A Conceptual Model: An Application of Universal Design in Tourism Industry for Senior and Disabled Tourists - A Case Study of North to Central Pattaya Beach Road Area

การจำลองแบบเชิงแนวคิด : การนำแนวคิดอารยสถาปัตย์ไปใช้ในอุตสาหกรรมการท่องเที่ยวสำหรับนักท่องเที่ยวสูงอายุและนักท่องเที่ยวผู้พิการ - กรณีศึกษาถนนเส้นเลียบชายหาดพัทยาเหนือถึงพัทยากลาง

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Abstract

This research was aimed to develop a Conceptual Model of an Application of Universal Design in Tourism Industry for Senior and Disabled Tourists in the area of North to Central Pattaya Beach Road Area by using 7 principles of Universal Design. A research was conducted by a qualitative method by using observation and interviewing with both government organization, public organisation and other supportive organisation to obtain useful information. Research results found that the interviewees believe that the existing facilities and infrastructures in the area of research are well equipped and efficient in serving the needs of seniors and disabled people. The main aspect that should be developed is a perception and awareness of people towards the right and needs of senior and disabled people. Therefore, the researcher had come up with a conceptual model of an application

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of Universal Design in the tourism industry for senior and disabled tourists in the area of the north to central Pattaya beach road area. The conceptual model can be divided into 4 related aspects which are 1) Facilities and Infrastructures 2) Qualified Supplier 3) Knowledge and Awareness and lastly 4) Marketing and Promotion. These aspects are essential elements that will help in developing an awareness and also create advantages to all stakeholders.

Keywords: Senior Tourist, Disabled Tourist, Universal Design, Pattaya Beach

บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อพัฒนาแบบจำลองเชิงแนวคิด เรื่องการนำหลักแนวคิดเกี่ยวกับอารยสถาปัตย์ ทั้ง 7 ด้าน ไปใช้ในอุตสาหกรรมการท่องเที่ยว สำหรับนักท่องเที่ยวที่สูงอายุและผู้บกพร่องทางร่างกายที่ เดินทางมาท่องเที่ยวบริเวณถนนเส้นเลียบชายหาดพัทยาเหนือถึงพัทยากลาง โดยใช้วิธีวิทยางานวิจัยคุณภาพ ผ่านการสัมภาษณ์เชิงลึก โดยมีหน่วยงานภาครัฐ และหน่วยงานที่ให้การสนับสนุนต่าง ๆ เป็นผู้ให้ข้อมูลหลัก จากการศึกษาพบว่า สิ่งอำนวยความสะดวกและโครงสร้างพื้นฐานที่มีอยู่แล้วนั้นสามารถตอบสนองความ ต้องการของผู้สูงอายุและผู้บกพร่องทางร่างกายได้ แต่สิ่งที่ควรพัฒนา คือ ทัศนคติของบุคคลและ การ ตื่นตัวของผู้มีส่วนได้ส่วนเสียในบริเวณนั้น ถึงสิทธิและความต้องการของนักท่องเที่ยวสูงอายุและผู้บกพร่องทาง ร่างกาย ดังนั้น จึงนำมาสู่แบบจำลองเชิงแนวคิดที่จะช่วยในการพัฒนาพื้นที่วิจัยให้เป็นจุดหมายในการ ท่องเที่ยวที่เป็นมิตรต่อนักท่องเที่ยวสูงอายุและผู้บกพร่องทางร่างกาย ซึ่งประกอบด้วย 4 ด้าน ได้แก่ 1) สิ่งอำนวยความสะดวกและโครงสร้างพื้นฐาน 2) ผู้ผลิตหรือผู้ที่ติดตั้งอุปกรณ์ที่ได้มาตรฐานและมีความเข้าใจ 3) ความรู้และการตื่นตัว และ 4) การตลาดและการนำเสนอ ซึ่งการพัฒนาทั้ง 4 ด้านนี้จะช่วยสร้างความ ตระหนัก รวมไปถึงก่อให้เกิดประโยชน์ต่อผู้มีส่วนได้ส่วนเสียในทุกด้านอีกด้วย

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Introduction

Pattaya City is a very well-known travel destination among tourists worldwide for decades. It is remarked by its variety of activities, beautiful natural settings and broad ranges of entertainment that provide to every tourist visit Pattaya. In 2017, according to a report of Domestic Tourism Statistics Q1-Q4 (Classify by region and province) by Ministry of Tourism and Sports, there were more than 18 million tourists visited Pattaya, both Thai and International. (Ministry of Tourism and Sports, 2016)

Even though Pattaya is one the most dynamically developing city in an eastern area of Thailand and the growth in term of the 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.

