



A MODEL OF UNIVERSAL DESIGN FOR SENIOR TOURISTS: A CASE STUDY OF
NORTH TO CENTRAL PATTAYA BEACH ROAD AREAS



A Thesis Submitted in Partial Fulfillment of the Requirements
for Master of Business Administration (HOTEL AND TOURISM MANAGEMENT)

INTERNATIONAL PROGRAM

Graduate School, Silpakorn University

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Title A MODEL OF UNIVERSAL DESIGN FOR SENIOR
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MISS TANISARA KANAWATTANAKUL : A MODEL OF UNIVERSAL DESIGN FOR SENIOR TOURISTS: A CASE STUDY OF NORTH TO CENTRAL PATTAYA BEACH ROAD AREAS THESIS ADVISOR : SOMNUCK JONGMEEWASIN, Ph.D.

This research aimed to study on the characteristics of facilities, infrastructures and environment that able to serve the needs of the senior, including disabled tourists and develop the model that particle for the area of research that is the North to Central Pattaya Beach road. The 7 principles of Universal Design was selected as a foundation for model development.

The research was conducted with mixed methods by using both quantitative and qualitative to seek accurate information in order to develop the model for the area of research. The site observation by the researcher and followed by a semi-structured in-depth interview with three related organisations, both government and private sector, to obtain an opinion and perspective from them that could benefit to the model development process. The questionnaires with each of the Universal Design principles were distributed to both senior and disable tourists in the area of research to evaluate their satisfaction towards the existing facilities.

The result of the study was developed into the model of Universal Design for senior tourists in the area of research by focusing on 4 main aspects which are 1) Facilities and Infrastructure 2) Qualified Supplier 3) Knowledge and Awareness and 4) Marketing and Promotion.

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CHAPTER 1

INTRODUCTION AND BACKGROUND

Nowadays, technology has been developed continuously, also for a development of a medical treatment as well. The better of medical technology leads to a better quality of life for people and then they become healthier and have a longer life span. Meanwhile, birth rate in many countries also decreasing which leads to an increase of a number of senior populations, especially those developed countries, and it is projected to grow continuously.

From the study of the United Nations in 2011 (United Nations, 2011), the total world population is at 7.1 billion people and there were more than 11.5% of senior population. Therefore, it could say that our world has become a world of aged society. To study further into an ageing ratio based on a level of national development, the developed countries have a highest number of senior populations at 22.5%. A ratio of senior population toward the total population in developing countries is at 9.1% and 5.4% in the underdeveloped countries.

Country	A ratio of senior population (60 years old and above)
World	11.5%
Developed Countries	22.5%
Developing Countries	9.1%
Underdeveloped Countries	5.4%
Thailand	13.4%

Table 1: A ratio of senior population (60 years old and above) in 2011

Source: United Nations. (2012). 2012 World Population Prospects: The 2010 Revision.

To summarize from the table 1 above, Thai population turns into aged rapidly comparing to the aging ratio of the world population, which is at 11.5% and higher than the average rating of other developing countries, which is at 9.1%. A ratio of senior population in Thailand is soon to be at the same level as those developed countries and expected to reach approximately 14.1 million people or 20% of the total population in 2021 that will lead Thailand into a “completed aged society” and in the next 20 years' time or in 2033, a number of senior population will increase to 18.7 million people or 28% of the total population.

A transformation of a population structure from a youth society to an aged society will have an effect to many dimensions of the society, both in term of social and economic. It is essential to ensure that everyone in the society are aware of and understand the situation when it comes to an aged society.

An increase number of senior populations led to a new potential market segment for a tourism industry, which is a group of senior tourists. From a study of Junjit T. et. Al in 2012(al., 2012) (Tiensiri, Wandee, Boonyanupong, & Sangkakorn, 2012) found a similarity in both Thai senior tourists and International senior tourists that the majority of senior tourist's age is between 60-64 years old. Their main income is from a pension and have no health issues. These results are similar with the result from the study of Kevin W. in 2015 (Kevin_Wongleedee, 2015) which was cited by Suthinan P. in 2017(Suthinan Pomsuwan, 2017), which found that the segment of senior tourists are mostly from the developed countries or European countries with an average age between 60-65 years old.

From the study of Ranee (Esichaikul, 2012a, 2012b), had categorized European senior tourist according to their behavior and travel purposes as 1) Leisure tourist 2) Long Stay tourist and 3) Medical and Wellness tourist.

The group of tourists who comes for a wellness, medical or health purpose are also in a focus of the government sector. As the government sector is now having a project called “Eastern Economic Corridor or EEC” which one of the agenda is to promote three provinces, which are 1) Chonburi 2) Rayong and 3) Chachoengsao, in the eastern of

Thailand to be a Sustainable World Class Tourism Destination. It is with objectives of increasing an income for a local people, building confidence and promote an investment from the oversea investors in the area by developing infrastructure, transportation and logistics.

According to the action plan for a tourism development and promotion in the area of Eastern Economic Corridor or EEC , a tourism situation in the area is continuously grow, both in term of the number of visitors and a revenue generated and it is mostly comes from potential of Pattaya City. In 2016, there were more than 26 million of visitors came to the area of EEC and the average increasing rate of the visitor between 2012-2016 is at 9.68% each year and Chonburi province where Pattaya City is located had the highest number of visitors which was at 61.96% of the total visitors.

Further from the EEC action plan mentioned above, it had analyzed abilities and potential of Chonburi province towards a tourism industry. The action plan stated that Chonburi province is a well-known travel destination for both domestic and international tourists as it is where Pattaya City and Bang Saen is located. There are many places that tourists can visit in Chonburi whether a natural beauty setting, cultural or historical site and man-made attractions. In addition, it is easily accessed by various types of transportation with a variety of activities and entertainment provided for tourists. With all of this uniqueness, Chonburi province is a modern travel destination, including a modernity of services provide in the area such as medical services, spa and a complete healthcare service. Therefore, it suits with a group of family and so with the people at all ages, Therefore, Chonburi is now promoting as a “Modern of the East” which focuses to be a city of health tourism and recreations.(The Eastern Economic Corridor (EEC), 2018)

Pattaya is not only a famous travel destination in Thailand but its reputation is also spread wide all over the world. This is because of many tourist attractions; Pattaya has many natural beauty attractions such as Pattaya beach, Na Jomtien Beach, and Koh Larn. Apart from these natural attractions, there are also broad ranges of entertainment that offer to tourist for example restaurants, nightclubs, sport and water activities and

traditional shows. Therefore, it is numerous numbers of tourists visit Pattaya all year round, not only in a high season.

Pattaya is located on the Gulf of Pattaya, approximately 160 kilometre south from Bangkok, Thailand's capital city. Pattaya city has been administered under a special autonomous system since 1978. It has a status comparable to a municipality and is separately administered by the mayor of Pattaya city who is responsible for making policies, organising public services, and supervising the city's workforce.

Before that Pattaya used to be a small fishing village with a 3-kilometre-longed line of coast, situated in Na Klua sub district, Banglamong district, Chonburi Province. It was about 30 kilometers from city of Chonburi. Pattaya is divided into 6 main areas details as below;

1. Naklua is the first area that visitors will arrive if they come to Pattaya by Sukhumvit Road. There are several five stars hotels and Condominium in this area. Wong Amat Beach is also an interesting place in Naklua area.

2. North Pattaya, there are a lot of nightclubs and restaurants locate in this area. There are Hypermarkets to provide convenience to local people and tourists. A high-quality hospital also located in North Pattaya.

3. Central Pattaya, this area seems to be for day businesses, not night businesses. The major businesses in Central Pattaya are pharmacies and clinics, including dental clinics. Nightclubs or bars are rarely seen in this area, but there are still spas in this area.

4. South Pattaya is a wide range of businesses. In the day time, there are many types of business run by local people, while in the night time, nightclubs are most popular in this area – this might be because South Pattaya connects to Pattaya Walking Street where there are huge numbers of entertainment for tourists

5. Pattaya Buddha hill, there are several high-class accommodations. With a spectacular view on the hill, some of tourists may

prefer to stay in this area. The Tourism Authority of Thailand (National Statistical Office) office is also located here so that tourists can request information for travel in Pattaya.

6. At Pattaya Jomtien, water activities are major interesting points and Jomtien is also a nice place for tourists preferring to take a rest a bit quietly.



Figure 1: Pattaya main area map

Source: ceediz.com, n.d.

SIGNIFICANCE OF THE STUDY

Pattaya City is a well-known beach destination throughout tourists all over the world. A wave of millions of tourists had come to visit Pattaya each year, this is also including a group of special care needed tourists such as senior people, those with disability and a group of long stay tourists. Even though Pattaya is one of the most dynamically developing cities in an eastern area of Thailand and the growth in terms of economy is rising continuously from the tourism industry which is the main business that generated revenue to local people. Pattaya is somehow still having a problem with a lack of facilities and infrastructures that can serve people with a wide range of needs.

Pattaya had shown an attempt on developing their infrastructures and facilities that provide to all tourists through these past few years. There was a huge renovation to improve a landscape of Pattaya beach road for tourism activities. Pattaya's beach landscape improvements were made, including:

1. The demarcation of zoning for various activities.
2. The improvement of circulation system to reduce congestion.
3. The creation of linkage between the beach and the adjacent area.
4. The provision of more shading.
5. The increase of necessary facilities.
6. The reduction of erosion from surface water drainage.
7. The reduction of components that disrupt the ocean vista.



Figure 2: Pattaya beach road before an improvement

Source: Chaysomyod, 2013



Figure 3: Pattaya beach road during an improvement

Source: Chaysomyod, 2013



Figure 4: Pattaya beach road after an improvement

Source: Chaysomyod, 2013

From the above concerned renovating dimension, can estimate that Pattaya city also pay attention to the matter of number of facilities and infrastructures that insufficient to provide to tourists, especially with those tourists who are senior or with any ranges of disabilities. An increasing in number of senior populations is tremendous in many developed countries, especially European countries, the United States of America, Japan and South Korea who is a main target tourist of Thailand. Therefore, to be aware and get ourselves ready for this special group of tourists would create more competitive advantages for Thailand's tourism industry as we can promote our country to be a friendly destination for senior and disabled tourists from all over the world.

According to a study of Pattaya's beach landscape for tourism activities by Asst. Prof. Ph. D. Angkana B. (Boonyobhas, N.D.), the area of Pattaya beach road is divided into 4 main parts as below;

1. Hotel area which is mainly a location for many large size hotels and resorts because of its location is quite peaceful compares to another part of Pattaya beach road, a bit far away from Pattaya's nightlife. There are many beach activities and it is suit for relaxation.

2. Commercial area is located next to hotels area which starts from Central Pattaya road to Walking Street. It is an area where most of business is running such as retail stores, nightclub or bars and small to middle size accommodation.

3. Walking street is where most of nightclubs, bars, restaurants and souvenir shops are located. This area is famous among tourists.

4. Pier area is started from the end of Walking Street to Bali Hai pier. There are some parts of this area that is now using as a park and a multipurpose filed for any public activities.

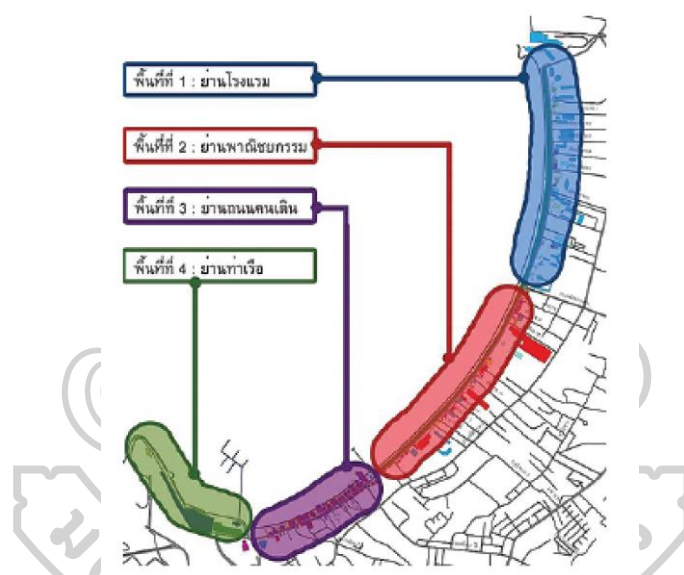


Figure 5: Map of Pattaya beach by zoning

Source: Angkana B., 2011

Therefore, this thesis is aimed to explore a potential of developing this area, the Pattaya beach road from North to Central Pattaya area, to be a friendly destination for tourists with all ranges of needs, especially those who need a special care as senior and disabled people.

STATEMENT OF THE PROBLEMS

Ageing society becomes a significant issue among all countries over the world for decades. Ageing society had started earlier in the more developed regions and was

beginning to take place in some developing countries later on. As reported in World Population Ageing 2013 by Economic & Social Affairs, United Nations stated that "...the number of older person (aged 60 years or over) is expected to more than double, from 841 million people in 2013 to more than 2 billion in 2050..." (United Nations, 2014). Thus, becoming ageing society is something that should be focused on, especially in developing countries, where an infrastructure and social welfare is insufficient.

Thailand had also faced with a challenging of ageing society since 2010. Now, 10 percent of Thai population is at the age of 60 years and above. There is also an expectation that in the next 5 years, Thailand will become a Complete Aged Society by the meaning that one-fifth of population would be at the age of 60 or over. Further than that, in the next 19 years or in 2035, Thailand will turn into a Super Aged Society with senior population percentage at 30 of all. (National Reform Council, 2015). While Thailand is still under the stage of lacking in all the social welfare, infrastructure and clearly understanding which is essential in order to cope with issues concerning with ageing society.

Regards to this mentioned issue; the National Reform Council of Thailand has expressed their concern towards this and set up a reform agenda no.30: A system reformation for Ageing Society. This reform agenda was aimed to explore the most appropriate way to extend a qualified and standardized infrastructure to senior population's needs. The study found that facilities and services had failed to serve the basic needs of elderly. Public space, facilities and services which are still under qualified which is not passing 50 percent from the standard evaluation. (National Reform Council, 2015). There has come to a guideline of how to improve a standard of facilities provided for elderly specially. There are three main perspectives to be considered. First are physical safety, accessibility and stimulation in consequence.

In a perspective correlates with travel industry, there are several issues that should be considered which help in creating more competitive advantages and attracting more senior tourists to visit Thailand. As reported by Jang and Wu (2004) that senior market draws attention in the tourism industry mainly because of its substantial size,

increasing purchasing power and time flexibility after retirement. (Jang & Wu, 2006) Jirawadee R. (2014) also expressed that senior tourists are one of the most dynamic market in tourism industry as they have numerous times with saving money to spend after their retirement. Moreover, they tend to spend their leisure time by visiting places related with history, culture and natural beauty settings. This is obviously a good chance for Thailand to promote our country as a dream destination among senior tourist. (SMEs White Paper Report 2008, the Office of Small and Medium Enterprise Promotion) (Rattanapaitoonchai, 2014)

In Thailand, there is a law and regulation regarding to a building which was constructed after September 01, 2005 with a public space more than 2,000 sq. m. There must be facilities providing for elderly and disabled person such as a ramp for wheelchair users and a handrail in toilet. Most of entrepreneurs are only provide those mentioned facilities according to a law by Royal Thai Government Gazette, 2005, regarding to standard of facilities in a building for handicapped, disabled and elderly people. A main issue of this matter is that most of entrepreneurs only provide rooms for those people with special care needed in a very less ratio according to law, which is only one room per a hundred rooms. Therefore, to meet the needs of senior tourist who is targeted to be one of the most potential markets in a near future would build up a huge competitive advantage for entrepreneurs.

Tourism Strategy of Thailand during 2015 – 2017 by Ministry of Tourism and Sports is focused on developing Thailand to be a sustainable tourism destination. (Ministry of Tourism and Sports, 2015) Even though Thailand tourism industry was succeeding in term of number and revenue generated by tourists each year but in a perspective of developing tourism products and services, Thailand still faces some obstacles. According to Travel and Tourism Competitive Index by World Economic Forum (WEF) 2013, competitiveness of Thailand was ranked at 43 out of 140 countries all over the world or 9 of 25 in Asia Pacific. An indicator that has the weakest performance was a standard of transportation and the readiness of infrastructure in consequence. (Chiesa, 2013)

The main idea of the Tourism Strategy of Thailand 2015 – 2017 was concentrate on developing Thailand to be a quality and sustainable travel destination. By increasing tourists' length of stay and revenue estimated per head. In this strategy also aware of a trend of tourism from 2015 onward, those developing countries will be significantly increasing market especially in Asia Pacific region (Ministry of Tourism and Sports, 2015). Further than that, ageing society is also an issue that government sector focusing on. Not only because of an increasing in number of senior people is tremendous in many developed countries, especially European countries, the United States of America, Japan and South Korea who is a main target tourist of Thailand, but also because of senior citizen in Thailand also increasing and will shortly turn into ageing society by 2030. (Ministry of Tourism and Sports, 2015) Therefore, to prepare and get ready to provide an infrastructure and services that serve the needs of senior people would be highly advantages for Thai's entrepreneurs.

Pattaya City is a very well-known travel destination among tourists, both for domestic and international. The government sector of the city also wanted to enhance its reputation and promote their tourism industry to be a world-class travel destination. Therefore, it is important to ensure that everyone, regardless of their ages, physical ability and preferences, can come and having a memorable travel experience at Pattaya City.

OBJECTIVES OF THE STUDY

1. To study and examine a characteristic of universal design which proper to serve basic needs of senior tourists including disabled tourists
2. To analyze a potential of being a friendly destination for senior tourist of North to Central Pattaya Beach Road, based on 7 principles of Universal Design
3. To give suggestions to all stakeholders including government and business sector in order to develop the area of North to Central Pattaya Beach Road to be a friendly destination for senior and disabled tourists

PROCESS OF THE STUDY

The process of this study is as follows;

1. Clarifying research topic from selections of problems
2. Finding literature review; journals, textbooks and other sources
3. Creating statement of hypothesis or research questions
4. Determination of appropriate methodology and research design; qualitative method. Primary data from semi-structured interview and secondary data from literature review from related documents
5. Interpret and analysis collected data from semi-structure interview and recommendation
6. Presentation of the result

STUDY BOUNDARIES

The scope of sample for this study is from all stakeholders, both government and business sector, and senior tourist, including those with any ranges of disabilities, who visit Pattaya city in the area of North to Central Pattaya Road. The exact period of gathering a data was during 1 January 2017 – 30 June 2019. The area of research was limited between north to central beach road of Pattaya City

The study will concentrate on characteristics of tourism destination that proper with the needs of senior tourist including tourist with disabilities. Researcher will get into details of what accounts when senior tourists searching for their travelling destination and what would facilitate them while travelling. A study about infrastructure and facilities management towards the use of 7 principles of Universal Design will be applied to this research's suggestion.

REPLICATION

The process of study is as follows.

1. The study will be investigated in a characteristic of facilities and infrastructures require by special care needed tourists, including senior and disabled tourists based on 7 principles of Universal Design.
2. A study and analysis on a potential of North to Central Pattaya beach road on being a friendly destination to senior and disabled tourists based on existing facilities and 7 principles of Universal Design.
3. Data and information gathering from stakeholders by using a semi-structured interview, related literature review and other sources of secondary data.
4. A recommendation will be provided to stakeholders in an attempt on developing North to Central Pattaya Beach road to be a friendly and proper tourism destination for tourists with any ranges of ability, especially tourists with disability and senior tourists.

RESEARCH QUESTIONS

This thesis is aimed to develop a model of Universal Design for senior tourist: a case study of North to Central Pattaya Beach road area. Several questions are posed to guide an enquiry as follows;

1. What is a characteristic of facilities and infrastructures of tourism destination that is required by a special care needed tourists, including senior and disabled tourists?
2. Does the area of North to Central Pattaya Beach road has a potential on being a friendly and proper tourism destination based on 7 principles of Universal Design?
3. What is a development model for North to Central Pattaya Beach road area to be a proper tourism destination for senior tourist, based on 7 principles of Universal Design?

SUB-RESEARCH QUESTIONS

1. Do the existing facilities provide in the area of North to Central Pattaya is sufficient and practical to senior tourists?
2. How can the existing facilities provided in the area of North to Central Pattaya be improved to meet the needs of senior tourists?

METHODOLOGY

The research methodology is conducted by a mix method. The deductive method can be referred to qualitative methods to find out the additional objectives by examining interview, observation and field survey, etc. A quantitative method was also combined into a process by distributing questionnaires to senior and disabled tourists in the area of research to obtain their feedback and point of view, which can be a valuable resource for a model development.

The researcher will use triangulation means two or more methods are combined to gain a different perspective on topic and verify a quality of the information for increasing validity and reliability of research data.

Firstly, the researcher will collect secondary data by related literature reviewing, follow by questionnaire, field survey or an observation and interview with informants which is referred to stakeholders include with tourists, government sector and Pattaya's business sector.

