

The research methodology that the researcher will use in this study. The decision of the researcher to implement both the qualitative and quantitative research methods is because through combining them, the research obtains strengths that offset the limitation of each research design (Bowling, 2014). a mixed research approach combines both the qualitative and quantitative research designs. The fact that these two deigns complement each other – each covering for the weakness of the other is the main strength associated with this approach (Venkatesh, Brown and Bala, 2013) Some of the objectives of this research were however addressed using just the qualitative approach. The main reason why a qualitative research method is important in addressing those specific objectives was that it enables the researcher to delve into people's deeper feelings/reactions rather than generalise and make statistical inferences (Devetak et al., 2010). For the purposes of the present study, the data collection method that will be used is face-to-face interviews and questionnaires. This is a quite flexible method of gathering useful information about the subject explored by the researcher and determining the size of the sample.

The study is based on research topic which aim to assess tourism policy and service quality management in business and conference tourism in the Saudi Arabia. The literature regarding this study is surrounded by concept of address the potential of Saudi Arabia to become a destination for business tourism and international conference travel (Ali, 2010). The Kingdom is persistently focused on developing new employment opportunities and sources of national revenue. This aim can be achieved by Saudi Arabia because it is constantly seeking adequate ways to liberalise its markets and open to foreign participation (Al-Kawaz, 2005). Another aim presented with this study is to raise public awareness of the Kingdom's efforts in expanding the possibilities for business tourism. Although research about Saudi Arabia's business tourism has been inadequate, there is a hope to overcome gaps in the field with the

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