However, Pattaya had shown an attempt on developing their infrastructures and facilities that provide to all tourists through these past few years. There was a massive renovation to improve the 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 the circulation system to reduce convict.
3. The creation of linkage between the beach and the adjacent area.
4. The provision of more shading.
5. The increase in necessary facilities.
6. The reduction of erosion from surface water drainage.
7. The reduction of components that disrupt the ocean vista.

Source: Chaysomyod, 2013

From the above concerned renovating dimension, can lead to an assumption that Pattaya city also pays attention to the matter of a 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 several 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.

Ageing society becomes a significant issue among many 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. As reported in World Population Ageing 2013 by Economic & Social Affairs, United Nations stated that " ... the number of the 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

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something that should be focused on, especially in developing countries, where infrastructure and social welfare is insufficient.

Thailand had also faced a challenging of ageing society since 2010. Now, 10 per cent of the 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 the senior population's needs. The study found that facilities and services had failed to serve the basic needs of the elderly. Public space, facilities and services which are still underqualified which is not passing 50 per cent from the standard evaluation. (National Reform Council, 2015). There has come to a guideline of how to improve the standard of facilities provided for the elderly especially. There are three main perspectives to be considered. First are physical safety, accessibility and stimulation in consequence.

In Thailand, there is a law and regulation regarding 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 an elderly and disabled person such as a ramp for wheelchair users and a handrail in the toilet. Most of the entrepreneurs are only provide those mentioned facilities according to law by Royal Thai Government Gazette, 2005, regarding the standard of facilities in a building for handicapped, disabled and elderly people. The main issue of this matter is that most of the 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 the near future would build up a huge competitive advantage for entrepreneurs.

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 the Asia Pacific region. Further than that, ageing society is also an issue that the government sector focusing on. Not only because of an increasing in a 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 market 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 infrastructure and services that serve the needs of senior people would be highly advantages for Thai's entrepreneurs.

Objective

To develop a Conceptual Model of An Application of Universal Design in Tourism Industry for Senior and Disabled Tourists in the area of North to Central Pattaya Beach Road Area.
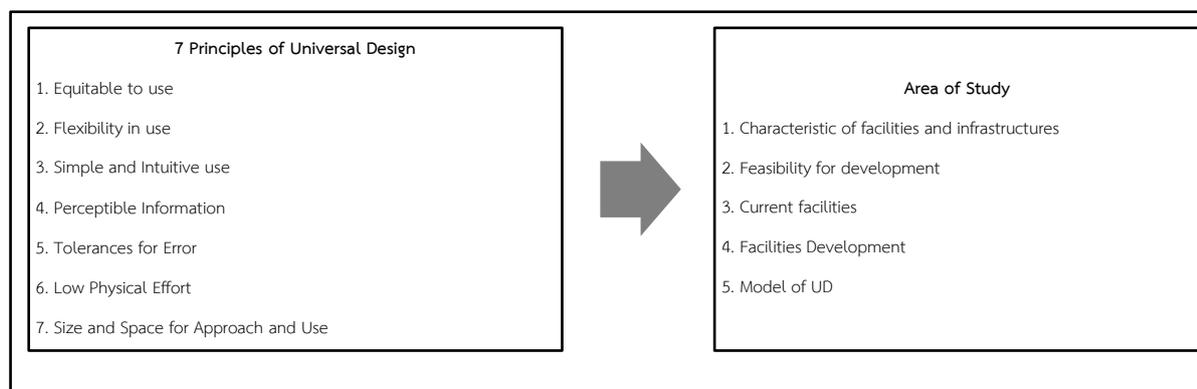
Scope of the Study

The study focused on developing a model of Universal Design for senior and disabled tourists in the area of North to Central Pattaya Beach Road.