The research requires variety of primary and secondary data to create an understanding regards to basic needs of senior and disabled tourists which will help in facilitate their travel pleasantly. This research concentrates on 7 principles of Universal Design which will be adopted to establish and develop a model of improvement existing facilities in the area of North to Central Pattaya Beach road to be a proper tourism destination for senior tourists. The research is using qualitative method, observation, interview and the investigation on factors that related to the needs of senior tourists, in

term of facilities and infrastructures needed in order to facilitate their trip. Several steps of research are as follow;

1. Through a documentary research, a characteristic of tourism destination that could facilitate and serve the needs of senior tourists, including those with disabilities.

2. A field observation in the area of North to Central Pattaya Beach road will take place in order to examine a potential in developing this area and its facilities provided to be a friendly tourism destination for people with all ranges of ability, especially those with a difficulty.

3. A questionnaire will be distributed to senior and disabled tourists to obtain a useful feedback and opinion from the real users in the area of research.

4. An interview with semi-structure will be conducted with stakeholders. Researcher will schedule and list of interviewees including from both private and public sector to seek for collaboration in developing this mentioned area. The sample consists of a range of groups:

- 4.1 Government sector such as Pattaya office of Tourism Authority of Thailand, Pattaya Office and The Designated Area for Sustainable Tourism Administration (DASTA), etc.

- 4.2 Business sector; Thai Hotel Association – Eastern Chapter

- 4.3 Senior and disabled tourists in the area of research

5. The analysis process will take place later on. By analysis information and data from literature review, observation, interview with different stakeholders. Opinion and information given will be analyzed and interpret. After that the data will be grouped to create an indicator according to 7 principles of Universal Design to seek for a potential of developing North to Central Pattaya Beach road to be a friendly tourism destination for senior tourists.

6. Lastly, the researcher will draw a conclusion and create a model of Universal Design that proper to develop this specific area. Recommendation

will be provided to benefit all stakeholders such as community, local residents, local authority involved in this area.

RESEARCH FRAMEWORK

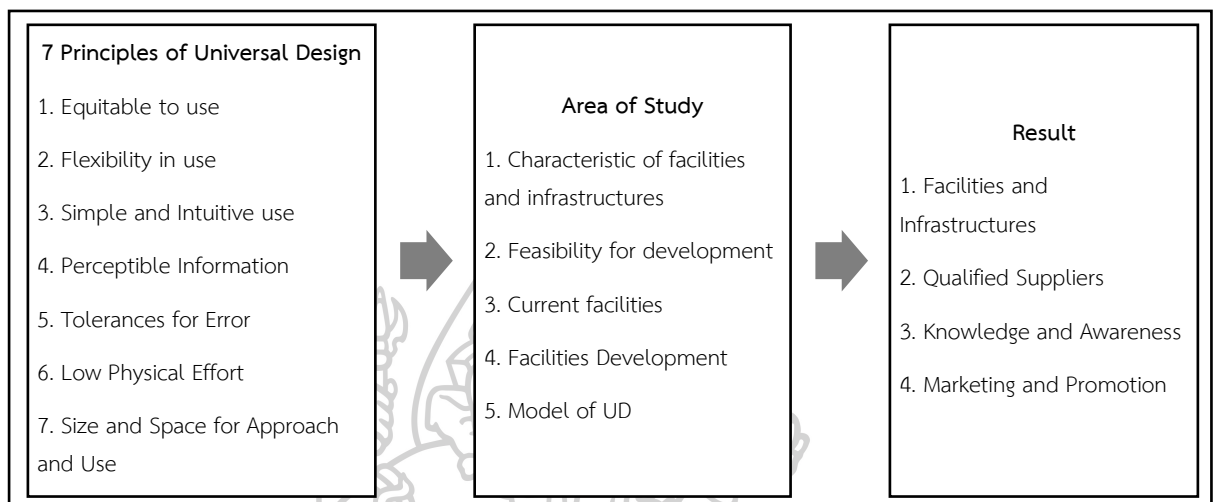


Figure 6: Research Framework

STRUCTURE OF DISSERTATION

This thesis is consisted of 5 chapters;

1. Chapter 1: introduction and explanation of the background of tourism destination selected as a case study, a problem and significance of the study, research' objectives and processes, the study boundary and methodology.
2. Chapter 2: literature review to gathering information related to research questions and research objectives.
3. Chapter 3: research methodology using qualitative method. Data derived from an observation and interview with all stakeholders.
4. Chapter 4: analysis data gathered from an interview and interpret.

5. Chapter 5: research result including discussion, suggestion and recommendation for making a development model for Universal Design for senior tourists in area of North to Central Pattaya Beach road



CHAPTER 2

LITERATURE REVIEW

As the aim of this thesis is to examine a characteristic of facilities and serve the needs of senior tourists and to facilitate their trip pleasantly, therefore this literature review will be conducted to answer the research questions “What is a characteristic of facilities and infrastructures of tourism destination that is required by a special care needed tourists, including senior and disabled tourists?, Does the area of North to Central Pattaya Beach road has a potential on being a friendly and proper tourism destination based on 7 principles of Universal Design? and What is a development model for North to Central Pattaya Beach road area to be a proper tourism destination for senior tourist, based on 7 principles of Universal Design?” The researcher reviewed related literatures in the field of what is impact to senior tourists’ satisfaction in term of facilities management based on 7 principles of Universal Design. In additional, a model of Universal Design for senior tourists will be presented.

The market of senior people had been talking about by many marketers during these past few years, especially in tourism industry. The senior market for leisure is becoming more important as American populations and other developed countries become ages (Chen & Shoemaker, 2014). According to the study of Sandy C. and Stowe S. in 2014, there are many different words use to refer to this specific market such as “the mature market” (Lazer, 1986), the “older market” (Walker, 1981), and “the senior market” (Shoemaker, 1989). More recent studies have used other phrases such as “the silver market” (Branchik, 2010). In this thesis, researcher uses the word “senior tourists” to describe a group of tourists who are age at 60 years old and older.

For more clearly understanding about tourism industry, firstly, the researcher conducted a literature review in topics as follows:

1. Definition, Concept and Types of Tourism
2. Definition of senior citizen and a difference and uniqueness of senior tourists
3. Accessible Tourism
4. Universal Design
5. 7 Principles of Universal Design and Who is benefited by Universal Design?
6. Pattaya's background
7. A circumstance of Universal Design in Thailand;
 - 7.1 Opportunity and Motivation
 - 7.2 problems and obstacles
8. Existing Universal Design in Thailand

Definitions and Concept of Tourism

“All tourism should have some travel, but not all travel is tourism”

Concept of travel and tourism can be easily misinterpreted as they have close meaning. In fact, travel is a part of tourism. Travel comprises of all journeys from one place to another. It includes all journeys made by people who enter a country for leisure, to work, reside, study or who just pass through a country without stopping. (Personal Social and Humanities Education Section, 2013)

A definition of tourism is various, depends on source and person. The first definition of tourism, according to the study of S. M. RASHEDUZZAMAN, was made by Guyer Feuler in 1905. He defined tourism as “a phenomenon unique to modern time which is dependent on the people's increasing need for a change and relaxing, the wish of recognizing the beauties of nature and art and the belief that nature gives happiness to human beings and which helps nations and communities' approaching to each other

thanks to the developments in commerce and industry and the communication and transportation tools' becoming excellent.” (RASHEDUZZAMAN, 2017; Uyar)

Macintosh and Goeldner (1986) had defined tourism as “the sum of the phenomena and relationships arising from the interaction of tourists, business suppliers, host governments and host communities in the process of attracting and hosting these tourists and other visitors.” (Macintosh & Goeldner, 1986; McIntosh, 1986)

To avoid a disaccord, World Tourism Organization had given a definition of tourism as “Tourism is a social, cultural and economic phenomenon which entails the movement of the people to countries or places outside their usual environment for personal or business/professional purposes.” (World Tourism Organization, 2008)

According to World Tourism Organization, tourism can be categorized into two groups. First is Domestic Tourism which refers to the activities of a resident visitors within a country of reference, either as a part of domestic tourism trip or a part of an outbound tourism trip. Second one is an International Tourism which comprises inbound tourism plus outbound tourism, that is to say, the activities of resident visitors outside the country of reference, either as a part of domestic or outbound tourism trips and the activities of non-resident visitors within the country of reference on inbound tourism trips. (World_Tourism_Organization, 2008)

Type of Tourism

Types of tourism can be distinguished based on different criteria such as the criteria of the initial area and the destination, the criteria of number of participants, the organizational criteria etc. (Tureac & Turtureanu, 2010)

To avoid confusion, United Nations, World Tourism Organization had categorized types of tourism to make a clear understanding between all concerned and stakeholders. Therefore, types of tourism were categorized into 3 categories based on the importance and main purpose if travelling as below;

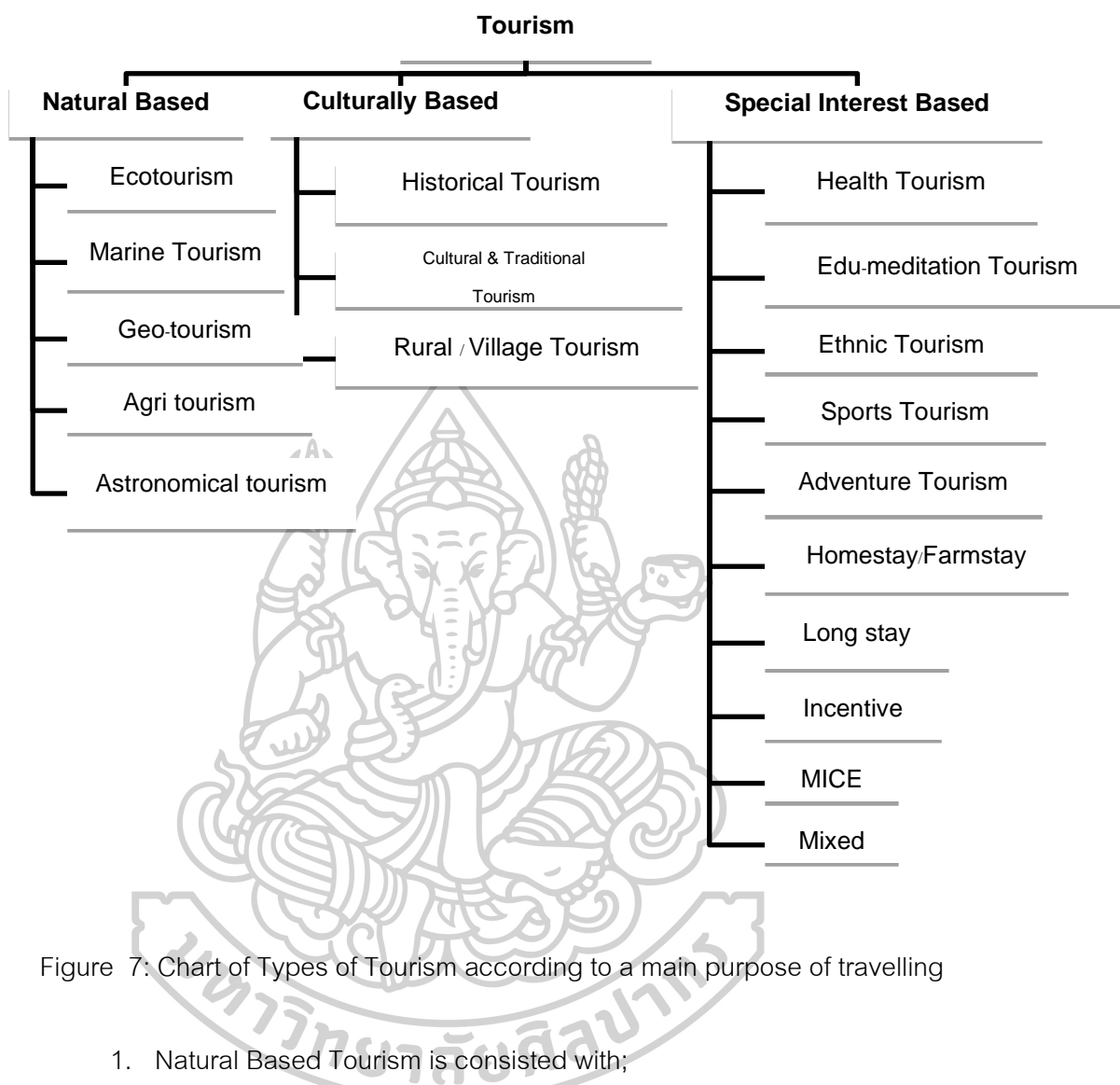


Figure 7: Chart of Types of Tourism according to a main purpose of travelling

1. Natural Based Tourism is consisted with;

Ecotourism – ecotourism was defined as a responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education" (Hunt, Durham, Driscoll, & Honey, 2015)

Marine Tourism - includes those recreational activities which involve travel away from one's place of residence which have as their host or focus the marine environment and/or the coastal zone. (Orams, 2002)

Geo-tourism - A form of natural area tourism that specifically focuses on landscape and geology. It promotes tourism to geosites and the conservation of geo-diversity and an understanding of Earth sciences through appreciation and learning. This

is achieved through independent visits to geological features, use of geo-trails and viewpoints, guided tours, geo-activities and patronage of geosite visitor centers. (Dowling & Newsome, 2010)

Agri tourism - is defined as any agriculturally based operation or activity that brings visitors to a farm or ranch. Agritourism has different definitions in different parts of the world, and sometimes refers specifically to farm stays, as in Italy. Elsewhere, agritourism includes a wide variety of activities, including buying produce direct from a farm stand, navigating a corn maze, slopping hogs, picking fruit, feeding animals, or staying at a bed and breakfast on a farm. (Elford, 2013)

Astronomical Tourism - is a potential attraction for visitors to destination areas where dark skies free from artificial light pollution can be enjoyed. This situation presents an opportunity for locations with specific product offerings such as astronomical observatories, (Robson, 2005; Weaver, 2011), auroral displays (Weaver, 2011), national/state/local parks, amateur astronomy organizations that offer public programs, and miscellaneous other providers. (Collison, 2012)

1. Cultural Based Tourisms can be divided as below;

2.1 Historical Tourism - refers to a kind of tourism, where the tour or tour group focuses on the history; history of some place, people, thing, or events. They go, see, study, discuss and experience places where historical things occurred. The places will be a portrayal of history of that country or the region and tells about the past happenings. (Ashworth, 2013)

2.2 Cultural and Traditional Tourism - is the subset of tourism concerned with a country or region's culture, specifically the lifestyle of the people in those geographical areas, the history of those people, their art, architecture, religion(s), and other elements that helped shape their way of life. (Development, 2009)

2.3 Rural/Village Tourism - is a form of tourism taking place in rural areas or settlements, providing employment and income to local population, and offering individualised holiday products to consumers. (Lane, 1994)

2. Special Interest Based Tourism is consisted with;

Health Tourism – or can be referred as a Medical tourism. Health Tourism is travelling for the purposes of improvement and/or maintenance of health. According to a definition given by Horowitz, Michael D. (Horowitz, Rosensweig, & Jones, 2007), It is the travel of people to a place other than where they normally reside for the purpose of obtaining medical treatment in that country. Traditionally, people would travel from less-developed countries to major medical centers in highly developed countries for medical treatment that was unavailable in their own communities.

Edu-meditation Tourism – is not a religion related but is meant for individual growth and for physical, emotional, intellectual, and spiritual balance. (Pongwiritton & Pakvipas, 2017)

Ethnic Tourism - is when travelers choose to experience first-hand the practices of another culture, and may involve performances, presentations and attractions portraying or presented by small, often isolated Indigenous communities. (Moscardo & Pearce, 1999)

Sport Tourism - is defined as a specific travel outside of the usual environment for either passive or active involvement in competitive sport where sport is the prime motivational reason for travel and the touristic or leisure element may act to reinforce the overall experience. (Pitts, 1999)

Adventure Tourism – can be defined as a leisure activity that takes place in an unusual, exotic, remote, or wilderness destination and tends to be associated with high levels of involvement and activity by the participants, most of it outdoors. (Richins & Hull, 2016)

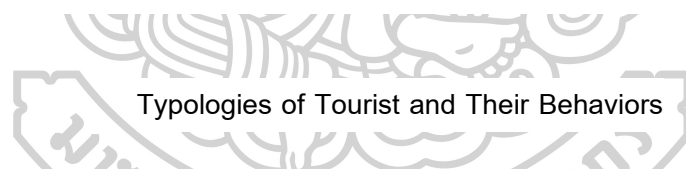
Homestay/Farmstay - is a cultural exchange in which a person visiting or temporarily staying in another country lives with a family in the host country.

Long Stay - is defined as pensioners from leading industrial nations who can travel to the destination countries of their choice and stay for periods between one month and one year in duration. (Acharya & Halpenny, 2013)

Incentive Tourism - is business-related travel that is designed to provide motivation or incentives to help businesspeople become more successful. According to the Incentive Research Foundation: "Incentive Travel Programs are a motivational tool to enhance productivity or achieve business objectives in which participants earn the reward based on a specific level of achievement set forth by management. Earners are rewarded with a trip and the program is designed to recognize earners for their achievements." (Swarbrooke & Horner, 2012)

MICE Tourism - Meetings, incentives, conferences and exhibitions, or Meetings, Incentives, Conferences, and Events (MICE) is a type of tourism in which large groups, usually planned well in advance, are brought together for a particular purpose. Recently, there has been an industry trend towards using the term 'meetings industry' to avoid confusion from the acronym. (Dwyer & Mistilis, 1999)

Mixed Tourism – this type of tourism is arranged by tour operators which a mixed types of tourism in order to provide tourists who have trip duration between 2 to 7 days. This form of travelling allows tourists to experience a different kind of tourisms such as eco-agro tourism, eco-adventure tourism or geo-historical tourism etc. (Varuch M., n.d.)



Category and a definition of tourists are varying between countries. Beside of word of "tourist", other terms such as "travellers", "excursionists" and "visitors" are commonly used to describe people traveling to destinations outside their own residences and working places. The meaning of those mentioned words is varied depends on authors but there is one thing in common which Education Bureau, the Government of the Hong Kong Special Administrative Region, had summarized each categories as below; (Personal, Social and Humanities Education Section, Education Bureau 2013)

1. Travellers

Any person who is taking a trip within or outside his/her own country of residence irrespective of the purpose of travel, means of transport used, even though he/she may be travelling on foot. Duration of a trip must be less than 24 hours or travelers

are not stay overnight at that certain place. This type of visitor can also refer to a group of travelers who are stop by one country for a transit flight.

2. Tourists (overnight visitor)

A tourist is a person who travels to destinations outside his/her residence and working place, and stays for at least 24 hours. The purpose of visiting can be either leisure or business. There are two types of tourist as below;

2.1 International Tourists; a visitor who visits another country and stays at least one night in a collective or private accommodation in the country visited.

2.2 Domestic Tourists; a visitor who stays at least one night in a collective or private accommodation in the place visited within his/her own country.

3. Excursionists (same-day visitor or day tripper)

An excursionist is a person who temporarily visits a destination and stays for less than 24 hours, for the purpose of leisure or business, but not a transit passenger.

3.1 International Excursionist; a visitor who does not spend the night in a collective or private accommodation in the country visited.

3.2 Domestic Excursionist; a visitor who does not spend the night in a collective or private accommodation in the place visited within his/her own country.

4. Any person travelling to a place other than that of his/her usual environment for a period not exceeding twelve months and whose main purpose of visit is other than the exercise of an activity remunerated from within the country visited.

4.1 International Visitor; any person who travels to a country other than that in which he/she has his/her usual residence but outside his/her usual environment for a period not exceeding twelve months and whose main purpose of visit is other than the exercise of an activity remunerated from within the country visited.

4.2 Domestic Visitor; any person residing in a country, who travels to a place within the country but outside his/her usual environment for a period of not exceeding twelve months and whose main purpose of visit is other than the exercise of an activity remunerated from within the place visited.

Apart from above categories of tourist mentioned, some authors had analyzed and identified a different, characteristic and demand of each tourist categories and classified them into groups. Below is a table of summarized selected main typologies of tourist and their characteristics and demands.

Five Components of Tourism (5As)

There are five main components of tourism that take accounts as basis features that requires by all tourist for a successful tourism according to a classification by Kharel & Khanal as below; (Kharel & Khanal,2011; Marahatta, 2012)

1. Attractions – Tourists are motivated to travel from their living place to other destinations. The attractions base in destination area is considered as a key factor that encourages people to travel to one destination. A tourist attraction is a place of interest that tourists visit for its inherent or exhibited cultural value, historical significance, natural or built beauty, or amusement opportunities (Australia, 2009). Some examples of attractions include exhibited cultural value, historical significance, natural or built beauty settings, or amusement opportunities.

2. Activities – Attractions are often supported by range of activities (Sunetra R., Archana B. and Vandana J., n.d.). Activities provide interesting or entertaining diversions for people once they are in the area. Activities add variety and can make a visit more enjoyable. Examples of activity are bird watching, wind surfing and water rafting etc. (Sunetra R., Archana B. and Vandana J., n.d.)

3. Accessibility – Accessibility means reach ability to the place of destination through various means of transportation. Transportation should be regular, comfortable, economical and safe (Ezeani Johnpaul E., n.d.). Globally, air transportation dominates a movement of international visitors. Other types of vehicle are also taking part in accessibility such as private car, boat or even by foot. (Sunetra R., Archana B. and Vandana J., n.d.)

4. Accommodation - It is a place where tourists can find food and shelter provided, he/she is in a fit position to pay for it. They can feel comfortable if the place can be affordable from their pocket. (Australia, 2009) By this place they decide their living duration according to the facility they have provided. There are various types of accommodation from a seven-star deluxe hotel to a normal budget class hotel. A variety in style and quality of accommodation in a region/ town provides an important means to increase the economic impact of visitors (Kharel & Khanal, 2011; Marahatta, 2012). Therefore, a successful accommodation development depends on building the right type of accommodation to suit the profitable market segment

5. Amenities – Amenities are services that require by tourists while they're on their trip. Facilities are very essential for any tourist centre. They are considered necessary aid to the tourist centre (Ezeani Johnpaul E., n.d.). Examples of amenities include public toilets, signage, retail shopping, restaurants and cafes, visitor centres, telecommunications and emergency services. Because many of the amenities are government services delivered by local, state and national agencies, a high degree of co-operation is needed, particularly where tourist services may be seen to be competing with the needs of local residents (Australia, 2009).

An Early Form of Travel

Since people had started find leisure, entertainment or to move from one place to other places, travelling had been begun. People in ancient time were travel for their pleasure and relaxation. Sometimes, it was not only for a pleasure but was made for a business or merchant also.

Travelling became more popular since an infrastructure, road and transportation were developed. In the beginning of 19th century, a huge development in field of transportation in Europe led to an enormous change in a form of travelling as it improved an ability to travel. People can move from one place to another place more

easily and this led to a new style of travelling. A period of travelling was shortening by a use of modern transportation technology and day trip was also becoming more popular than before. By this mentioned period, (Gyr, 2010), travelling was still remained the preserved of privileged part of population.

The Beginning of Mass Tourism until its Globalization

As mentioned earlier that in the beginning of 19th century, a travelling was seemed to be an activity for those aristocracy as they were seeking for their relaxation and to avoid from a crowded of the city. Until Thomas Cook, an entrepreneur in England, had started to offer an all exclusive price to reduce a cost of travelling in 1840, (Gyr, 2010). An emerging of all-inclusive price caused to a mixed clientele, not only for an upper class or nobility. People from a middle class, lower middle class and also a working class had a chance to start own trip with their own preferred budget.

As period of war had end, there was a rapid growth of an economic and technological progresses which result in a high level of competition and creation in new destinations and travelling styles. The factors that led a mass tourism to its change is various, including a urbanization, a construction of transportation and communication network, a shorter working hours helped people to have more times for leisure and relaxation. All those mentioned factors bring a travel industry to a high level of competitive. By the other means is an entrepreneur has to find a more distinctive and interesting product to sell.

A new way of travelling with an alternative

Apart from mass tourism which satisfied people in every ranges of social classes. There had come to a searching for other types of tourism, other forms of development, and other tourism practices with another relationship to the environment, host societies, more sustainable and more ethical (Brookfield, 1988; Butler, 1990; Smith and Eadington 1992; Bramwell, 1996; Wall, 1997; and Mowforth Munt, 2003; Theng, 2015).

Duterme (2007) had point out that beyond the economic issues, we must also consider the social and cultural dimensions, the relationship to the environment, the participation of host communities. Alternative tourism can be referred to many names for instance sustainable tourism, Ecotourism, Geo tourism and so on.

A definition of alternative tourism had been summarized as “By combining the various existing definitions, we can identify some essential and recurring traits such as environmental protection, cultural and social capitalization of the heritage, involvement of local people in project development and optimization of the economic benefits for the host community.”, summarized by Theng, Qiong and Tatar. (Theng, Qiong, & Tatar, 2015)

Definition of Senior Citizen

There are many researchers that showed an attempt to identify a definition of Senior Tourist. According to a report of World Population Ageing 2013 by Economic & Social Affairs, United Nations, had defined a word of older persons as those whom aged 60 years old and older. (Department of Economic and Social Affairs, United Nations, 2013) World Tourism Organization had defined a senior tourist as a tourist whom aged over 55 years old. (UNWTO 2005: 11-13; Hall 2006: 12-17) Barta (2009) presented that “The American Association of Retired Persons within the US (the largest seniors’ organization in the world), and their Australian equivalent, the National Seniors Association, along with other researchers, define seniors as those who are 50 years of age or older (Bartos, 1983; Lewis, 1996; Ostroff, 1989; Silver, 1997)”. From a study of Le Serre (2008), had summarized a various given definitions of senior tourist as “(1) people aged 50 and over (Lavery, 1999; Anderson and Langmeyer, 1982), or (2) people aged 55 and over (Javalgi et al., 1992; Shimet al., 2005), or (3) people aged 60 and over (Cleaver and Muller, 1998; Muller and Polle,2001; Goulding, 2002, or (4) people aged 65 and over (Heslop, 1987; Bernhardt and Kinnear, 1976; Barak, 1982), or (5) people who are retired (Tamaro-Hans, 1999), or finally, (6) people who are experiencing biological, psychological and social ageing (Belk Smith and Moschis, 1989; Guiot, 2005).”

In Thailand context, according to the Act on Older Persons B.E. 2546 (2003 A.D.), an older person means whom is aged 60 years old and above. In a respect of definition given by National Statistical Office, senior citizen can be divided into two groups which are 1) Primary stage of senior citizen means as an elderly who are aged between 60 – 69 years old and 2) Secondary stage of senior citizen which can be referred as an elderly who are aged over 70 years old.

In conclusion, from all definitions mentioned above, researcher decided to define a word of senior people according to a definition by United Nations that referred to people whom aged 60 years old and over.

Difference and Uniqueness of Senior Tourism

A characteristic of senior tourist had drawn an attention from many entrepreneurs because of the market size and its potential for growth (Horneman, Carter, Wei, & Ruy, 2002; Batra, 2009). As a number of senior citizens have been continue increasing in developed countries and in many developing countries have also faced a circumstance of increasing number of senior citizens. Senior or mature travelers are already important to the tourism industry, and they will grow in importance as the segment grows in size and wealth (Reece, 2004)

Esichaikul (2012), has reported that because of the longer lifespan and greater numbers of seniors who are educated, healthy and self-sufficient members of society, together with larger discretionary income, may encourage them to participate in society and leisure activities such as overseas travel (Sellick and Muller, 2004). Furthermore, time flexibility after retirement; they have plenty of time to spend for their own pleasant. They do not have to plan a trip for only for a seasonal occasion or holiday. This makes the senior market more attractive to tourism businesses that suffer from seasonal demand fluctuations (Jang and Wu, 2006). The senior market has been cited as one of the most important consumer segments of the tourism industry. (Shoemaker, 2000; Bai et al., 2001; Horneman et al., 2002; Jang and Wu, 2006).

Accessible Tourism – An Access to all people

United Nations had launched a campaign of “World Tourism Day 2016” under theme “Tourism for all-promoting universal accessibility” to encourage the awareness of a tourism which can be enjoyed equally by everybody, regardless of one’s disability (World Tourism Organization, 2016) Facilitating travel for people with disabilities is therefore not only a human rights imperative, but also an exceptional business opportunity. Therefore, to pay more attention into a small detail of this market segment would be highly benefit to all stakeholders, not only for an entrepreneur.

There is no universally accepted definition of “Accessible Tourism”. According to a definition define by United Nations, World Tourism Organization (UNWTO), “Accessible Tourism” which also known as “Access Tourism”, “Universal Tourism”, “Inclusive Tourism” and in some countries such as in Japan “Barrier-free Tourism” is tourism and travel that is accessible to all people, with disabilities or not, including those with mobility, hearing, sight, cognitive, or intellectual and psychosocial disabilities, older persons and those with temporary disabilities" (Takayama Declaration - Appendix, UNESCAP, 2009)

Further than that, “Accessible Tourism” also refers to tourism that caters to the needs of a full range of consumers including persons with disabilities, older persons and cross-generational families. It entails removal of attitudinal and institutional barriers in society, and encompasses accessibility in the physical environment, in transportation, information and communications and other facilities and services. It encompasses publicly and privately-owned tourist locations." (Takayama City and UNESCAP Conference - Press Release - Takayama, 2009)

From the meaning given above, it is important to ensure that everyone has a same vision and attitude that accessible tourism is not only a matter to people with disability but also for everyone in a society. Thus, it is very important that we have an eye on the matter of accessibility and take it as a serious matter as disabled people, they also have the right to live and enjoy their life as others.

Universal Design

A matter of accessibility is one of the most interesting issues among people in various ages. As a population in this world is getting older and they are becoming a majority population, especially in developing countries. In many developed countries had faced with an issue of aging society and had developed facilities to support those people. In the meanwhile, developing countries still attempt to find a way to handle with those requirements.

Universal Design had been adopted in many countries in order to support the needs of senior and disabled people. Universal Design is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people. An environment (or any building, product, or service in that environment) should be designed to meet the needs of all people who wish to use it (Centre for Excellence in Universal Design, National Disability Authority, Ireland, 2014). This is not a special requirement, for the benefit of only a minority of a population. It is fundamental of good design. If an environment is accessible, useable, convenient and pleasure to use, everyone benefits. By considering the diverse needs and abilities of all throughout the design process, universal design products, services and environments that meet people's' needs, simply put, Universal Design is a good design. (Centre for Excellence in Universal Design, National Disability Authority, Ireland, 2014)

The 7 Principles of Universal Design

The 7 principles of Universal Design were developed in 1997 by a working group of architects, product designers, engineers and environmental design researchers led by the late Ronald Mace (Design Pioneer, internationally recognized Architect) in North Carolina State University (Centre for Excellence in Universal Design, National Disability Authority, Ireland, 2014)

Universal design intended to create environments that are usable by all people. While considerations for people with disabilities are certainly necessary for universal design, they are not sufficient when planning and designing for the whole

population. Accommodating the needs and wishes of everyone – e.g., children, the elderly, women and men – is also necessary for universal design (Norwegian State Council on Disability, 1997; Bringa, 2001)

The 7 principles of Universal Design consist with;

1. Equitable to use – the product is useful, marketable to people with diverse abilities, provides the same means of use to all users. Avoid segregating or stigmatizing any users. Make provision for a privacy, security and safety equally available to all users

2. Flexibility in Use – the design accommodates a wide range of individual preferences and abilities. Provides choice of method to use, accommodate right-or left-hand to use, facilitate the user's accuracy and precision, provides adaptability to the user's pace

3. Simple and Intuitive Use - use of the design is easy to understand, regardless of the user's experience, knowledge, language skills or current concentration level. Eliminate unnecessary complexity, be consistent with user expectation and intuition, arrange information consistent with its importance, provide effective prompting and feedback during and after task completion

4. Perceptible Information - the design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities. Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information. Maximize "legibility" of essential information, differentiate elements in the way that can be described, provide compatibility with variety of techniques or devices used by people with sensory limitations

5. Tolerances for error - the design minimize hazards and adverse consequence of accidental or unintended actions. Arrange elements to minimize hazards and errors, provide warnings, provide fail features, discourage unconscious action in tasks the require vigilance

6. Low Physical Effort – the design can be used efficiently and comfortably and with a minimum of fatigue. All user to maintain a neutral body position, use reasonable operating forces, minimize repetitive actions and minimize sustained physical effort

7. Size and Space for Approach and Use – appropriate size and space is provided for approach, reach, manipulation and use regardless of user's body size, posture or mobility. Provide a clear line of sight to important elements or any seated or standing user, make reach to all components comfortable for any seated or standing user, accommodate variations in hand and grip size, provide adequate space for the use of assistive devices or personal assistance.

Source: The Center for Universal Design, College of Design, North Carolina State University



Figure 8: An example of Universal Design

Source: Enabling Village, SB Village 2015

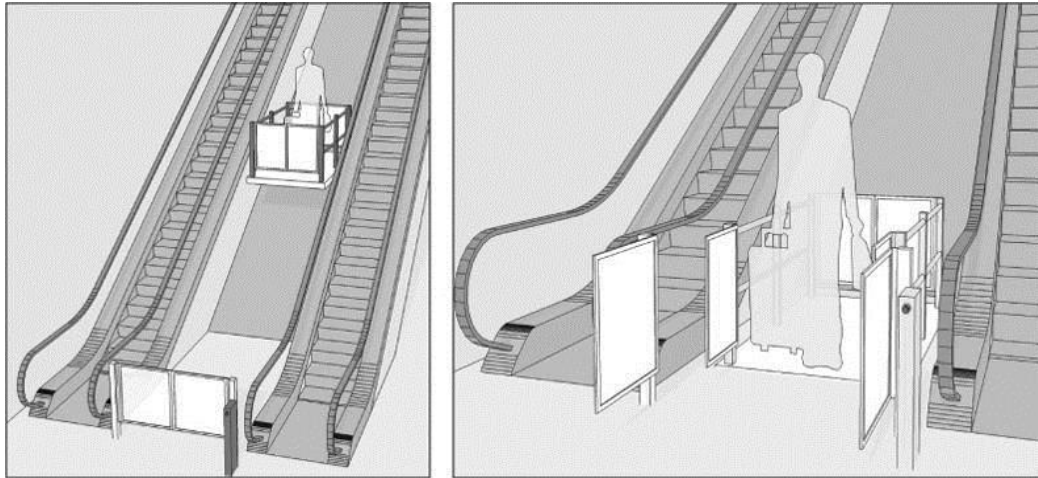


Figure 9: An example of Universal Design

Source: Center for Inclusive Design and Environmental Access, 2010

Programme related Universal Design; including an in-house training to extend knowledge and understanding through all staffs. An Initiative Programme “Service Officer”, is aimed to train and qualified staffs with more than 326 certified staff places through all 42-domestic airport by JAL.



Figure 10: An example of Universal Design by Japan Airlines

Source: Japan Airlines, n.d.

Another example of an attempt to create a Universal Design city where everyone can live equally is New York City. The Mayor’s Office for People with Disabilities (MOPD) was established in 1973 to assist implementation of City compliance with disability-related laws. According to the study of Gary Scott Danford (Danford & Tauke,

2001), They implement on 7 Principles of Universal Design and focus on 6 main occupancy types which are;

1. Cultural Facilities; New York has a lot of museums, gardens and galleries for all visitors

2. Public assembly and Entertainment Facilities; Whether it is a music hall, a Broadway theatre or a major league baseball park, all the people should be able to find enjoyment and entertainment in these often-world-renowned facilities.

3. Participant Sport and Recreation Facilities; such as recreation center, playground, jogging and bicycle path, all these mentioned must be able to use by all people equally

4. Temporary Lodging; Hotels/motels and shelters are two forms of temporary lodging that are particularly important to life in large urban centers. New York City's many fine hotels/motels are there to ensure that all its visitors and guests are welcome. Its public and private shelters provide the safety net that reflects the City's concern for the welfare of all its citizens.

5. Workplace Facilities; Ensuring all its citizens the ability to access and use such facilities, whether offices or factories, retail stores or assembly lines

6. Human Service Facilities; such as community centers, child-care centers, senior centers, etc., are places where all people come to participate in programs that enrich their lives. Other human service facilities (e.g., police stations) are places that all people turn to for safety and security.

In many developed countries which their major citizens are senior people or so called "Aged Society", they had prepared themselves to be ready to serve the needs of those senior citizens. There is an Access City Award 2016 by European Commission which the prize for European cities that making cities more accessible to people with disabilities and older citizens. The award showcases excellent efforts of cities across the

continent to become better places to live for all people. This award had been started since 2010 with more than 250 cities participated in with the aim is to promote accessibility in the urban environment for Europe's growing population of older people and people with disabilities. The award winner Access City of 2016 was Milan, Italy, Chester from United Kingdom in 2017 and Lyon of France in 2018 consequently. (Directorate-General for Employment, Social Affairs and Inclusion (European Commission) ,2016)

In 2011, Milan adopted the principles of United Nations Convention on the Rights of Person with Disabilities and made a commitment to develop a new culture of accessibility and a strategic integrated approach to delivering the concept of "City for All".

Who is benefited by Universal Design?

As mentioned, Universal Design dose not only benefits to a specific group of senior or people with disability but benefits all. Universal Design is an approach of design by human-centred. The design is user-friendly and convenient but still respects human right, dignity and privacy. Due to a degree of difficulty people experience when using a product, service and environment is vary as below (Centre for Excellence in Universal Design, National Disability Authority, Ireland, 2014);

1. People who has no significant problems but appreciated with a well-design, accessible and useable product, service and environment
2. People who has little difficulty with all features
3. People who has difficulty with some features
4. People who has trouble with most features
5. People who is unable to use product, service and environment at all

Therefore, to response back to the needs of these people would be highly benefited to both individual, society and business level. Universal Design is creating an ability to people of all level to live independently. It assumes that the range of human

ability is ordinary, not special (Elaine Ostroff, 2001). Especially in the aged of technology, skills to participate in society's activity becomes more complicated as people who find it is difficult to adopt technology will have to take a risk of being excluded from many society' activities. In order the facilitate people with differing abilities, of differing ages and sizes within society, systems and building must be designed with the user at the centre of the design process. A universally designed environment promotes equality and makes life easier and safer for everyone. (Centre for Excellence in Universal Design, National Disability Authority, Ireland, 2014) Therefore, it increases an ability of one to live independently by using a Universal Design to help them live conveniently and adapt themselves to technology in order to participate in any society' activities.

Apart from individual and society who is benefited by the Universal Design, a business sector also has a chance to get benefits from it as well. The benefits for business from adopting Universal Design is vary from increasing market chance to increasing customer's satisfaction and retention. A business that positively contributes to society by incorporating a universal design approach is likely to receive a reputation for having a high level of corporate social responsibility. (Centre for Excellence in Universal Design, National Disability Authority, Ireland, 2014)

From the above, a benefit of Universal Design is not only provided to those people with disability or senior people but people with all ranges of ability. Moreover, society and business sector also benefited by this as Universal Design encourages people with any ranges of ability to participate in any society's activities. Therefore, to push forward a Universal Design to serve facilities that serve the needs of everyone equally is something that would be benefit for all.

Pattaya's Background and History

Before Pattaya became a world class tourism destination likes these days Pattaya used to be a small fishing village with a 3-kilometer-long lined of the coast, located in Naklua sub district, Banglamong district, Chonburi province. While in a period of land trading in Thailand, Pattaya caught an interesting of many upper classes. To build

up an advantage of the land they bought, therefore most basic public utility such as roads, electricity and water in Pattaya was conjoined and improved by various divisions and its landscape was adjusted to reveal the beauty of the beaches and the sea of Pattaya. The first road in Pattaya was “Pattaya-Naklua Road” which ran from Naklua Market straight to the beaches.

Pattaya's name originated from the march of Phraya Tak (later was known as King Taksin) and his followers from Ayutthaya to Chanthaburi just before the fall of the former capital, Krung Sri Ayutthaya, to the Burmese invaders in 1767.

When Phraya Tak's army arrived at the vicinity of what is today's Pattaya, he encountered the troops of Nai Klom who tried to intercept him. But when the two leaders met face to face, Nai Klom was awed by Phraya Tak's dignified manner and his army's strict discipline. And he surrendered without a fight. The place the two armies confronted each other, was later called Thap Phraya, which means the Army of the Phraya. This was changed to Phatthaya, which happens to mean the wind blowing from the southwest to the northeast at the beginning of the rainy season. Today the spelling of the name has been simplified to Pattaya.

First step of Pattaya to become a world-famous tourist town

The fame of Pattaya as a dream destination for tourists among the world had begun with the start of the first road, Pattaya-Naklua Road. Not so long after a completion of the road construction, a news reporter from Ploenchit Newspaper together with some famous authors had arranged a trip to visit Pattaya. They were impressed by the aesthetic of natural beauty of the Pattaya beaches. Soon after getting back from the visit, the article about Pattaya beaches and its beauty had published widely. This had been a starting point of spreading Pattaya beauty throughout the country. (Office, n.d.)

The actual starting point of being a world-famous tourist city of Pattaya was in 1959 when Government of Thailand had an agreement with American Troop in using U-Tapao airport as their base during the Vietnam War. On 29 April 1961, the first group of about 100 American servicemen who would join the Vietnam War arrived in Pattaya for

relaxation. Soon, Pattaya became Thailand's premier and most successful beach resort which annually attracts hundreds of thousands of visitors. Fishermen's huts along the beach were replaced by a full range of accommodations from high end luxurious hotels to bungalows and budgeted guesthouses. Fishing vessels were adapted to become tourist boats. Then, the quiet beaches are full of swimmers and sunbathers from various parts of the world. Places of nighttime entertainment have also sprung up and are popular among international tourists. (Magazine, n.d.)