Firstly, the primary data was obtained by field observation by the researcher during 9th - 10th February 2019 to observe and investigate the current facilities and infrastructure in the area of research based on 7 principles of Universal Design.

Secondly, the interview with the key informants from the government, the public organisation and the support organisation using a semi-structured interview with open-ended questions to encourage the interviewees to share their concerns and idea to develop the model of Universal Design to the area of research.

Lastly, after gaining information from field observation and interviewing, the researcher had developed a model of how Universal Design can be adopted by stakeholders in the area of research.

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Conceptual Framework

7 Principles of Universal Design	Area of Study
1. Equitable to use	1. Characteristic of facilities and infrastructures
2. Flexibility in use	2. Feasibility for development
3. Simple and Intuitive use	3. Current facilities
4. Perceptible Information	4. Facilities Development
5. Tolerances for Error	5. Model of UD
6. Low Physical Effort	
7. Size and Space for Approach and Use	

The researcher used 7 Principles of Universal Design as the main theory to identify the characteristics of facilities and infrastructures that can serve the need of seniors and disabled people. Then, study furthermore on the feasibility of developing the area of research to be a friendly destination for seniors and disabled tourist through field observation and find further recommendations from both government and related support organisation. Consequently, the researcher had developed a model of Universal Design for seniors and disabled tourist in the area of research that focus on 4 main dimensions which are 1) Facilities and Infrastructures 2) Qualified Suppliers 3) Knowledge and Awareness and 4) Marketing and Promotion.

Literature Review

There are many researchers that showed an attempt to identify a definition of a 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 who aged 60 years old and older (United Nations, 2014). World Tourism Organization had defined a senior tourist as a tourist aged over 55 years old. (UNWTO 2005: 11 - 13; Hall 2006: 12 -1 7) 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)." (Le Serre, 2008)

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 (Department of Older Persons, 2003). 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. (National Statistical Office, 2014)

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.

Universal Design had been adopted in many countries in order to support the needs of seniors 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, 2014).

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, 2014). Universal design intended to create environments that are usable by all people.

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 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

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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 a way that can be described, provide compatibility with a variety of techniques or devices used by people with sensory limitations

5. Tolerances for error - the design minimizes 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 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.

Universal Design does not only benefit a specific group of seniors 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, 2014).

1. People who have no significant problems but appreciated with a well - design, accessible and useable product, service and environment

2. People who have little difficulty with all features

3. People who have difficulty with some features

4. People who have trouble with most features

5. People who are unable to use product, service and environment at all

Therefore, to respond back to the needs of these people would be highly benefited to both individual, society and business level. Universal Design is creating an ability for people of all level to live independently. It assumes that the range of human ability is ordinary, not special (Ostroff, 2011). Especially in the age 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 to 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, 2014). Therefore, it increases the ability of one to live independently by using a Universal Design to help them live conveniently and adapt themselves to technology 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 a business segment from adopting Universal Design vary from an increasing market chance to increase customer 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, 2014).

From the above, the benefit of Universal Design is not only provided to those people with a 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 a benefit for all.

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

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revisit again. They also expect tourists to stay longer and find the potential of investing and running a 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 the market in the Asia Pacific region by making an adjustment on environments and facilities provided for senior and disabled people.

A-one Pattaya Beach Resort is one of the example hotels that show an attempt on supporting groups of senior and ds. 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 manoeuvre 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 a group of people with any ranges of disability. By constructing a slope down to the beach and for those with a visual disability, there will be a guide provide to describe a scenario for them to increase an ability to imagine of the 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 hotel owners and entrepreneurs are active and responsive 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 the policy of Pattaya

Model. In this study, the 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.

Research Methodology

The research methodology was conducted by a qualitative method to find out the additional objectives by examining interview, observation and field survey.