Pattaya City – More than just an ordinary travel destination

Pattaya City is now working on improving and developing their city to be “a pleasant travel destination (Muang Tong Tiew Na Yoo)” which means that Pattaya would be more than just an ordinary travel destination. They prefer tourists to have an impression and experience a service mind of Pattaya people since their first time visiting and would love to revisit again. They also expect tourists to stay longer and find a potential of investing and running business in Pattaya.

Apart from that, Pattaya also selected by Department for Empowerment of Person with Disabilities to be a pilot city in a dimension of facilities and environment management for senior and disabled people. This policy is supported by many governments' organizations. Pattaya City aims to be a dream destination for this special segment of market in Asia Pacific region by making an adjustment on environments and facilities provided for senior and disabled people.

In an International Conference on Accessible Tourism 2007 in Bangkok with more than 400 participants from countries around the world had been pursuing the topic of disability and tourism from the perspective of development. Scott Rains, an American travel writer, consultant, and advocate for disabled people had attend this forum and express his concern that a development in Asian context brought in a new set of partners, issues, and competencies because of the sheer geographic size and cultural diversity of Asia together with the solid foundation for Inclusive Tourism previously set by UNESCAP

in the ASEAN region made ICAT 2007 a very powerful impetus worldwide. (Rains, 2007) He also had been working together with many institutions in Thailand for example Srinakharinwirot University and especially the Redemptorist Vocational School for the Disabled - Pattaya, and the mayor of Pattaya city in order to make Pattaya a destination of choice for travelers with disabilities. Moreover, there are few hotels in Pattaya that provide an accessible room to facilitate tourists who need a special care.

A-one Pattaya Beach Resort is one of those examples. It is the first wheelchair friendly resort in Pattaya. A-ONE Pattaya Beach Resort has been built with an idea of easy wheelchair access in mind, starting from construction to the final interior decorations and amenities. There has a ramp from the car park under the building will give wheelchairs easy access to the main lobby where guest can check-in very convenient as it is seated, not standing as in most hotels. The Elevator has a control panel that is accessible from wheelchair point of view. Also, the whole menu is written in Braille for the sight-disabled. In the guestroom, there is plenty of space to maneuver and there are no unpleasant steps down or up anywhere in our wheelchair friendly resort. There is wheelchair access without using the lift, means that the fire emergency exit can be used by wheelchair access as well. From all features mentioned, the A-ONE has won prizes to praise their awareness on the needs of senior and disabled tourists.

Moreover, Thailand Tourism Authorization or TAT also support and encourage Thais to travel through Thailand, including group of people with any ranges of disability. By constructing a slope down to the beach and for those with visual disability, there will be a guide provide to describe a scenario for them to increase an ability to imagine of beautiful scenery of Pattaya beach for them. Since Pattaya was selected to be a pilot city of Universal Design or called as "Pattaya Model" in 2009. Many of hotel owners and entrepreneurs are active and response to the government organization's policy. They started to develop their hotels to serve the needs of people with all ranges of ability.

From all mentioned above, Pattaya is now working how to develop their city to a friendly tourism destination for senior and disabled tourists as per a policy of Pattaya Model. In this study, researcher aims to examine factors that affect to the tourists'

satisfaction on facilities providing to senior and disabled tourists and how Pattaya City could develop their area of North to Central Pattaya Beach Road to serve the needs of those special needed segment of tourists.

A Circumstance of Universal Design in Thailand; its opportunities and obstacles

Thailand had encountered with a circumstance of Population Ageing with a rapid growth during these past years. This is a result from a great development of medical technology that extends a higher quality of life and life span of Thai populations. A number of elderly people have increased continuously and further than that Pornwitoo K., 2014 had quoted in her academic writing from Krissana L., 2013 that a Universal Design is an important issue among many countries in the world as world populations are now changing into a senior and people who have a physical challenge will also increasing not by a congenital disorders but mostly by illness, accident and senility. Moreover, nowadays, Universal Design becomes as one of a social norm that indicates a social civilization in each country. (Khoukachaporn, 2014)

As Thailand is officially one of a member of Asean Economics Community (AEC) since the beginning of 2016. Therefore, to show the readiness of Thailand on being a tourism destination to welcome all tourists from all over the world, a design that is able to response to the needs of people with all length of ability is a thing to do. Thai's government also support by launched many laws and regulations to develop and extend a well-being to those populations whom have a disability (Krissana L., 2013; (Khoukachaporn, 2014). Further than that, there is collaboration among groups of disabled people that creating an advantage and helping in pushing forward a concept of Universal Design to be widely known by all people. Therefore, this is a great opportunity for Thailand to develop our country to be a tourism destination that meets the need of tourists with every length of ability.

Vice versa, there are also some obstacles on implementing the idea of Universal Design to any public places in Thailand such as a limitation on budget which leads to a delay of an implementation, also a principle of Universal Design is not a

mandatory to all related government organizations, therefore an implementation is still limited. (Khoukachaporn, 2014)

There are many communities in Thailand that had been selected as a pilot city to implement or adopt a Universal Design into their areas. This project was originally led by the Ministry of Social Development and Human Security or MSDSH of Thailand with objectives of creating a pilot city with Universal Design that facilitates everyone in the society and allows them to live independently, conveniently and safely under the environment that is completely without any obstacles for them. It is also to promote awareness and understanding of the importance of Universal Design among the community members.

The success factors of this project are below;

1. The executive committees of the area must place an important of this project and communicate to related organisations to ensure that everyone has the same understanding and awareness.
2. The readiness and existing facilities of the area of development are also very important to the success of this project. These factors are including with an understanding and awareness from the local executive committees and also the existing facilities that have a potential for development. If the area is having these factors, there is a high possibility of having a successful development of Universal Design into the area.
3. A contribution from every segment in the community also helps in driving a policy into a tangible environment. It should start with the interview or questionnaire to obtain feedback and opinion from the community members toward the usage and design of the public area before starting the planning process. However, the development of Universal Design must be planned carefully with educational institutes, scholar or the Universal Design experts to ensure that the design will follow through the principles of Universal Design and it must be useful for everyone in the community.
4. Budget is definitely a crucial part of any development plan. It could be an integration between budget from the government and private

sector, also a contribution from people in the community could help to this project to be achievable.

There are 3 communities that have been selected to participate in this “Universal Design Community Model” which are 1) Koh Kret, Nonthaburi Province 2) Khon Kaen Province and 3) Nan Province. In this part, researcher would like to present and discuss based on the “Koh Kret Model”.

An Existing Model of Universal Design in Thailand: Koh Kret Universal Design Community Model

Koh Kret is an island in the Chao Phraya River, one of most famous tourism sites in Nonthaburi. In 2015, government had an initiative in developing Koh Kret as a model of Universal Design Community in response to the policy of Minister of Social Development and Human Security that focus on upgrading the quality of life of the people, especially persons with disabilities, senior citizens, and the underprivileged.

With the goal of allowing the disabled and the elderly to live as conveniently as normal people do, the Ministry of Social Development and Human Security is considering expanding the universal design project to other provinces, especially those with major tourist attractions.

The project began in December 2014, budget was allocated to improve and modify various facilities to make travel easier for people with disabilities, as well as older person. With facilities accessible to them, they will be able to carry out their various activities safely, without posing burdens to society and people around them.

In 2016, Nonthaburi province is expanding the number of areas with facilities and services that are accessible to all users, such as ramps and public toilets for people who travel on wheelchairs and those who require supporting equipment. Facilities and structures around the mass transit system have also been improved.

Khon Kaen Universal Design Project

The other useful example is from Khon Kaen province which called as “Khon Kaen Universal Design Project”. It consists of 9 missions which are;

1. Rise up the awareness; assign a Brand Ambassador of the project to create awareness and understanding regard to Universal Design among community members. Also, arrange a public hearing session to get opinion and feedback from disabled and senior people.

2. Training community mechanics; to promote skills and knowledge of Universal Design into the design and planning process. This process included the mechanics from the local administrative organisations, volunteers from the community, representatives of the group of disabled people in the area, communities’ leaders, scholars and other related support organisations.

1. Municipal Office Adjustment and Management; the municipal office was developed at this stage as a pilot building because it is the place that welcome everyone in the community. It should be designed and developed to facilitates everyone regardless of the physically abilities.

2. Pilot scheme in selected area; to develop footpath and ramps in selected area such as Na Muang road, Sri Chan road, Klang Muang road and Thetsaban Nakhon Khon Kaen Youth and Family Center or UYFC. There was also an installation of an elevator to an overpass in front of the Medical Education Centre, Khon Kaen Hospital for a

convenient and safety of a senior, disabled or a patient who comes to a hospital.

3. Development for Thung Sang Health Park; it is a place where people can gather for their relaxation or do some exercise. This development is to assure that everyone will find convenience, safety and pleasure visiting this park. A public toilet with amenities and the design that follows the principles of Universal Design was built and also ramps and walkway for senior and disabled people.

4. Expanding a network; in this mission, it consists of 21 cooperated organisations to achieve a goal of Universal Design adoption into each area of the community. The 21 organisations are consist of schools, hospitals, religious institutes, administrative organisations and etc.

5. Enhancing public welfare for senior and disabled people; by taking care of the healthcare service, providing supplies to the shelter and the rights of senior and disabled people.

6. Improvement of a vehicle for senior and disabled people;

7. Budget Management for the community to develop a Universal Design environment for all.

CHAPTER 3

RESEARCH METHODOLOGY

This thesis is a descriptive research presented by the mixed methodology which consist with site observation, questionnaire and interview methods in order to find out the research problems and objectives. The research consists of the following points;

1. Research design
2. Data Sources
3. Population
4. Research instruments
5. Data collection
6. Data verification

RESEARCH DESIGN

This research design is the research methodology planning process system which uses the mixed methodology in order to find the answers to research questions, and also research objectives of examining characteristics of facilities that meet the needs of senior tourist and to analyze a possibility of develop the area of North to Central Pattaya Beach Road to be a tourism destination for senior tourists and also tourists with disabilities. The 7 principles of Universal Design will be adopted as a main theory to analyze a potential of one's area on being a friendly tourism destination for senior and disabled tourists. The researcher will use an observation and interview to collect data which will use to analyze a potential of

Pattaya city in developing to be a tourism destination that serve the needs of senior tourist and develop a model and a guideline for the area of North to Central Pattaya Beach Road.

DATA SOURCES

There are two sources of data that will be collected which is primary data and secondary data for data reliability and validity.

1. Primary Data Sources

As this thesis was designed by mixed method, therefore, primary data will collected from the interview with all stakeholders who are involved in the area of North to Central Pattaya Beach road such as local residents, concerned organisation officers and senior tourists including disabled tourists in the area of study. Apart from that, an observation or a filed survey will take place in order to investigate and examine a form of existing facilities in the area of North to Central Pattaya Beach Road that serve the need of senior tourists and to seek for some points that need a development.

Questionnaire are to be distributed to senior and disabled tourists in the area of research to gain a precise opinion and feedback from the users who are really in need of using facilities with Universal Design.

2. Secondary Data Resources

The process to gather all necessary information will be by literature review from vary sources such as textbooks, journals, researches, article and news from internet which related to research area. In order to find out a definition and an important of senior tourists market, a principle of Universal Design and other theory and information concerned with research topic. Documents and information from both private sector and public sector and other stakeholders will be used to identify a form of facilities that match with the needs of senior tourists and also to analyze potential of Pattaya City in the area of North to Central Pattaya Beach Road on being a friendly tourism destination for senior tourists including tourists with disabilities, also in order to organize a model of Universal Design for senior tourists.

POPULATION

The targeted participants are classified into three groups which are government organisations, supporting organization and senior tourists in area of research (including tourists with disabilities). The interview will be used to gain necessary information that will use to analyze a potential to develop the area of research to be a friendly tourism destination for senior tourists. Different types of interview will be used with different groups of informants. A structure is as below;

1. Government Organizations will use a structure interview with organizations as below;
 - 1.1 Tourism Authority of Thailand (Pattaya Office)
2. Non-government organization
 - 2.1 Designated Areas for Sustainable Tourism Administration (Public Organization) (DASTA)
 - 2.2 Thai Hotel Association – Eastern Chapter (THA-E)
3. Senior tourist including disabled tourists in the area of research

SAMPLE SIZE AND SAMPLE METHOD

To identify a sample size of senior tourists, including disabled tourists, in the area of research, researcher decided to use a Simplified Formula for Proportions, which was developed by Taro Yamane in 1967.

The formula from Yamane is;

$$n = \frac{N}{1 + N(e)^2}$$

This formula can be used to determine the minimal sample size for a given population size. Where: n = sample size, N = population size and e = the level of precision. This formula assumes a degree of variability of 0.5 and a confidence level of 95%.

At the level of precision (e) at 95% with the population at 100,000 units and above, a sample size will always equal to 400 units. When the level of precision (e) at 90% and a population is at 20,000 units and above, a sample size will equal to 100 units.

Size of Population	Sample Size (n) for precision (e)	
	±5%	±10%
500	222	83
1,000	286	91
2,000	333	95
3,000	353	97
4,000	364	98
5,000	370	98
7,000	378	99
9,000	383	99
10,000	385	99
15,000	390	99
20,000	392	100
25,000	394	100
50,000	397	100
100,000	398	100
>100,000	400	100

Table 2: Taro Yamane, Sample Size Proportions at a confidence level at 95% and 90%

A statistic number of senior tourists, including disabled, both from domestic and international that visit Pattaya city in each year was not recorded by the concerned organization. Therefore, researcher decided to collect questionnaires from 400 senior and disabled tourists in the area of research. The researcher will use a non-probability sampling, a purposive sampling method to identify a sample unit by choosing tourist in the area of research who are at 60 years old and above, also including those with disability as well.

RESEARCH INSTRUMENT

Questionnaires were distributed to senior and disabled tourists in the area of research to obtain the feedback and point-of-view from the real users. Their feedback

could be a valuable resource in order to develop a model of Universal Design for the area of research.

This thesis aims at studying the qualitative research that is related with the concerned literature reviews and evidences. The qualitative method is showed by the interview with relevant stakeholders and their opinions after the observation on the area of research which is north to central Pattaya beach road to support the model and guideline of Universal Design for senior tourists.

An in-depth interview with stakeholders

A semi-structured, in-depth interview was used as a research instrument to seek for a point of view and comments from various stakeholders concerned with a potential of an area of North to Central Pattaya Beach road.

Questions concern with research question and objective, dividing into 3 points, composed of 16 questions of the in-depth interview as the following points:

1. The significant and characteristics of Universal Design
2. The potential of existing facilities and infrastructures in the area of research that are able to develop according the 7 principles of Universal Design
3. The guideline for adopting Universal Design to tourist attractions

Points of Question	Question
1. The significant and characteristics of Universal Design	1. Do you clearly understand the characteristics of Universal Design to tourist attractions? Please explain.
	2. What is a significance of Universal Design for tourism, especially to those senior and disabled tourists?

Points of Question	Question
	3. What is the significance of Universal Design involves with developing tourism sites such as the area of North to Central Pattaya beach road?
	4. How can Universal Design be an advantage to all stakeholders?
	5. Who are the respondents of developing and adopting Universal Design to the area of research?
	6. Who will be benefited by developing and adopting Universal Design to the area of research?
2. The potential of existing facilities and infrastructures in the area of research that are able to develop according the 7 principles of Universal Design	7. How can the existing facilities and infrastructures serve the needs of tourists?
	8. What is strength of existing facilities and infrastructure in the area of research? And why?
	9. On the other hand, what is a weakness of the existing area of research? And why?
	10. Why should we develop the existing facilities and infrastructure according to the 7 principles of Universal Design, in your own opinion?
	11. How should the existing facilities and infrastructure be developed to serve the needs of senior and disabled tourists?
	12. According to the 7 principles of Universal Design, what should be developed first in order to serve the needs of senior and disabled tourists?

Points of Question	Question
	13. Are there any obstacles in developing this area to be a friendly tourism destination for senior and disabled tourists? Please clarify and explain.
3. The guideline for adopting Universal Design to tourist attractions	14. How can we improve the quality of existing facilities and infrastructures in the area of North to Central Pattaya beach road to serve the needs of senior and disabled tourists?
	15. How can stakeholders participate in adopting and developing the area of North to central Pattaya beach road to be a friendly tourism destination for senior and disabled tourists?
	16. What is a guideline for adopting Universal Design to develop an area of North to Central Pattaya beach road to be a friendly tourism destination for senior and disabled tourists?

Table 3: In-depth interview questions

Stakeholders' opinions after the observation in the area of North to Central Pattaya Beach Road

Opinions after observation done by the relevant stakeholders in the area of research will be conducted as to understand the stakeholders' opinions and expectations for overall facilities in the area and their readiness to serve the needs of senior and disabled tourists. The researcher has adopted 5-point Likert scale as a checklist based on 7 principles of Universal Design developed by Advisory Committee on Accessibility (ACA), Access Design Subcommittee in 2010. A commonly used 5-point Likert scale format to measure satisfaction after the observation is applied, starting from "Very

Satisfied (5)", "Satisfied (4)", "Neither Satisfied Nor Dissatisfied (3)", "Dissatisfied (2)", and ending by "Very Dissatisfied (1)" respectively, as outlined below.



Principle	Design	Rating Scale				
		5	4	3	2	1
Principle 1: Equitable Use	The design is useful and marketable to people with diverse abilities.	5	4	3	2	1
1A)	Provide the same means of use to all users.					
1B)	Avoid segregating or stigmatizing any users.					
1C)	Provision for privacy, security and safety should be equally available to all users.					
1D)	Make the design appealing to all users.					
Principle 2: Flexibility in Use	The design accommodates a wide range of individual preferences and abilities.	5	4	3	2	1
2A)	Provide choice in methods of use.					
2B)	Accommodate right or left-handed to use					
2C)	Facilitates the user's accuracy and precision					
2D)	Provide adaptability to the user's pace					
Principle 3: Simple and Intuitive Use	Use of the design is easy to understand, regardless of the user's experience, knowledge, language's skill or current concentration level.	5	4	3	2	1

Principle	Design	Rating Scale				
		5	4	3	2	1
3A)	Eliminate unnecessary complexity					
3B)	Be consistent with the user expectations and intuition					
3C)	Accommodate a wide range of literacy and language skills					
3D)	Prioritize based on importance					
3E)	Provide effective prompting and feedback during and after task completion					
Principle 4: Perceptible information	The design communicates necessary information effectively to the user, regardless to the ambient conditions or the user's sensory abilities.	5	4	3	2	1
4A)	Use different modes of communication (pictorial, verbal, tactile) to present an essential information					
4B)	Provide adequate contrast between essential information and its surrounding					
4C)	Maximize legibility of essential information					
4D)	Differentiate elements in ways that can be described (i.e. make it easy to give directions and instructions)					

Principle	Design	Rating Scale				
		5	4	3	2	1
4E)	Provide compatibility with a variety of techniques and or devices used by people with sensory limitations.					
Principle 5: Tolerance for error	The design minimizes hazards and the adverse consequence of accidental or unintended actions.	5	4	3	2	1
5A)	Arrange elements to minimize hazards and errors: most used element, most accessible, hazardous elements eliminated, isolated or shielded.					
5B)	Provide warning of hazards and errors.					
5C)	Provide fail-safe features.					
5D)	Discourage unconscious actions in task that require vigilance.					
Principle 6: Low physical effort	The design can be used efficiently, comfortably and minimum of fatigue.	5	4	3	2	1
6A)	Allow user to maintain a neutral body position.					
6B)	Use reasonable operating forces.					
6C)	Minimize repetitive actions.					

Principle	Design	Rating Scale				
		5	4	3	2	1
6D)	Minimize sustained physical effort.					
Principle 7: Size and space for approach and use	Appropriate size and space is provided for approach, reach manipulation and use, regardless of user's body size, posture or mobility.	5	4	3	2	1
7A)	Provide a clear line of sight to important elements for any seated or standing user.					
7B)	Make the reach to all components comfortable for any seated or standing user.					
7C)	Accommodate variations in hand and grip size.					
7D)	Provide adequate space for the use of assistive devices or personal assistance.					

Table 4: Questionnaire

The above observation was conducted during 9-10 and 16-17 February 2019 and focused on the area of North to Central Pattaya beach road to evaluate a quality of the existing facilities and infrastructures design by using 7 principles of Universal Design as a base theory.

DATA COLLECTION

As a qualitative research, data will be collected from both primary data resource and secondary data resource. Data collection will be used to examine a form of facilities that matches with the needs of senior tourist in the area of North to Central Pattaya Beach Road. The researcher will use an interview to seek for a truth regards to a form of facilities that is preferred by senior tourists to make their trip more pleasant. Further than that, stakeholders' opinions after the observation and questionnaire as well as field survey will take place in the area of research to seek for any possibility for develop the area of research, North to Central Pattaya Beach Road, and to develop a guideline or a model for stakeholders to adopt and apply in their area of concerned in order to develop North to Central Pattaya Beach Road to be a friendly tourism destination for senior tourists including tourists with disabilities.

Primary Data Resources

An in-depth interview with various stakeholders will take place at first following by an on-site observation with opinion and expectation done by those stakeholders at the area of North to Central Pattaya Beach Road. The main outcome is to get standard and quality of the design for the existing facilities and infrastructures according to 7 principles of Universal Design.

Questionnaires are distributed to senior and disabled tourists in the area of research in order to obtain feedback and opinion from the real users. Their feedback will be valuable resource in term of developing a model of Universal Design for area of North to Central Pattaya Beach Road.

Secondary Data Resources

At the first step of data collection, a literature review will be applied in order to seek for relevant documents, textbooks, case studies, articles, press, thesis, the internet access and other sources that used for helping to identify the research problems and key existing factors related to Universal Design for people with all ranges of ability. Moreover, an information and data from secondary data resources was used to get insight for the analysis of the primary data.

DATA VERIFICATION

The analysis the result of qualitative method is by analyzing data from an in-depth interview with all stakeholders and their opinions after the on-site observation. The analysis is conducted with content analysis in order to come up with a model of Universal Design for senior tourists including tourists with disabilities in an area of North to Central Pattaya Beach Road.

In conclusion, this chapter aims to examine a method of research which is a qualitative research method using on-site observations and in-depth interviews involved by the relevant stakeholders, while the next chapter aims to examine and interpret these inputs for appropriate answers of the research questions

CHAPTER 4

RESULTS

The research of A Model of Universal Design for Senior Tourists: Case Study of North to Central Pattaya Beach Road Area is aimed to identify a potential of being a friendly tourist destination for senior tourists, including disabled, by studying a significance and characteristics of Universal Design that go along with the need of these special care needed groups of tourists. An in-depth interview was taken place with all concerned in order to gather information from all aspects and after that, a model shall be developed and proposed to other relevant organization as of to increasing impact to society respectively. This chapter is composed of analysis on-site observation, documentary research and data interpretation from respondents by an in-depth interview.

To summarize, there will be 5 parts to discuss as below;

1. Collecting and interpreting information from Documentary Research
2. Finding result from on-site observation
3. Analysis of the data from the questionnaires
4. Finding result from an in-depth interview
5. Developing a Model of Universal Design for Senior Tourists in the area of North to Central Pattaya Beach Road

Part 1: Collecting and interpreting information from Documentary Research

For a better understanding of the need of senior tourists, including those with disability, researcher have to do a documentary research to seek for a guideline to develop existing facilities in the area of research to be able to respond to the need of these groups of tourist.

According to the study of Ezeani Johnpaul E., n.d., apart from attraction, activity, accommodation and amenity, accessibility is also one of a components that encourages people to travel from one place to another. Accessibility means that a destination should be able to reach by various transportations. It should be smooth, regular, comfortable with a reasonable cost and safe. Therefore, considering of how to provide such service to people with all ranges of ability would be highly benefit to all stakeholder.

A concept of “Accessible Tourism” started to grab people’s attention when United Nations launched a new campaign in 2016 aimed to encourage and raise people’s awareness on equality of accessibility of all people in travelling. Accessible tourism also can be referred to tourism that is able to cater the needs of people at all ranges of capability including people with disabilities, old persons and those who have any ranges of difficulty with using products, services or environment.

As to pursue the purpose of accessibility for all, a principle of Universal Design was developed by a group of architects, product designer, engineer and environmental design researchers in 1997. Universal Design intended to create environment, services or products that can be accessed, understood and used by all people. It aimed to extend the ability of access to all people who wish to use it. This is not a special requirement only for a minority population but it is a fundamental of good design.

The principle of Universal Design consists with;

1. Equitable to use; products or services must be useful to all people with diverse abilities, provide the same means of use to all users.
2. Flexibility in use; the design accommodates a wide range of individual preferences and abilities. Provides choice of method to use.
3. Simple and intuitive use; use of the design is easy to understand, regardless of the user’s experience, knowledge, language skills or current concentration level.
4. Perceptible information; maximize legibility of essential information. Use different modes (pictorial, verbal, tactile) to reiterate the meaning of essential messages.

5. Tolerances for error; the design must minimize hazards, accidental or unintended actions.

6. Low physical effort; the design can be used efficiently and comfortably and with a minimum of exhaustion.

7. Size and space for approach and use; appropriate size and space is provided for approach, reach, manipulation and use regardless of user's body size, posture or mobility.

A current situation of people with disabilities in Thailand according to a 5th National Improvement Plan for a Quality of Life of People with Disabilities 2017-2021 by a Department of Empowerment of Persons with Disabilities, Thailand is now having 1,657,438 registered disabled persons which are 2.52% of all Thai's population. A span of age that is most founded as disabled person are at 60 years old and above with a number at 812,825 persons in total. To classify into types of disability, a physical and mobile disability is found as the largest number of all comparing to other disabilities at 48.37%, follows by hearing loss and deafness and vision loss and blindness at 18.28% and 10.69% respectively. (Disabilities, 2017)

Further than that, the Department of Empowerment of Persons with Disabilities has also determined and analyze into each factor that effect to an ability of developing quality of life of disabled persons in Thailand by using SWOT analysis as to be summarized in table below;

<p>S: Strengths</p> <ul style="list-style-type: none"> ● An inclusive law and policies for quality of life development for persons with disabilities 	<p>W: Weaknesses</p> <ul style="list-style-type: none"> ● Lack of environment and public services ● Limited information and social activity for disabled ● Attitude towards disabled person ● Integrated system for disabled
<p>O: Opportunities</p> <ul style="list-style-type: none"> ● A movement in global context for a quality of life development for persons with disabilities 	<p>T: Threats</p> <ul style="list-style-type: none"> ● Internal politic situation ● National reformation

Table 5: Summary of a result from SWOT analysis of factors effecting to an ability of developing quality of life of disabled persons in Thailand

According to a SWOT analysis by the Department of Empowerment of Persons with Disabilities, researcher found that one of challenges for Thailand to overcome the situation of aged society is a limitation of public services and a proper environment that caters the need of people with disabilities in any type. On the other hand, strength is a policy from government which shows an awareness of aged society issue that every concerned agency needs to follow and objectify those policies.

A vision of the 5th National Improvement Plan for a Quality of Life of People with Disabilities 2017-2021 by a Department of Empowerment of Persons with Disabilities is to “Make the right real for person with disabilities towards independent living in sustainable inclusive society” (Disabilities, 2017). Their mission is to create an environment, transportation, public services and accessible technology for disabled persons.

Incheon Strategy: Make the Right Real

During 28 October – 2 November 2012 at Incheon, Republic of Korea, government of Economic and Social Committee of Asia Pacific gathered to develop “Incheon Strategy” to “Make the Right Real” for persons with disabilities in Asia and the Pacific. (Pacific, 2019)

The Incheon Strategy goals cover development areas including poverty reduction, employment generation, political participation, ensuring accessibility in comprehensive terms, social protection, early intervention, education, and disability-inclusive disaster risk reduction.

There are 10 goals that have to be achieved in order to create disability-inclusive societies which are to ensure that no one is left behind in a process of disability-inclusive sustainable development. Below are the 10 goals that were set up by the ministers and representatives of members and associate members of the United Nations Economic and Social Commission for Asia and the Pacific; (Pacific, 2019)

1. Reduce poverty and enhance work and employment prospects; this is to reduce the gap income and job hiring ratio between people with disabilities and their families. By having a decent job with appropriate education and training to help them keep their jobs is the best means to overcome the poverty.

2. Promote participation in political processes and in decision-making; to have people with disabilities participate in political process and decision making is a way to make all people realize the important of the rights of people with disabilities.

3. Enhance access to the physical environment, public transportation, knowledge, information and communication; this is a precondition for persons with disabilities to fulfil their rights in an inclusive society. The accessibility based on Universal Design increases safety and ease of use not only for persons with disabilities, but also for all other members of society.

4. Strengthen social protection; a social protection in developing countries of Asia and the Pacific is often limited to a social insurance programmes and only available to those with regular employment contracts and leave the rest of the society, especially

those with disabilities, without sufficient coverage. Therefore, it is essential to ensure that people with disabilities have access to social protection equally with other people in a society.

5. Expand early intervention and education of children with disabilities; in much of the Asia-Pacific region, an unbalanced number of children with disabilities do not have access to early intervention and education programmes. It is necessary to provide prompt and appropriate responses to optimize their all-round development. Such early intervention responses cover, stimulation, nurturing and care, and pre-school education and to ensure that children with disabilities will have access, on an equitable basis with others in the communities in which they live.

6. Ensure gender equality and women's empowerment; girls and women with disabilities are largely invisible in mainstream gender equality programmes and it sometimes leads to an issue of sexual, violence and abuse. Therefore, it is crucial that girls and women with disabilities have equitable access to mainstream development opportunities and any decision-making processes of the government in their concerned issues. Also, the accessibility to sexual, reproductive health services, violence and abuse on an equitable basis with girls and women without disabilities.

7. Ensure disability-inclusive disaster risk reduction and management; people with disabilities and other vulnerable groups are at higher risk of death, injury and additional impairments, as a result of exclusion from disaster risk reduction policies, plans and programmes. To have people with disabilities regularly participate in emergency preparedness drills and other disaster risk reduction measures at the local and district levels could prevent or minimize risk and damage when disasters occur. Physical and information infrastructure that includes Universal Design principles would improve the chances of safety and survival.

8. Improve the reliability and comparability of disability data; the Asia Pacific region needs more accurate statistics on the population of persons with diverse disabilities and on their socioeconomic status. The adequacy of disability statistics would

enable policymaking to be evidence-based to support the realization of the rights of persons with disabilities.

9. Accelerate the ratification and implementation of the Convention on the Rights of Persons with Disabilities and the harmonization of national legislation with the Convention; all members of UNESCAP to support an enactment of national laws which include anti-discrimination provisions, technical standards and other measures to uphold and protect the rights of persons with disabilities.

10. Advance subregional, regional and interregional cooperation; to facilitate mutual support, including through sharing lessons learned, good practices and innovative solutions among member nations.

To take a look into Pattaya City's readiness to be a friendly destination to senior tourist including those with disabilities, from documentary research, researcher found that Pattaya was selected by Tourism Authority of Thailand or TAT to be a pilot city for Universal design or so called "Pattaya Model" since 2009. Moreover, Pattaya also selected by Department for Empowerment of Person with Disabilities to be a pilot city in for facilities and environment management for senior and disabled people. Pattaya City Council itself also aimed to push this city to be "A Pleasant Travel Destination (Muang Tong Tiew Na Yoo)" which their purpose is to develop Pattaya to be a destination where people want to stay longer, revisit again or even to be considered as a place to stay after their retirement. In a business dimension, they also expect to promote Pattaya as a great choice for business investment. To achieve these goals, there are several guidelines, policies and collaborations between both government and private sectors to be set up to extend Pattaya ability to become an accessible destination for all people.

According to Official Statistics Registration System from Department of Provincial Administration as of 31st of December 2017, Chonburi province itself where Pattaya city located is also facing an issue of aged society as other provinces of Thailand. The total number of Chonburi population is now at 1,483,049 persons which now having 175,875 persons who are aged at over 60 years old which equal to 11.86% of total

population. (National Statistical Chonburi Office, 2017). The statistic number of total population and senior population in Chonburi province are displayed in below table.

Province Gender	Total Population			Total Disabled Population			Percentage
	Male	Female	Total	Male	Female	Total	
Chonburi	726,918	756,131	1,483,049	75,292	100,583	175,875	11.86%

Table 6: Total number of populations in Chonburi province, showing a number categorized by gender and age and also percentage of aged population compares to total population.

Source: Adapted from Official Statistics Registration System from Department of Provincial Administration, 2017. (National Statistical Chonburi Office, 2017)

Further than that, a projected number of aging populations in Thailand is still increasing continuously in this 15-year time. The below table shows a trend or projection number of aging populations in Thailand in a next 15 years. An index of Aging (IoA) was computed by percentage of aged population (60 years old and above) divided by a percentage of children population (15 years old and lower)

$$\text{Index of Aging (IoA)} = \frac{\text{60+}}{\text{15-}}$$

Area	Year 2015			Year 2020			Year 2025			Year 2030		
	Number of Population	Children (0-<15 YO.)	IoA (percentage)	Number of Population	Children (0-<15 YO.)	IoA (percentage)	Number of Population	Children (0-<15 YO.)	IoA (percentage)	Number of Population	Children (0-<15 YO.)	IoA (percentage)
Chonburi	149,600	209,700	71.34	185,900	214,700	86.59	232,200	217,800	106.61	285,300	205,900	138.56
Thailand	10,351,200	11,793,200	87.77	12,620,340	11,081,300	113.89	15,125,900	10,505,900	143.98	17,581,000	9,801,000	179.38

Table 7: A table of aging index, computing from a comparison between a projected number of aging population and children until 2030.

Source: Adapted from Centre of Information Technology of Ministry of Social Development and Human Security, 2014. (National Statistical Office, 2014)

Therefore, there was attentiveness among groups of services providers, especially in tourism industry, to serve the need of people with access requirement and

to make an equality of access to places and services to entire population. Hotels in Pattaya started to focusing on developing their products and services to be a place where providing safe and convenient environment to as many people as possible. There are several examples for hotels in the area of research that are adopting the 7 principles of Universal Design and developing their products and services. A-one hotel beach resort is one of the most recognized accessible hotels in Pattaya as their concept is to provide an accessible and convenient accommodation for their guests. The resort has been built with an idea of easy wheelchair access in mind, starting from construction to the final interior decorations and amenities. A-ONE beach resort has won prizes to praise their awareness on the needs of senior and disabled tourists.

Even though, there are many policies that had been launched and encouraged by government to all concerned and stakeholders to apply with their organisations, however, only some business entrepreneurs are interesting in adopting or following those policies.

According to the study of Choomkate S. in 2008, he found that Pattaya has advantages in term of management and a clear policy for developing a quality of life of people with disabilities. A gap that could be improved is how to work on and follow those policies and make it real? For example, facilities management for all people, a public wayside and crosswalk management and lastly, an accessible transportation service for all. (A Summary of Suggestions or Concepts of Universal Design for Improving Public Wayside Area in Pattaya by Choomkate S., 2008). This challenge was also mentioned by one the respondent from an in-depth interview which will be described in the 3rd part of this chapter, Finding result from in-depth interview, later on.

Part 2: A result from on-site observation

Pattaya city is one of the most dynamic and vivid cities among tourists over the world. Hence, there are large number of facilities to respond the need of tourist for example, hotels with a wide range of facilities and services provide, restaurants with various options to select, a walk way along the beach with proper light during the night

and also close circuit television or CCTV to protect and secure the life and assets of people in that area. Pattaya City Council had shown their attempt to develop a wayside of the Pattaya's beach road as to serve the needs to all people that comes to visit Pattaya. Senior and disabled people are also a large source of tourists that love coming to Pattaya for either their holidays or to living after the retirement. Therefore, it would be highly benefit for all concerned if the area of research could be developed to respond to the need of these groups of tourists.

In 2016 and before, the area of research, North to Central Pattaya beach road, on the beach side walk way was filled with peddlers, deck chairs that provided by merchants. There was lack of land management that led to a not-fully utilization of the area. After that, Pattaya City Council had developed the area by reconstructed a footpath along the beach side and organized sun decks and also zoning for sellers in the area in order to improve a landscape and maintain a clean, nice and tidy environment of the Pattaya beach road. Below are the pictures of Pattaya beach road before, during and after the reconstruction.



Figure 11: Pattaya beach road before a reconstruction

Source: (Chaysamyod, 2013)



Figure 12: Pattaya beach road during the reconstruction

Source: (Chaysamyod, 2013)



Figure 13: Pattaya beach road after the reconstruction

Source: (Chaysamyod, 2013)



Figure 14: Pattaya beach road after the reconstruction

Source: (Chaysamyod, 2013)



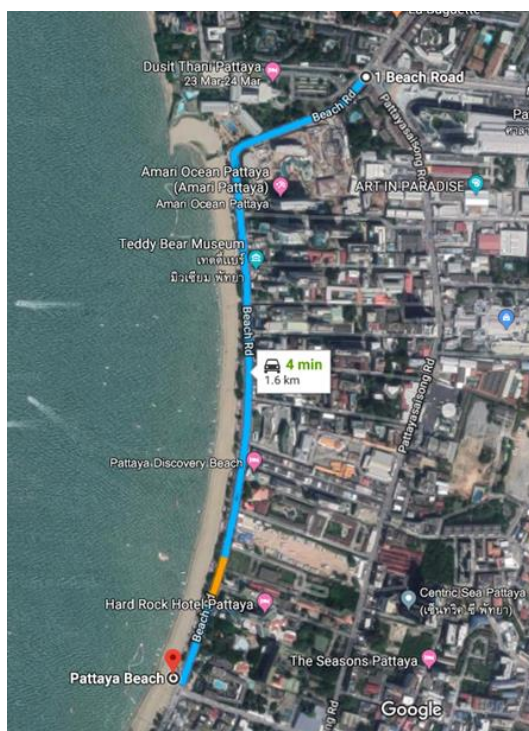


Figure 15: Area of research

Source: Google Maps

Researcher did a site observation between 9th-10th and 16th-17th February 2019. Start from the beginning of beach road, around the entrance of Dusit Thani Pattaya Hotel, till the junction between north and central Pattaya beach road and all the way back to the beginning to observe the other side of the road as well.

From the observation, researcher found that there are some facilities that have been installed or been constructed before to provide a convenience to all tourists. However, the existing facilities are not well-distributed and cover throughout the area of research. For example, braille blocks were constructed in only some part of the footpath, not along the way through the full length of the road and it was also not in a proper condition. Some of them were cleavage and some parts were missed. There also has a pole that blocks on the braille blocks way for people with disability. There is no continuity and constancy on providing such an element in the area of research.



Figure 16: Site Observation

Source: (Author, 6 February 2019)

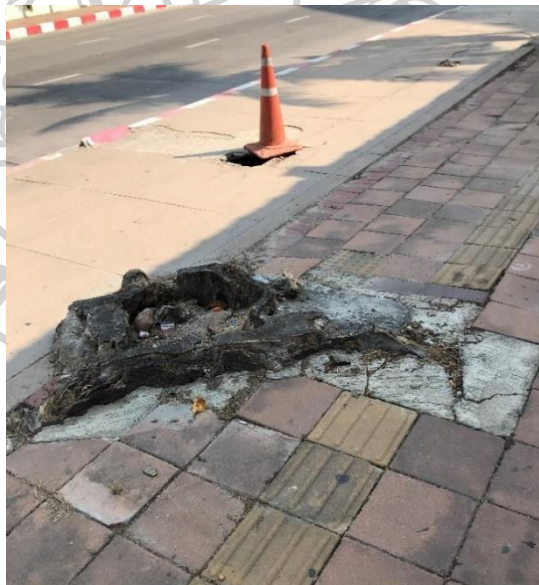


Figure 17: Site Observation

Source: (Author, 6 February 2019)



Figure 18: Site Observation

Source: (Author, 6 February 2019)

The above statement and pictures are only an example of the condition of existing infrastructure and facilities at the area of research in term of empirical evidence. Researcher also did an interview with related organisations to obtain another perspectives and opinions.

Part 3: Analysis of the data from questionnaires

The researcher did a data collecting with 112 senior and disabled tourists in the area of North to Central Pattaya beach road. The demographic data from the questionnaires are interpreted and summarized as below.

There are 60 male respondents which is counted as 53.57 % of the total respondents. Female respondents are 52 persons which equal to 46.43% of all respondents.

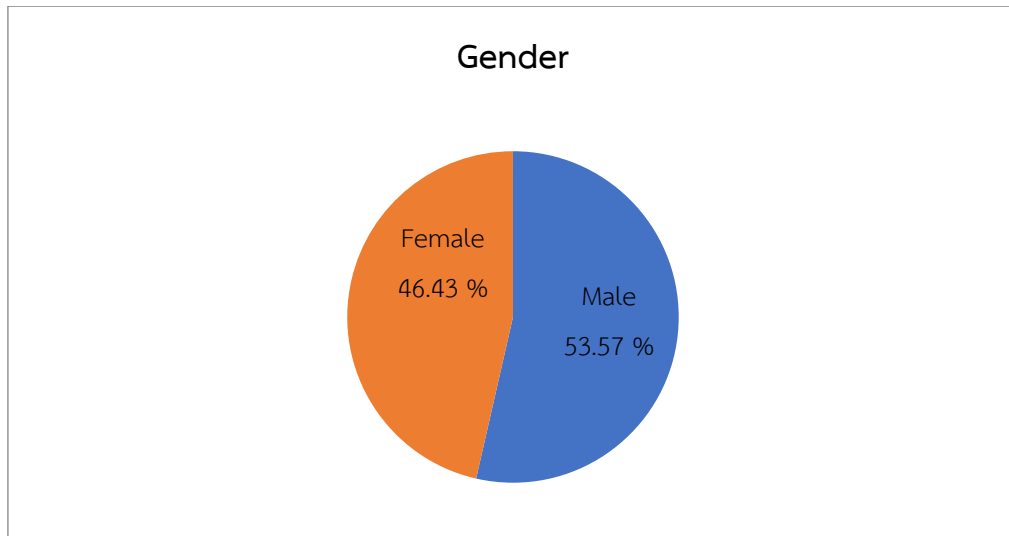


Figure 19: Gender of the respondents

The age ranges of the respondents are classified into 3 groups which are 1) 41-50 years old, 2) 51-60 years old and 3) above 60 years old in consequence. 80 of the respondents or 71.43% of the respondents are over 60 years old, follows by the respondents' age at 51-60 years old at 30 persons or 26.79% of the total respondents and lastly, 2 respondents are age between 41-50 years old which is 1.79% of the respondents.