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

Firstly, the researcher collected secondary data by related literature review, followed by field survey, observation and interview with informants which were referred to stakeholders including with related public and government organisations.

The research requires a variety of primary and secondary data to create an understanding regards to basic needs of senior and disabled tourists which will help in facilitating their travel pleasantly. This research concentrated on 7 principles of Universal Design which will be adopted to establish and develop a model of improving existing facilities in the area of North to Central Pattaya Beach road to be a proper tourism destination for senior tourists.
Several steps of research are as follow;

1. 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.

2. A semi-structured interview was conducted with 3 stakeholders in different areas. A researcher had scheduled and list of interviewees including from both government and public sector and supporting organisation to seek collaboration in developing this mentioned area. The sample consists of a range of groups:

2.1 The Government Sector; Tourism Authority of Thailand (Pattaya Office)

2.2 Supporting organisation; Designated Area for Sustainable Tourism Administration (DASTA)

2.3 The Thailand Hotel Association - Eastern Chapter (ETHA)

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3. The analysis process was taken place later. By analysis information and data from a literature review, observation, interview with different stakeholders. Opinion and information given were analysed and interpreted.

4. Lastly, the researcher had drawn a conclusion and created a model of Universal Design that proper to develop this specific area. A recommendation will be provided to benefit all stakeholders such as community, residents, local authority involved in this area

Results

After a field observation between 9th-10th February 2019 and interview with Tourism Authority of Thailand (Pattaya Office) and Designated Area for Sustainable Tourism Administration (DASTA), a researcher found that there are some facilities that already have been installed or been constructed before to provide 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.

From an interviewing with Tourism Authority of Thailand (National Statistical Office) Pattaya Office and Designed Areas of Sustainable Tourism Administration (DASTA), a researcher found that both organizations were having moderate knowledge and understanding in meaning and importance of Universal Design towards 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 the 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

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the 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, they also organized and controlled vendors 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 in 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 of 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 from Tourism Authority of Thailand, Pattaya Office, 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 targets for Pattaya. Therefore, the idea of developing and promoting Pattaya to be a friendly destination for a 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, 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.

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

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From interviewing with both government and support organisation, the researcher had summarized the comments from both organisation's representatives, they think that the current infrastructure and facilities are rather enough to response the basic needs in travelling for seniors and disabled tourists such as a crossroad with a traffic light which extend an ability to cross the road safely to all users due to the signal light that can be easily seen and easy to understand by all people, a slop way that allows people who use a wheelchair to travel smoothly with low physical effort. However, the priority dimension that should be developed the awareness and conscious mind of the stakeholders. People need to understand the importance of adopting Universal Design. A benefit must be stated clearly to persuade and convince them to be a part of the development plan.

After a site observation and interview with both organisations, a 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. The stakeholders also get benefits from adopting these principles of design into their businesses.

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 as shown in picture 2 below;

1. Knowledge and Awareness
2. Qualified Suppliers
3. Facilities and Infrastructures
4. Marketing and Promotion
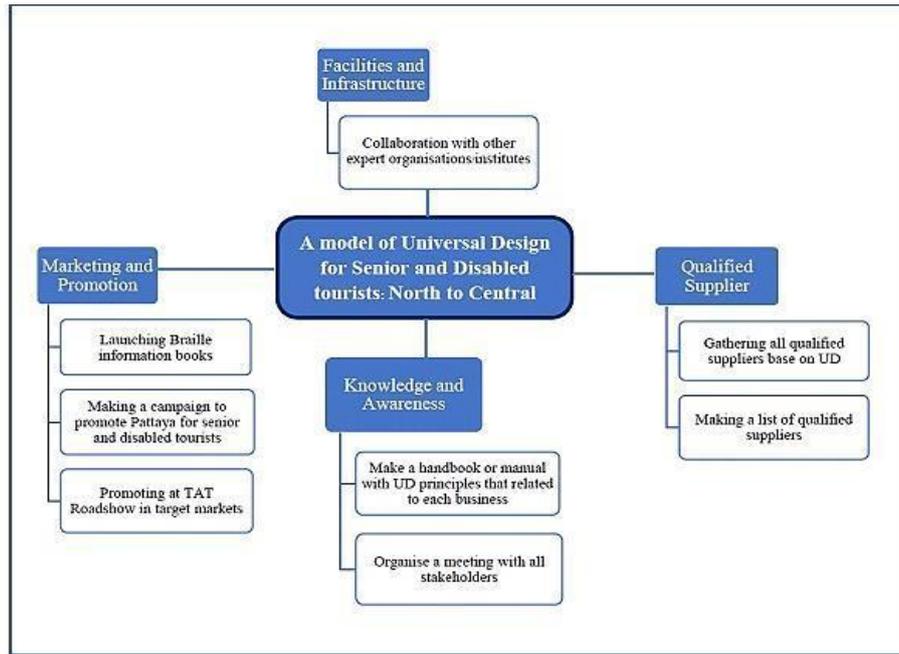
Picture 1: A Conceptual Model of an Application of Universal Design in Tourism Industry for Senior and Disabled Tourists in the area of North to Central Pattaya Beach Road Area