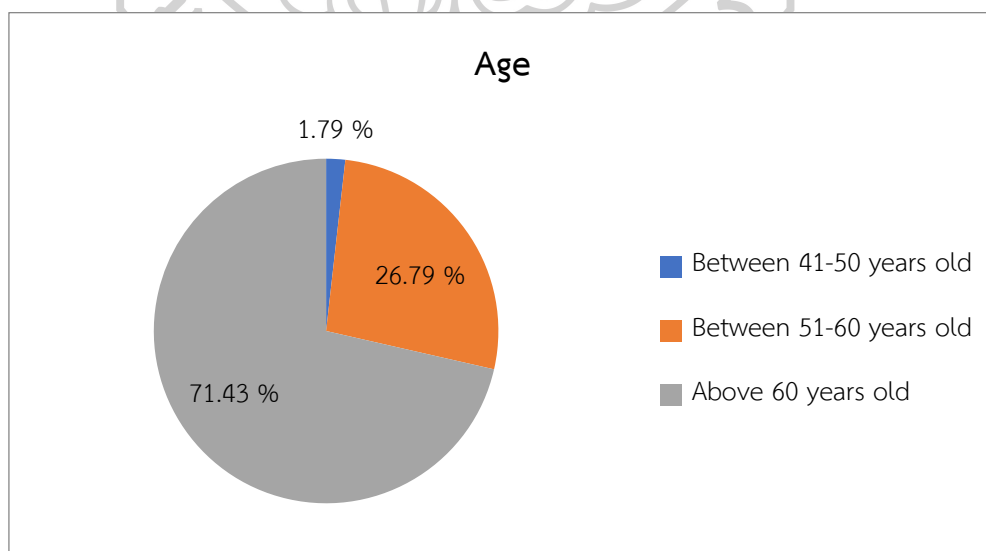


Figure 20: Age of the respondents

In term of the physical condition of the respondents, there are 7 of them that have some disabilities which calculated as 6.25% of all respondents. The disabilities are various which consist of Diffuse Idiopathic Skeletal Hyperostosis (DISH), disability with the right leg, hemiparesis, deafness, blurred vision and two of them were not identified.

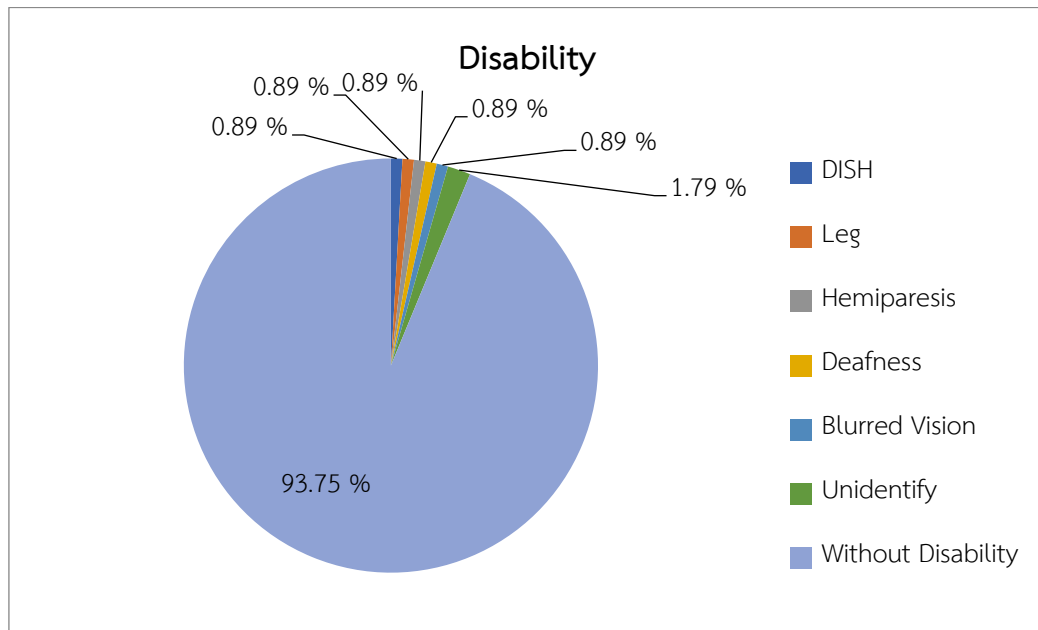


Figure 21: Disability of the respondents

The second part of the questionnaire was designed to evaluate the respondents' satisfaction over the facilities and infrastructure in the area of research. The questionnaires are based on the 7 principles of Universal Design.

Opinions after observation done by the relevant stakeholders in the area of research was conducted as to understand the stakeholders' opinions and expectations for overall facilities in the area and their readiness to serve the needs of senior and disabled tourists. The researcher had adopted the 5-point Likert scale as a checklist based on 7 principles of Universal Design developed by the Advisory Committee on Accessibility (ACA), Access Design Subcommittee in 2010. A commonly used 5-point Likert scale format to measure satisfaction after the observation is applied, starting from

“Very Satisfied (5)”, “Satisfied (4)”, “Neither Satisfied Nor Dissatisfied (3)”, “Dissatisfied (2)”, and ending by “Very Dissatisfied (1)” respectively, as outlined below.

Principle 1: Equitable to use - The design is useful and marketable to people with diverse abilities.

Universal Design P1	Average	Standard Division	Result
Provide the same means of use for all users: identical whenever possible; equivalent when not.	4.054	1.069	Satisfied
Avoid segregating or stigmatizing any users.	3.848	1.069	Satisfied
Provision for privacy, security and safety should be equally available to all users.	3.670	1.204	Satisfied
Make the design appealing to all users.	3.789	1.001	Satisfied
Total	3.580	1.047	Satisfied

Table 8: Result from the questionnaire on the first Universal Design principle

This principle focuses on the design that provides the same means, avoid segregating or stigmatizing any users, equally provision for privacy, security and safety and lastly, make the design appealing to all users.

The average satisfaction rate of this principle is at 3.580. The most satisfying perspective is “P1A - Provide the same means of use to all users” with a rating at 4.054 from the respondents. Follows by “P1B - Avoid segregating or stigmatizing any users” at 3.848, “P1D - Make the design appealing to all users” at 3.789 and “P1C - Provision for privacy, security and safety should be equally available to all users” at 3.670 out of 5.

Principle 2: Flexibility in Use - The design accommodates a wide range of individual preferences and abilities.

Universal Design P2	Average	Standard Division	Result
Provide choice in methods of use.	3.518	0.920	Satisfied
Accommodate right- or left-handed access and use.	3.866	1.103	Satisfied
Facilitate the user's accuracy and precision.	3.536	1.098	Satisfied
Provide adaptability to the user's pace.	3.600	1.040	Satisfied
Total	3.482	0.904	Satisfied

Table 9: Result from the questionnaire on the second Universal Design principle

This principle is mainly about the design accommodates a wide range of individual preferences and abilities. Provides choice of method to use. It must be able to accommodate right-or left-hand users. The average satisfaction of this principle is at 3.482 out of 5 from 112 respondents.

The respondents are most satisfied with "P2B - Accommodate right or left-handed to use" with a rating scale at 3.866 out of 5. Follows by "P2D - Provide adaptability to the user's pace" at 3.600, "P2C - Facilitates the user's accuracy and precision" at 3.536 and the last one is "P2A - Provide choice in methods of use" at 3.518.

Principle 3: Simple and Intuitive Use - Use of the design is easy to understand, regardless of the user's experience, knowledge, language's skill or current concentration level.

Universal design P3	Average	Standard Division	Result
Eliminate unnecessary complexity.	3.768	1.048	Satisfied
Be consistent with user expectations and intuition.	3.679	1.050	Satisfied
Accommodate a wide range of literacy and language skills.	3.777	1.105	Satisfied
Prioritize based on importance.	3.509	0.999	Satisfied
Provide effective prompting and feedback during and after task completion.	3.768	1.048	Satisfied
Total	3.620	0.855	Satisfied

Table 10: Result from the questionnaire on the third Universal Design principle

This principle focuses on the design that is easy to understand, regardless of the user's experience, knowledge, language skills or current concentration level. Eliminate unnecessary complexity and be consistent with user expectation.

For this principle, the average satisfaction is at 3.620 out of 5 from 112 respondents. The aspect that was most satisfying by the respondents are "P3C - Accommodate a wide range of literacy and language skills" with a rating scale at 3.777 out of 5. Then follows by "P3A - Eliminate unnecessary complexity" and "P3E - Provide effective prompting and feedback during and after task completion" at the same level of satisfaction at 3.768, "P3B - Be consistent with the user expectations and intuition" at 3.679 and the least satisfying aspect is "P3D - Prioritize based on importance" with a satisfaction rating scale at 3.509.

Principle 4: Perceptible Information - The design communicates necessary information effectively to the user, regardless of the ambient conditions or the user's sensory abilities.

Universal design P4	Average	Standard Division	Result
Use different modes of communication (pictorial, verbal, tactile) to present an essential information	3.643	1.047	Satisfied
Provide adequate contrast between essential information and its surrounding	3.473	0.949	Satisfied
Maximize legibility of essential information	3.685	1.053	Satisfied
Differentiate elements in ways that can be described (i.e. make it easy to give directions and instructions)	3.491	0.959	Satisfied
Provide compatibility with a variety of techniques and or devices used by people with sensory limitations	3.429	1.020	Satisfied
Total	3.544	0.855	Satisfied

Table 11: Result from the questionnaire on the fourth Universal Design principle

This principle is about the design that able to communicate necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities. Use different modes (pictorial, verbal, tactile) to present essential information. The overall satisfaction for this principle is at 3.544.

The most satisfying aspect is "P4C - Maximize legibility of essential information" with a rating scale at 3.685 and follows by "P4A - Use different modes of communication (pictorial, verbal, tactile) to present an essential information" at 3.643, "P4D - Differentiate elements in ways that can be described (i.e. make it easy to give directions and instructions)" at 3.491, "P4B - Provide adequate contrast between essential information and its surrounding" with rating at 3.473 and lastly is "P4E - Provide compatibility with a variety of techniques and or devices used by people with sensory limitations" with the least satisfaction scale at 3.429 out of 5.

Principle 5: Tolerances for error - The design minimizes hazards and the adverse consequence of accidental or unintended actions.

Universal design P5	Average	Standard Division	Result
Arrange elements to minimize hazards and errors: most used element, most accessible, hazardous elements eliminated, isolated or shielded	3.714	1.086	Satisfied
Provide warning of hazards and errors	3.775	1.059	Satisfied
Provide fail-safe features	3.723	1.059	Satisfied
Discourage unconscious actions in task that require vigilance	3.723	0.985	Satisfied
Total	3.668	1.086	Satisfied

Table 12: Result from the questionnaire on the fifth Universal Design principle

This principle focuses on the design that minimizes hazards, errors and adverse consequence of accidental or unintended actions by users. The average satisfaction of this principle is at 3.668 out of 5 from 112 respondents.

The satisfaction ratings of each aspect for this principle is very similar. However, an aspect that had the highest rating score is "P5B - Provide warning of hazards and errors" then follows by "P5C - Provide fail-safe features" and "P5D - Discourage unconscious actions in task that require vigilance" with the same level of satisfaction at 3.723 and the last one is "P5A - Arrange elements to minimize hazards and errors: most used element, most accessible, hazardous elements eliminated, isolated or shielded" with a rating scale at 3.714.

Principle 6: Low Physical Effort - The design can be used efficiently, comfortably and a minimum of fatigue.

Universal design P6	Average	Standard Division	Result
Allow user to maintain a neutral body position	3.477	1.017	Satisfied
Use reasonable operating forces	3.607	1.126	Satisfied
Minimize repetitive actions	3.545	1.047	Satisfied
Minimize sustained physical effort	3.393	1.085	Neither Satisfied nor Dissatisfied
Total	3.668	0.952	Satisfied

Table 13: Result from the questionnaire on the sixth Universal Design principle

This principle is mainly about the design can be used efficiently and comfortably and with a minimum of tiredness. All user to maintain a neutral body position, use reasonable operating forces, minimize repeated actions and minimize sustained physical effort

The most satisfying aspect from the respondents is “P6B - Use reasonable operating forces” with a rating scale at 3.607 out of 5 from 112 respondents. Follows by “P6C - Minimize repetitive actions” at 3.545 and “P6A - Allow user to maintain a neutral body position” with satisfaction scale at 3.477 out of 5.

In this principle, there is one aspect that received feedback from the respondents as neither satisfied nor dissatisfied which is a “P6D - Minimize sustained physical effort”. This aspect got a rating scale at 3.393.

Principle 7: Size and Space for Approach and Use - Appropriate size and space is provided for approach, reach manipulation and use, regardless of user's body size, posture or mobility.

Universal design P7	Average	Standard Division	Result
Provide a clear line of sight to important elements for any seated or standing user	3.768	0.910	Satisfied
Make the reach to all components comfortable for any seated or standing user	3.813	1.095	Satisfied
Accommodate variations in hand and grip size” at 3.748 in consequence	3.748	1.179	Satisfied
Provide adequate space for the use of assistive devices or personal assistance	3.750	1.151	Satisfied
Total	3.769	0.993	Satisfied

Table 14: Result from the questionnaire on the seventh Universal Design principle

This principle is mainly focusing on the appropriate size and space is provided for approach, reach, manipulation and use regardless of user's body size, posture or mobility. The overall satisfaction from the 112 respondent is at 3.769 out of 5.

The most satisfying aspect of this principle is “P7B - Make the reach to all components comfortable for any seated or standing user” with a satisfaction rated at 3.813. Follows by other aspects that are at the similar satisfaction rate which are “P7A - Provide a clear line of sight to important elements for any seated or standing user” with rating at 3.768, “P7D - Provide adequate space for the use of assistive devices or personal assistance” at 3.750 and “P7C - Accommodate variations in hand and grip size” at 3.748 in consequence.

Overall Satisfaction of Senior and Disabled Tourist in the area of research

Universal design P7	Average	Standard Division	Result
Average U7	3.638	0.817	Satisfied
Total	3.638	0.817	Satisfied

Table 15: Overall Satisfaction of Senior and Disabled Tourist in the area of research

To summarise the result from the questionnaires filled in by 112 senior and disabled tourists in the area of North to Central Pattaya Beach Road to obtain their feedback towards the overall existing facilities. The result shows that the senior and disabled tourists are satisfied in the overall facilities in the area of research with rating at 3.638 out of 5.

To analyse into each principle, most feedback from the respondents show positive response towards each aspect. There is only one aspect in principle no. 6 that received a neither satisfied nor dissatisfied.

Part 4: Finding result from an in-depth interview

A semi-structured interview was conducted with 3 representatives from organisations that work related to a tourism industry in the area of research which are 1) Designated Areas for Sustainable Tourism Administration (Public Organization) or DASTA 2) Tourism Authority of Thailand (Pattaya Office) and 3) Thai Hotel Association Eastern Chapter (THA-E).

An interview was conducted during the 20th of May to the 25th of November 2018 to find another perspectives and ideas from the stakeholders. They are the organisations that are a crucial part of developing, promoting and enhancing the standard of Pattaya tourism. Their understanding and awareness are important to the plan of developing Universal Design into the area of research as they could be a coordinator to create a better understanding and awareness to all concerned in their responsible areas.

A set of questions as stated in chapter three were used and the answers from each respondent are below;

Point of Questions: The Significant and Characteristics of Universal Design

1. Do you clearly understand the characteristics of Universal Design to tourist attractions? Please explain

Respondent 1: He said that he has a moderate understanding in the concept of Universal Design, what is it, how is it important and how it would give us benefits. But when discuss into a deep detail, in term of architecture and engineering, of course, still need a manual or a handbook to guide or be a standard.

Respondent 2: He understands that Universal Design is a type of design that allows people with all ranges of ability to experience and enjoy facilities. He had noticed that in some areas of Pattaya already have ramps or a slope to provide for those who use wheelchairs, also a toilet for disabled person as well.

Respondent 3: The respondent was not give the answer related much to the question but she provides feedback and opinion in the other relevant issues such as the area development of Pattaya and the habit or nature of the senior market that come to Pattaya. She mentioned that most of the senior tourists in Pattaya are from Scandinavia countries and they love to enjoy the natural beauty of the beach but Pattaya beach are filled with beach chairs and stalls.

2. What is a significance of Universal Design for tourism, especially to those senior and disabled tourists?

Respondent 1: He thinks that Universal Design is important and it should be aware of by all stakeholders in tourism industry as it causes many benefits to senior tourists, disabled tourists and entrepreneurs also. He believes that if Pattaya successfully applies these principles into developing their facilities and infrastructures to response to the needs of all people then it would also affect to a reputation as a world class destination of Pattaya and those senior and disabled people can enjoy the same experience as other people.

Respondent 2: A Universal Design would be highly benefitting for those senior and disabled tourists as it helps people to travel around the city with all the facilities that may required. They can travel safely from place to place conveniently on any types of vehicle.

Respondent 3: She thinks that it is important to have facilities that provide safety and convenient to all people. As she is now also working as a General Manager for a pre-opening hotel in Pattaya which the main concept is for health and wellness, so the main target customer is also included senior people. To provide equipment, facilities and infrastructures that was created or designed base on their needs is very important to them. Especially, in western culture, people are more self-reliance. Hotels or the accommodation should provide an environment that allows them to be able to take care of themselves easily and safely.

3. What is the significance of Universal Design involving with developing tourism sites such as the area of North to Central Pattaya beach road?

Respondent 1: It would help to promote Pattaya City to reach its goal as a World Class Destination. It shows that we are ready to welcome all tourists. Pattaya has lot facilities but they are not in a proper condition so if it is applied to all tourism sites in area, it would help in raise up standard of the site.

Respondent 2: He thinks that, in term of business, it would be benefit for all stakeholders in tourism industry such as hotels, restaurants and merchant in an area of research.

Respondent 3: She said that if the area of research was developed, both in term of natural aesthetics and facilities and infrastructures, more people can enjoy the beauty and relaxation of the beach equally. Everyone will be able to use the area safely and conveniently.

4. How can Universal Design be an advantage to all stakeholders?

Respondent 1: Mainly, he thinks that it would be advantage for all stakeholders in the area of research such as hotels, restaurants, tourist attractions and shopping malls. These are the people who will get the benefits by adapting Universal Design into their

business. Universal Design will help them expand their sales channels to this market segment. Further than that, Pattaya City Council and other supporting organizations, both government and private sector, will also get a budget in order to develop the facilities and infrastructures to serve the needs of all people.

Respondent 2: He believes that applying a Universal Design will lead to creating a better image and reputation for Pattaya City. To show senior and disabled tourists all over the world that we are ready for them, all stakeholders must be truly understanding of their needs and make sure that all facilities are practical in use for them. There are tremendous hotels or lodging business that shared and updated their information with TAT Pattaya aiming that we could promote them into these segments of market.

Respondent 3: It would help increasing business opportunity and expanding market segment for hotels in the area. In the hotel, if we can provide some special care such as providing “Senior Floor”, it is with the same concept of lady’s floor or family floor. Staff can focus more and provide such service or help immediately in time of need.

In term of business, we can use this as selling point and promote our hotel as a senior and disabled friendly hotel.

5. Who are the respondents of developing and adopting Universal Design to the area of research?

Respondent 1: In his opinion, he thinks that Pattaya City Council should be the leader of this project as the area of research is basically in their in-charge area. Apart from that, all entrepreneurs in private sector are as well should be responsible for this such as restaurants, hotels, convenient stores and department stores in the area of research.

Respondent 2: Pattaya City Council should be the main organization that responsible for this issue. Along with other concerned stakeholders, for example, entrepreneurs of hotels, restaurants, tourism sites, associations and every people in the community. Some organisations are able to give suggestion or being a consultant in this project such as Siam Cement Group or SCG. They are an expert in a construction industry

and they understand that designs of area or place that will be used by senior or disabled people need a different form. It would have to be very careful when making a design or floorplan. They also are a supplier that is able to provide materials for a construction as well. So he thinks that they could be one of the organisations that will be able to consult with Pattaya City in order to develop the area of research to align with the Principle of Universal Design.