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 responsible for 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 understood and applied easily should be distributed to each business for example hotels, restaurants, tourist attraction, 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

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

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role in building an effective design that can be used truly. As one of the interviewees had raised his concern that even though his office tried to adopt Universal Design by building a ramp for wheelchair and a toilet for a disabled person. However, it was not built properly by an unprofessional contractor so it can't be used in a real situation.

Therefore, qualified suppliers that can do construction with knowledge of Universal Design would benefit 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 need them for their mobility.

There should be cooperation between Pattaya City Council and other expert institutes in order to create 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 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 a senior and disabled person.

Marketing and Promotion

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 lack the channels to communicate with the target audience. On the other hand, disabled person i.e. blind person also could not receive information without voice or Braille.

Therefore, to utilize the most of Universal Design, information or guidebook about tourist attractions, restaurants, entertainments and accommodations that able to accommodate

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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 making the right real for the disabled person.

Another way that we can promote business with Universal Design is to work with the 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 exposure.

Discussion and Conclusion

From the study, the researcher found that the area of North to Central Pattaya beach road has feasibility in developing to be a friendly travel destination for seniors and disabled tourists. However, there will be several organisations to be involved in the process of planning and development the Universal Design into the area of research.

Government sector especially Pattaya City Council should take the main responsibility in providing support and distribute necessary information and resources that could be useful to both internal and external organisation. The policy of improving the quality of life of people with difficulties, including seniors people, is also one of the main concern of the National Reform Council. However, Pattaya City is still lack of awareness and understanding regarding this issue as seniors and disabled tourists are not the massive market for them. Universal Design is an important issue among many countries in the world as world populations are now changing into a senior. Moreover, nowadays, Universal Design becomes as one of a social norm that indicates a social civilization in each country. Therefore, Pattaya City that is a well-known travel destination should emphasize and value people or tourists will all ranges of capability.

For the business sector, in the area of research, there are only a few hotels that are fully friendly with wheelchair users. Business entrepreneurs are still having limited knowledge and understanding the importance of supply products and services with Universal Design principles, mostly have a perception of Universal Design as a design for a disabled or senior person only. They think and concern of a result in term of business; What could be a benefit for them? Or what will they get in return from adopting principles of Universal Design? To identify the return on investment (ROI), a chance for market expansion and increasing guest satisfaction is one of the ways to communicate and persuade business entrepreneurs in adopting Universal Design.

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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.

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 for the area by

Recommendation for Future Research

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 include 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 of 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 very beneficial 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 a group of people that will be directly affected by this environmental development. Their experience and expectation towards the area development will be greatly reflex on the needs and also a valuable resources that will help the researcher to develop a model that able to enhance the quality of life for seniors 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 convenience, safety and security of senior and disabled people in the area of research.

However, most of the hotel entrepreneurs that had been contacted for 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. Information from the hotel

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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 a piece of information and feedback from real users such as senior and disabled tourists in the research are also very important to the validity and precision of the obtained information. However, the researcher had found some difficulty while collecting questionnaires from these respondents as these groups of tourist 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.

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