Respondent 3: For Thai Hotels Association – Eastern Chapter, there are discussions over the meeting but there is still no concrete plan on this. However, there are some hotels that already provide facilities and services to these groups of people.

6. Who will be benefited by developing and adopting Universal Design to the area of research?

Respondent 1: Increasing an opportunity for all people to travel safely and conveniently. Entrepreneurs are also benefited by expanding sales channels and target customers.

Respondent 2: As a marketing organization for tourism in Pattaya, he sees that adoption of Universal Design in area of research would create a better image and reputation to Pattaya. It would help in grabbing attention from this group of tourists as well.

Respondent 3: She believes that it would be benefit to the business owners because not only in other countries that the number of senior people are increasing but also in Thailand as well. There are some business entrepreneurs recognized the value and business opportunity in serving these market segments.

Point of Questions: The potential of existing facilities and infrastructures in the area of research that is able to develop according the 7 principles of Universal Design

7. How can the existing facilities and infrastructures serve the needs of tourists?

Respondent 1: He notices that the area of research is already having some of the facilities to provide for both senior and disabled tourists. However, those existing

facilities are either not in a proper condition or they are occupied or blocked by for other usage. He thinks that this is the major problem rather than the facilities or equipment.

Respondent 2: He said that, in his opinion, the area of research has sufficient facilities and equipment provide to senior and disabled person, for example, a slope for wheelchair user and a footpath with braille blocks for the visually impaired person. Unfortunately, they are not in the condition that can be utilized by senior or disabled person because they were used for other objectives instead such as the stalls that are set up on the footpath and so on.

Respondent 3: She said that there is a law enforcement that every hotels have to provide facilities to disabled persons, which also can be utilized by seniors, such as an elevator that is not only convenience for wheelchair users but it has to be also easily use by people with other forms of disability such as blind and deaf people as well. If hotels do not apply these laws into their business, they will not pass an annual evaluation that could cause to losing of their business licenses. Therefore, she believes that most of the legal hotels are having facilities to provide for both senior and disabled people. They provide Family rooms or Disabled rooms which normally will be with a very limited number, only according to the law enforcement. She had conversation with some disabled tourists from the oversea; they gave feedback that mostly they will come with family or friends who are also use a wheelchair. This is a limitation or an obstacle that they had to split their group and stayed at the different hotels.

8. What is strength of existing facilities and infrastructure in the area of research? and why?

Respondent 1: He thinks that the collaborative projects between Pattaya City and other related organisations for a landscape adjustment such as preventing soil erosion of the beach and to expanding size of a footpath. Hence it also leads to a better utilization of the area, means that more people can access and enjoy this public area. This is also a good opportunity to promote an adoption of Universal Design into this area.

Respondent 2: The strength of the area of research is the city plan because it was planned neatly so it would be easier to develop. Also, Pattaya beach in the north part

is more peaceful and less of beach chairs, stalls and bars, comparing to the other parts such as central to south beach or Pattaya walking street, so the scenic and environment in this area is suit with elderly people and the family. This is one main point that could support the area of research to be the destination for senior and disabled tourists.

Respondent 3: She thinks that the area of research has a potential in developing to be a friendly destination to senior and also disabled tourists because there are already some hotels in the area of north Pattaya that provide rooms with facilities for senior or disabled persons. As well as the design of architecture that allows people who use wheelchair to easily move or travel from one place to another. These hotels could be used as a pilot hotel to lead other interested hotels to follow them or to study from them how to adopt a Universal Design into their business or how to make the design of hotels that can be utilized by everyone equally.

From an interviewing with Tourism Authority of Thailand (National Statistical Office) Pattaya Office and Designed Areas of Sustainable Tourism Administration (DASTA), researcher found that both organizations were has a moderate knowledge and understanding in a meaning and importance of Universal Design towards a tourism industry. One of the interviewees mentioned that he has only a brief understanding of what is the meaning of Universal Design and its benefit for those people with disabilities and elderly but not in a detail in term of engineering design. He also pointed out that as he is working in a part of government organization, he noticed that the government is aware of and recognize a value of senior tourists from both domestic and international context and has shown their attempt in developing an infrastructure and facilities to respond to the needs of these segments of tourist. Pattaya City Council itself also responds to the policy from Thailand's Government by having a project of landscape adjustment in the area of Pattaya beach road. The beach umbrellas and sunbeds were organized in a limited area so that it would help in creating more beautiful and tidier ambience. A footpath was also renovated by removing electric poles and telephone lines to underground, reconstruction a beach pedestrian with braille block for visually impaired including a signal light and sound at the crosswalk for senior and disabled people.

Further than that, they also organized and controlled sellers not to set up their stalls in a walkway or roadside in order to make sure that everyone can make use of the area effectively. At this stage, this interviewee himself thinks that the current infrastructure and facilities are enough to serve the needs of senior tourists, including those with disabilities too. What could really make the difference on developing a research area into a destination for senior tourist is that mindset or attitude of all stakeholders or concerned people in the area. They need to have a better understanding on what is a point of developing Universal Design into their area or business and how could it make profit or benefit to them.

The other interviewee shared his opinion that as a tourism marketing organization of Pattaya, he must frankly speak that silver age or senior tourists are not the main target for Pattaya at this moment and also the main marketing campaign for Thailand is now promoting other 55 local destinations apart from the main travel destination. Therefore, the idea of developing and promoting Pattaya to be a friendly destination for senior tourist may not be in a part of the marketing plan soon. However, the strength or selling point of Pattaya is the variety in term of activities, foods, cultures and a wide price range of accommodation as well as easy access which means that every people should be able to enjoy travelling to and staying in Pattaya, including senior and disabled tourists as well.

For Universal Design in the area of research, he personally thinks apart from facilities and infrastructure that need to be improved, a safety and security for all people is also very important. A physical environment such as a road and footpath are intruded by sellers. Therefore, even there is some part of the area of research that had been install or designed to provide for senior and disabled person's convenience, but it is not in a proper condition or cannot be utilized by those people for real.



Figure 22: Site Observation

Source: (Author, 6 February 2019)



Figure 23: Site Observation

Source: (Author, 6 February 2019)

His concern is that apart from a physical environment that need to be developed. It is also a mindset of people as well that need a development. He thinks that there are many people who are not aware of and do not understand the importance of providing the Universal Design. However, some entrepreneurs are awakened to the trend of aging society and senior tourists. They provide the information of their business that able to cater the needs of this group of tourists and looking for collaboration and channels to promote their readiness.

Part 5: Developing a Model of Universal Design for Senior Tourists in the area of North to Central Pattaya Beach Road

From the result of questionnaires filled in by senior and disabled tourists in the area of research, together with a result from an in-depth interview with three related organisations, researcher found that even though there are facilities, equipment and infrastructures are provided in the area of research. However, they are neither in a proper condition nor useable in a real situation. The reason of this matter is a lack of understanding of all stakeholders such as government sector, business sector and residents in the area.

After a site observation and interview with both organisations, researcher has come up with a model that will help in creating an impact of Universal Design into an area of North to central Pattaya Beach road for senior and disabled to tourist.

There are 4 main aspects that should be considered in order to develop area of north to central Pattaya beach road to be friendly destination for senior and disabled tourists.

1. Knowledge and Awareness
2. Qualified Suppliers
3. Facilities and Infrastructures
4. Marketing and Promotion

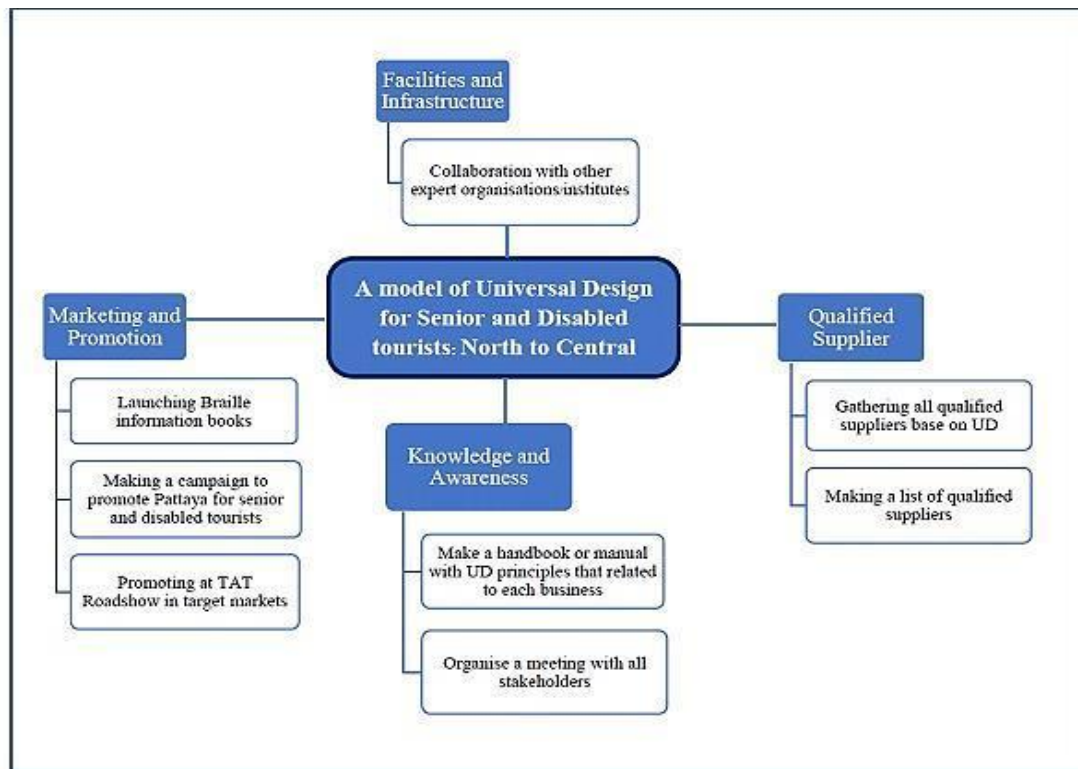


Figure 24: A model of Universal Design for the area of research

Knowledge and Awareness

It is crucial to have all stakeholders, both government and private sector, aware of and understand the importance of the segment of tourists, both senior and disabled person, and understand their needs. Related organisations can help by establishing an agent that responsible in developing and publicizing the knowledge and awareness regards to Universal Design to those business owners and residents in the area of research.

After that, a simple manual or guidebook of Universal Design that can be understand and applied easily should be distributed to each business for example hotels, restaurants, tourist attraction, shopping malls and entertainments. This is aimed create a better understanding and encourage entrepreneur to adopt Universal Design to their businesses. A meeting should be organized occasionally, like every quarter, to follow up

with the business segment to see a progress and obtain their feedback after adopting Universal Design and to discuss further or give an advice for those who may need.

Qualified Suppliers

Apart from having a manual or handbook that will be distributed to each business, suppliers who are knowledgeable and expert in Universal Design also playing an important role in building an effective design that can be used truly. As one of the interviewees had raise his concern that even though his office tried to adopting Universal Design by building a ramp for wheelchair and also a toilet for disabled person. However, it was not built properly by unprofessional contractor so it can't be used in a real situation.

Therefore, qualified suppliers that are able to do a construction with knowledge of Universal Design would benefits for both entrepreneurs that are interesting in adopting a Universal Design into their business and for a contractor which get more job opportunity. Moreover, it of course benefits and can be used easily for everyone.

Facilities and Infrastructures

This is also a very important aspect that should be developed as well because it is easily noticed by all people. It is also essential for those who are in need of them for their mobility.

There should be cooperation between Pattaya City Council and other expert institutes in order to create a better infrastructure and facility to provide to both senior and disabled person. There are many organisations that are an expert in this issue such as Friendly Design for All Foundation which was founded in 2015 by Mr. Krisana Lalai whom is also a disabled person himself. There are also other organisations such as Ministry of Social Development and Human Security, Tourism Authority of Thailand (National Statistical Office) under the Ministry of Tourism and Sports and PTT Public Company Limited and Central Group from the public sector side that place importance on Universal Design. These are the organisations that should have collaboration with Pattaya City

Council in order to develop Pattaya city to be a friendly destination for senior and disabled person.

Marketing and Promotion

In this part of a development could be done follow each perspective of the Marketing Mix theory which was developed by Neil Borden in 1964. As per the study of E. Constantinides (2016) that the Mix has its origins in the 60's: Neil Borden (1964) identified twelve controllable marketing elements that, properly managed, would result to a "profitable business operation". Jerome McCarthy (1964) reduced Borden's factors to a simple four-element framework: Product, Price, Promotion and Place.

According to the study of Tellis (2006), product refers to aspects such as the firm's portfolio of products, the newness of those products, their differentiation from competitors, or their superiority to rivals' products in terms of quality. Promotion refers to advertising, detailing, or informative sales promotions such as features and displays. Price refers to the product's list price or any incentive sales promotion such as quantity discounts, temporary price cuts, or deals. Place refers to delivery of the product measured by variables such as distribution, availability, and shelf space (Tellis, 2006).

In term of product development for the area of research, the facilities, equipment and infrastructures in the area should design and develop base on the 7 principles of Universal Design to ensure the convenience and safety that will be provided to all users. It is to draw an attention from group of senior and disabled tourists into the area of research and increase an opportunity to expand this market segment into tourism industry of Pattaya City

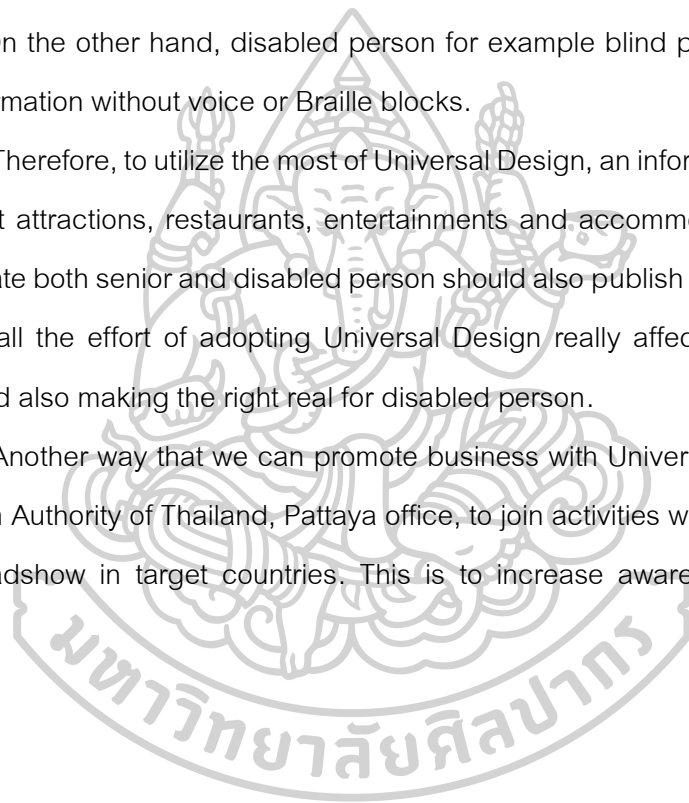
Price and promotion is seemingly to be one of the most effective way to encourage people to make a decision on their travelling plan or destination. A reasonable

price and attractive promotion would persuade tourists to travelling to a specific destination.

After adopting Universal Design into the business, marketing is also a crucial aspect that will help entrepreneurs driving their business and achieve the aimed result in term of numbers. From the interview, one of the interviewees had expressed his opinion that even though many businesses have tried to get into the segment of senior and disabled tourists but they are lack of the channels to communicate with the target audience. On the other hand, disabled person for example blind person also could not receive information without voice or Braille blocks.

Therefore, to utilize the most of Universal Design, an information or guide book about tourist attractions, restaurants, entertainments and accommodations that able to accommodate both senior and disabled person should also publish in Braille as well. This is to make all the effort of adopting Universal Design really affect towards the target segment and also making the right real for disabled person.

Another way that we can promote business with Universal Design is to work with Tourism Authority of Thailand, Pattaya office, to join activities with TAT such as table top and roadshow in target countries. This is to increase awareness and create an exposure.



CHAPTER 5

DISCUSSION, CONCLUSION AND RECOMMENDATION

This research aimed study on the potential of the North to Central Pattaya Beach Road area to become a friendly travel destination for senior and including disabled tourists. A study was done by using mixed method to gain useful information and perspective from stakeholders in the area of research.

Firstly, Researcher did a review in related documents to find a cornerstone of design that allow everyone to be able to utilize the area equally which is the 7 principles of Universal Design which were developed in 1997 by a working group of architects, product designers, engineers and environmental design researchers at North Carolina State University.

After that, a site observation, a semi- structured interviewing and data collecting from questionnaire with 100 senior and disabled tourists and residence in the area of research was taken place in consequence.

Lastly, by reviewing and combining all obtained information, researcher had come up with a model that could be used in order to develop the area of research according to the Principles of Universal Design.

DISCUSSION

This study presents a guideline of how to develop the area of North to Central Pattaya Beach Road with the Principles of Universal Design by follows the research questions as below;

Research Questions

1. What is a characteristic of facilities and infrastructures of tourism destination that is required by a special care needed tourists, including senior and disabled tourists?

Senior tourist is the segment that had drawn attention from business entrepreneurs in many countries. All the number of people at this age is continuously growth, especially in developed countries where social welfare, education and the healthcare system are decent and equally accessible. Even though number of seniors with a longer of lifespan, well- educated, healthier and self- sufficient is increasing, however, the architectural design that allow them to be self-reliance while safety and convenient is the most concern also essential aspect to cover.

The 7 Principles of Universal Design was developed with an intention to create environment that can be accessed, understood and used by all people. Universal Design consider the diverse needs and abilities of all throughout the design process to meet people's' needs. Therefore, the concept of Universal Design is appropriate to use with facilities design for all people including senior and disabled.

To summarize, there are 7 Principles of Universal Design as below;

1. Equitable to use; the product or environment that is useful to all people even with divers of abilities. It must provide the same meaning and make provision for a privacy, security and safety equally available to all users to all users.

2. Flexibility in Use; the design accommodates a wide range of individual preferences and abilities. Provides choice of method to use. It must be able to accommodate right-or left-hand users.

3. Simple and Intuitive Use - the design that is easy to understand, regardless of the user's experience, knowledge, language skills or current concentration level. Eliminate unnecessary complexity and be consistent with user expectation.

4. Perceptible Information - the design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities. Use different modes (pictorial, verbal, tactile) to present essential information.

5. Tolerances for error - the design minimize hazards, errors and adverse consequence of accidental or unintended actions.

6. Low Physical Effort – the design can be used efficiently and comfortably and with a minimum of tiredness. All user to maintain a neutral body position, use reasonable operating forces, minimize repeated actions and minimize sustained physical effort

7. Size and Space for Approach and Use – appropriate size and space is provided for approach, reach, manipulation and use regardless of user's body size, posture or mobility.

2. Does the area of North to Central Pattaya Beach road has a potential on being a friendly and proper tourism destination based on 7 principles of Universal Design?

Researcher did a site observation in the area of research, started from the beginning of Pattaya Beach Road at roundabout to the Central Pattaya junction and made a way back to the start point on the other side of footpath. From the observation, researcher noticed that footpath on the beach side had been renovated. Footpath was widened and beach chairs were restricted in specific areas which create a pleasant scenic than usual.

However, there are no elements that would help in creating a proper environment for senior and disabled people. No Braille blocks were installed, the crosswalk signals are only provided in coloured lights so it could cause difficulty to people who are colour blindness and also for the visual impaired.

Further than that, for people who are in need of wheelchair and people with some conditions of physical impaired, they would have faced with insecurity and difficulty because the design of the footpath, both on the beach and resident side. There are slope ways that is too board. Even though, they are not very steep but due to the width of the slope way, it could cause accidents such as an overturn of the wheelchair for example. Also there is no handrail has been installed along the side of the slope way as well as a tactile flooring.

The other main problem of the area of research is none of the public toilet is provided. This is not only effect to senior and disabled people but everyone who comes

to North to Central Pattaya Beach Road. Public toilet is a standard infrastructure that should be accessible for everyone.

On the residence side, the size of footpath is narrow and uneven. Even for pedestrians, it is inconvenient and easy to walk. Certainly, no wheelchair users can use this side of the road. There are many stalls along the path which are causing lack of area utilization. People are unable to use it as a thoroughfare.

To summarize, from the site observation, researcher found that the area of research still has rooms for improvement in order to align with the 7 principles of Universal Design. The scenery and landscape from the North to Central Pattaya Beach Road had been adjusted and improved by Pattaya City Council. On the other hand, most of the facilities and infrastructure in the area are not enough, in a proper condition or well-constructed to serve the needs of senior and disabled people. It could not be used and utilized by everyone according to the 7 Principles of Universal Design.

After the site observation, researcher did an interview with relevant organisations to obtain other perspective and feedback from each part of stakeholders. There are three organisations that participated in this interview which are Designated Areas for Sustainable Tourism Administration (Public Organization) or DASTA, Tourism Authority of Thailand (National Statistical Office) Pattaya Office and Thai Hotel Association – Eastern Chapter in consequence. A semi-structured interview was conducted with organization representatives to discuss and seek for an idea to develop a model of Universal Design that could be applied to the area of research and benefits with all stakeholders.

From the interview, most of the interviewees are agreed on the point that there are some facilities that had been provided or installed in the area of research. However, those facilities or equipment are not in a proper condition that can be used by all people. Some are neglected and even broken.

Apart from facilities, security and safety is also an essential aspect that needs to be focused on. The area that has a proper security system allows people at all ages and physical abilities to enjoy and live their life carefree.

Nevertheless, from their point of view, they think that external factors such as facilities and infrastructure are something that can be easily developed if comparing to the mindset and awareness of people on the rights of senior people, including people with disabilities and the disabilities-inclusive society. They think that even if the area, facilities and equipment have been improved to align with the principles of Universal Design but if people in the area, both in the business sector and the residents, do not aware of the importance, they somehow would not be last long.

To summarize, interviewees are agreed that the facilities and infrastructures in the area of research are provided even though they might not be in a good condition but it is a good sign that stakeholders, especially from the government sector, are aware of the equally quality of life for senior and also people with disabilities. As mentioned above, the hardware is easier to develop but it is software or the mindset of people that is the challenge for the development.

3. What is a development model for North to Central Pattaya Beach road area to be a proper tourism destination for senior tourist, based on 7 principles of Universal Design?

The 7 principles of Universal Design is the design that considers all ranges of capabilities of all people. It is not a particular design that given profitable to senior or disabled people only but is the design that aims to facilitate all people to live their lives safely and conveniently.

For the area of research which is the area of the north to central Pattaya Beach Road, after the site observation, interviewing with related organisations and data collecting from senior and disabled tourists, a researcher had developed a model of Universal Design that can be applied by stakeholders in the area.

There are 4 main aspects that should be considered in order to develop the area of the north to central Pattaya beach road to be a friendly destination for senior and disabled tourists.

1. Knowledge and Awareness
2. Qualified Suppliers
3. Facilities and Infrastructures

4. Marketing and Promotion

Knowledge and Awareness

It is crucial to have all stakeholders, both government and business sector, aware and understand the importance of these segments of tourist, both senior and disabled person, and understand their needs. Their needs are different from other segments of tourist. Some of them are able to travel from place to place independently while some others are relying on aid, equipment or assistance from others. However, it is eventually about the rights and equality of person.

An awareness and understanding of people in the area are essential to the development plan because they are living in and using that area to make a living. Therefore, they are playing a big role in how successful the development could be. People in the area are often used to their traditional way of life. It would have to indicate the benefits that they would have gotten from the changes. The advantages of adopting Universal Design into their area are plentiful. It is not only for the senior and disabled tourists that would benefit but also for all the senior and disabled citizens in their community as well. Further than that, if the area has adopted Universal Design, it will also increase an opportunity to attract more and wider segments of tourist to their community which could lead to new ways to earn.

Stakeholders from different segment are focusing on a different perspective. Business owners are looking at the number and the return on investment. In order to persuade them to be a part of a development plan, we must indicate the benefits that they will get after applying the principles of Universal Design to their businesses. These market segments are growing up, especially from developed countries. By being ready to serve their needs, both by facilities and services will definitely open their business to more opportunity of selling.

In order to allow stakeholders to have a better understanding of a concept or main idea of the 7 principles of Universal Design, government sector, especially Pattaya City Council, should cooperate with other related organisations that have readiness and

knowledge of the principles of Universal Design to create a simple manual or guidebook of Universal Design that can be understood and applied easily should be distributed to each business segment for example hotels, restaurants, tourist attractions, shopping malls, and entertainments.

This is aimed to create a better understanding and encourage the entrepreneur to adopt Universal Design to their businesses. A meeting should be organized occasionally, like every quarter, to follow up with the business segment to see progress and obtain their feedback after adopting Universal Design and to discuss further or give an advice for those who may need.

Qualified Suppliers

After distributing guidebooks to business owners, the other thing that can do to support and encourage them to take more actions on this issue is to provide the list of suppliers with qualification and know-how of the principles of Universal Design. As the understanding and knowledge of the builder or contractor have highly affected the effectiveness of the construction. If the contractors do not have decent knowledge and well understanding, the result of construction could turn out to be unable to use in a real situation for senior and disabled people.

Therefore, qualified suppliers that are able to do construction with knowledge of Universal Design would benefit for both entrepreneurs that are interesting in adopting a Universal Design into their business and for a contractor which get more job opportunity. Moreover, it of course benefits and can be used easily for everyone.

Government sector, especially Pattaya City Council, should cooperate with other related organisations that have readiness and knowledge of the principles of Universal Design and make a list of qualified suppliers that business owners can consult and work with them to create an environment and facilities that work properly with senior and disabled people.

Facilities and Infrastructures

One of the most important and tangible elements is facilities and infrastructures in the area of research. It is the first element that tourists can see, touch and feels and it also affects their first impression as well.

The existing facilities and infrastructures in the area of research were installed and provided to serve the needs of senior and disabled tourists. However, they are not really in a proper condition to use and they are not provided thoroughly the area which is lead to insufficient facilities for everyone and underutilization.

Pattaya City Council, as the assigned authority of the area, should be the leader of the development plan. They should have a cooperative project with other expert organisations in order to develop and design the area of research with facilities and infrastructures according to the 7 principles of Universal Design.

There are many organisations that are an expert in this issue such as Friendly Design for All Foundation which was founded in 2015 by Mr. Krisana Lalai who is also a disabled person himself. There are also other organisations such as Ministry of Social Development and Human Security, Tourism Authority of Thailand (National Statistical Office) under the Ministry of Tourism and Sports and PTT Public Company Limited and Central Group from the public sector side that place importance on Universal Design. These are the organisations that should have collaboration with Pattaya City Council in order to develop Pattaya city to be a friendly destination for the senior and disabled people.

Marketing and Promotion

To encourage more people to aware and alert of the benefits of Universal Design, especially business owners in the area of research, a concerned organization must support them by doing marketing activities to promote businesses that are ready to serve the needs of these groups of tourists. In perspective of business owners, they want to see the profits from adopting new things into their business. There must be a return on investment to motivate them to invest their money. From the interviewing, the researcher

had got feedback from one organization that there are hotels that have an environment and design to serve the needs of senior and disabled people but they are lack of the channels to promote their businesses and communicate to their target customers.

There are many marketing activities that can be done in order to promote the area of research to the target segments which may have to cooperate with the Tourism Authority of Thailand or TAT to do some activities such as making a recommended travel routes and guidebook for senior and disabled people. Providing information about the 5 travel components which are accommodation, amenity, accessibility, attractions and activities that apply with the principles of Universal Design to their businesses.

In term of promotion, an information or guide book with information about tourist attractions, restaurants, entertainments and accommodations that able to accommodate both senior and disabled person should also publish in Braille as well. This is to make all the effort of adopting Universal Design really impact the target segment and also making the right real for the disabled person.

Further than that, there are many activities lead by TAT to that can be attended to promote Universal Design-based businesses such as tabletop and roadshow in target countries. This will also help to increase awareness and create exposure to the target market.

Sub-research Questions

2. Do the existing facilities provide in the area of North to Central Pattaya is sufficient and practical to senior tourists?

There are the results from two parts; first is from the site observation by the researcher and follows by the result from the questionnaires data collecting.

From the site observation by the researcher, there are some of the facilities providing in the area of research such as Braille blocks on the footpath for the visually impaired person are not in proper condition. They are not tiled flatly and throughout the way. There are some signages and electricity poles and installed in the middle of the way

and blocked the pedestal. It is unsafe and inconvenient for people who are disabled or using some equipment to travel from place to place without assistance for others.

Other facilities such as the crosswalk signals, they are only provided in coloured light which may cause some challenges to people with colour blindness and also visually impaired. There should have a sound system that can guide them to cross the road safely. Apart from that, there is no CCTV installed in the area of research. It is very important to ensure the safety of all people in the area, not only for tourists.

To summarize the result from the site observation, the existing facilities are insufficient and inefficient in order to serve the needs of the senior and disabled people. Facilities should be provided more and throughout the area to ensure that they are accessible and practical to everyone.

From the questionnaires, the overall satisfaction of tourists in the area of research shows positive feedback towards the existing facilities in the area of research. Firstly, in the principle no.7 which refers to an appropriate size and space is provided for approach, reach manipulation and use, regardless of user's body size, posture or mobility. In this principle, it mainly focuses on an appropriate size and space is provided for approach, reach, manipulation and use regardless of user's body size, posture or mobility. Provide a clear line of sight to important elements or any seated or standing user, make a reach to all components comfortable for any seated or standing user, accommodate variations in hand and grip size, provide adequate space for the use of assistive devices or personal assistance. On this point, the average satisfaction is at 3.769 out of 5, based on a 5-point Likert scale. Senior and disabled tourists had emphasized that it is easy for them to access and approach to existing facilities at any gesture.

Secondly, follows by the principles no. 5 and no. 6 at the same level of satisfaction at 3.668 out of 5. Principle no. 5 of the Universal Design is about the design minimizes hazards and the adverse consequence of accidental or unintended actions. In this principle, it is mainly focused on the design that allows people to use safely, reduce a risk that might happen during the usage and after that. Principle no. 6 is about the design can be used efficiently, comfortably and a minimum of fatigue. This principle is

quite referred to the same meaning with principle no.7 that is focused on the ease of using tools, equipment and facilities for all people. The design ensures all people can use them without using too much energy.

To summarize the result from the questionnaires, senior tourists in the area of research are satisfied with the overall facilities and infrastructure at the score of 3.638. The 3 aspects that they are satisfied with the most are the design and space of the area and facilities that are easily accessible, the design that minimizes the hazards and reduce the risk of using and follows by the ease of use of the design and facilities provided in the area respectively.

3. How can the existing facilities provided in the area of North to Central Pattaya be improved to meet the needs of senior tourists?

From the site observation, the researcher suggests that the stakeholders should consider developing the existing facilities based on the principles of Universal Design to be able to serve the needs of senior and disabled tourists. A footpath should be widened to a minimum of 90 cm. with a ramp and handrail to support wheelchair users and people with other forms of disabilities. A Braille block to support the visually impaired people should be also provided throughout the area to ensure the user's safety and the continuity of usage.

Other facilities that should be developed are related to the safety and security of all people. The lights and CCTV in the area should be installed more to make certain that both tourists and residents can use the area at any time without risks. Especially for Pattaya City, it is a vivid city with entertainment, nightlife and activities happening at night. Therefore, it is essential to provide sufficient safety elements for them.

The other component that is very important to all people who use the area is a public toilet. From the site observation, the researcher found that there is no public toilet provided in the area of research. It causes to the lack of facilities provided to tourists in the area.

From the questionnaires, three principles that have the most negative feedback from the senior and disabled tourists in the area of research are 1) Principle no.2; the design accommodates a wide range of individual preferences and abilities, 2)

Principle no.4; the design communicates necessary information effectively to the user, regardless of the ambient conditions or the user's sensory abilities and 3) Principle no.1; the design is useful and marketable to people with diverse abilities consecutively. The researcher will explain more in regards to each principle below.

The least satisfying aspect from the senior and disabled tourist in the area of research is the principle no.2; Flexibility in Use – the design accommodates a wide range of individual preferences and abilities. Provides choice of method to use, accommodate right-or left-hand to use, facilitate the user's accuracy and precision, provides adaptability to the user's pace. The rating from the senior and disabled tourists in the area of research is at 3.428. This principle is aimed to provide facilities or a design that can accommodate everyone without regards to individual capability. It must be useful to everyone. However, from the feedback from respondents, they are still unsatisfied with this aspect of the design of the existing facilities in the area of research.

Secondly, the principle no. 4; Perceptible Information - the design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities. Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information. Maximize “legibility” of essential information, differentiate elements in a way that can be described, provide compatibility with a variety of techniques or devices used by people with sensory limitations. This principle is focused on the design that uses different form or pattern to communicate with people and to ensure that everyone has received the same messages without any consideration of a user's background and physical abilities. In this part, the respondents rated their satisfaction at 3.544.

Lastly, the principle no.1; Equitable to use – the product is useful, marketable to people with diverse abilities, provides the same means of use to all users. Avoid segregating or stigmatizing any users. Make provision for privacy, security and safety equally available to all users. This principle mainly focuses on the equality of all people. The design that can be used safely and utilize easily and equally by everyone. In this aspect, the respondents gave their rating at 3.580.

To summarize the result from the questionnaires, the respondents are less satisfied with the flexibility in the use and perceptible Information and equitable in a use of the existing facilities in the area of research. There are recommendations from the respondents on the facilities that they wish to see improvement such as a crossroad signal light with a sound signal that is easy at use for both senior and disabled people should be installed more in the area to ensure providing flexibility and safety in travelling for them. The signage, guide post and others such as a warning sign should also communicate in various modes, for example, pictorial, verbal and tactile to ensure that the accurate information has been communicated and everyone can perceive the same meaning.

IMPLEMENTATION

Originally, this research was aimed to develop a model of Universal Design that can be applied and benefit all stakeholders such as the government sector, business sector, seniors and disabled tourists and also local residents. Therefore, the above model was created to persuade stakeholders to take action and be a part of the development plan.

Further from the discussion above, below are the suggestions on implementing Universal Design for the stakeholders.

1. Government Sector; the main role is to be a coordinator among other sectors, to support and drive government plans and related policies pragmatically. Especially, Pattaya City Council that owns the area should take a step forward to lead the project and make it functional and really practical for everyone.

2. Business Sector such as tourist attractions, hotels, restaurants, shops and travel agents in the area of research; they are one of the main aspects that would help in creating such an environment according to the principles of Universal Design. However, from the study, the main concern is that the awareness and mindset, so it is essential to educate the importance and benefit of adopting Universal Design into their businesses. Related organisations, both from government and other expert organisations, are responsible to arrange training or conduct a meeting to share their expertise among a group of stakeholders

to create a better understanding and attitude towards seniors and disabled people and how to be responsive to their needs. Those business sectors can also cooperate by providing useful information about their current business situation and facilities and allow expert team or organisations to do a site inspection in order to provide a guideline in developing their existing facilities to align with the principles of Universal Design.

3. Local Residents; they can also be a part of development in their area by accepting new concept or knowledge into their daily life. An awareness of people in the area is having great significance to the process of development. Even if the government and business sector try to improve or develop the landscape and facilities in the area but if people who live in or frequently use the area are not aware of or see it as importance, it would be very challenging to adopt or develop the area. Therefore, the mindset of people in the area of research is one of the most important aspects to focus on.

To make them have a better understanding of the importance or benefits of adopting Universal Design into their area, they have to notice that does not only benefit to those who are seniors or disabled but it will also benefit people at all ages and ranges of physical capabilities.

LIMITATION AND RECOMMENDATION

The research of a Model of Universal Design for senior tourists in the area of North to Central Pattaya Beach road which in this study, the researcher also includes an aspect from the disabled people in this research as well. The researcher used the 7 Principles of Universal Design as the main idea for model development.

From the interviewing with three related organisations, most of the interviewees had a limited understanding of the Universal Design and the needs of seniors and disabled people. The interviewees were from the organisations that so-called a supportive organisation. They will go along with any policies that announce by the government to drive those policies into an action plan.

One of the essential organisations that has a great significance in order to support and urge the policies to become a tangible environment and to study further on the readiness

of the related organisation, Pattaya City Council should be also included in the list of the interviewees as they are in-charge of the area of research. Their readiness, awareness and understanding on the equality and the rights for senior and disabled people will have highly affect towards the development strategy and policy. The implementation of Universal Design into the area of research would be a very successful one if they were truly understanding the principle and the importance of Universal Design.

There are many organisations, both profit and non-profit, that have a great understanding and know-how of how to develop and implement the principles of Universal Design into each business or environment. The future research should also include their perspective which would be very benefit to the study and the development of the model as well. The further study could be advantaged by interviewing with the group of people who are senior or people with disability. They are the group of people that will be directly affect by this environmental development. Their experience and expectation towards the area development will be greatly reflex on the needs and also a valuable resource that will help the researcher to develop a model that able to enhance the quality of life for senior and disabled people.

Apart from that, the researcher had faced some limitation while doing the research that caused a lack of information from the business owners' side. The feedback and opinion from the business entrepreneurs will be useful for the researcher as well. As the business sector is also having an important role on providing facilities, services and environment that useable and impact to the convenient, safety and security of senior and disabled people in the area of research.

However, most of the hotel entrepreneurs that had been contacted for an interviewing denied giving any information. Hotels didn't want to share their information due to a policy, some confidential information and also for their reputation. The Information from the hotel entrepreneurs would also show another aspect and could be very valuable feedback to develop the area of research to becoming a friendly travel destination to all people.

To collect an information and feedback from the real users such as senior and disabled tourists in the research are also very important to a validity and precision of the

obtained information. However, researcher had found some difficulty while collecting questionnaires from these respondents as these groups of tourists are limited in number and some of them denied giving information and feedback. In addition, the researcher cannot reach out to hotels or accommodations around the area due to the privacy concern for their guests. Therefore, the number of questionnaire respondents were limited by the timeframe also.

CONCLUSION

There are many elements that would create a suitable environment for senior and disabled people as they might face some challenges from their physical ability. However, the rights and equality for these people are sometimes neglected by people in a society. In fact, the environment and facilities that design able to accommodate the needs of these people will also benefits other people in the community as well.

The principles of Universal Design are the concept of the design, whether the facility, environment and products that accommodate wide ranges of people abilities. It will be able to facilitate all people regardless of their body preferences, knowledge, skills, level of concentration at the moment of using and etc. It can be simply referred to as the design for all people.

To conclude the study of a model of Universal Design for the area of North to Central Pattaya Beach road, it was started by a literature review about the Universal Design to find a cornerstone that should be implemented in order to develop a model for the area of research. The 7 principles of Universal Design were used as a foundation to evaluate the area of research during the site observation and data collecting from the senior and disabled tourists by using questionnaires.

After reviewing, site observation, interviewing and data collecting by a questionnaire, a model of Universal Design for the area of North to Central Pattaya Beach road had been developed. A model consists of 4 main aspects which are 1) Knowledge and Awareness 2) Qualified Suppliers 3) Facilities and Infrastructures and 4) Marketing and Promotion. The developed model is aimed to facilitate and encourage stakeholders, both from

the government and business sector, to participate and adopt the Universal Design into their policy and businesses. It is not only benefitting to the senior and disabled people but also affects to other stakeholders as well. The government sector will get benefits from the expanding market of senior and disabled tourists which could help increase revenue from the tourism industry. For the business owners, they can also expand their target market segment and increase profitability from providing facilities and services to senior and disabled tourists. Lastly, the residents can also get more job opportunities from the growing number of tourists in the area and also benefits from the developed environment that is accessible for everyone in a community.

As mentioned in the implementation part of this chapter, there are many communities that had adopted the Universal Design into their area. The researcher had noticed some of the best practices from those existing models which are described below;

First, after the management team or the committees of the project were set up, they will start with the site observation and obtain feedbacks, opinions, experiences and expectations from the community members by using tools such as questionnaire, interviewing and public hearing. This information is very useful for the planning process as the main objective of the project is to response the needs, both physically and mentally, to all members of the community. It is crucial to ensure that all feedback and expectations are evaluated and be a part of the plan.

During the planning process, there are many related organisations and persons that become an important part to drive this project and make it a successful development plan. From the study of the existing models of Universal Design, many experts from various fields and organisations had gathered to ensure then the developed plan will be useful, effective and practical for everyone. It is a great collaboration between the government and the business sector to provides an environment that suitable and convenient for everyone. This is a very important factor that affect to the success the development. The understanding and awareness towards the issue of senior and disabled people from the local executive committees are highly have an effect on the progress of the development. As some of them may have some physical difficulties and are rely on the equipment or under the care of their

family, to provide an environment with convenience, safety and security elements will allow them to live and maintain their rights equally with the rest of the community members. At this stage, some guidance, expertise and advices from the expert organisations, scholars or engineers are essential because the 7 principles of Universal Design are stated only the guideline of the environment that will be helpful for senior, disabled and everyone. Nevertheless, to take a look into the details of the buildings, structures and any constructions, it would take more than these principles. A knowledge of the structural design and the construction that is really functional and useful to people with disabilities would be required at the planning stage to ensure that the infrastructure, buildings and environment are safe and useful according to the law enforcement and the expectation of the real users.

These steps mentioned above are similar to the model of Universal Design for the North to Central Pattaya Beach road which was developed by the researcher in this study. However, as Pattaya city is a well-known world class travel destination with millions of travelers, both international and domestic, visit in a year, the researcher became aware of the importance of the marketing, public relations and communication to the travelers all over the world.



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