A STUDY OF VISITOR EXPECTATION AT UNDERWATER WORLD, PATTAYA

By
CHARNCHAI LEELAPRAD

A Thesis Submitted in Partial Fulfillment
of the Requirements for the Degree of

Master of Business Administration

Graduate School of Business
Assumption University
Bangkok Thailand

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Abstract

The aquarium industry is gradually developing in Thailand from the government's effort to promote education and tourism, and foreign investors seeking opportunities. Since there is limited information on the aquarium market in Thailand, it is a good time to conduct research relating to this developing industry for future reference. By determining visitor expectation will enable the aquarium developers to generate marketing strategies for different segments of the target group.

This research is performed at the Underwater World Pattaya, a relatively new aquarium in Thailand. The purpose of the study is to determine if there are any significant differences between the expectations of residents and tourists as well as the expectations of experienced and inexperienced visitors on various aquarium offerings. Within the differences, the research will determine what aquarium offerings will attract these different market segments.

This study focuses on the expectations of the aquarium visitors on various aquarium offerings. The visitors' expectations are believed to be determined by the visitors' origins (as local residents or foreign tourists), and their experience as aquarium visitors. The origin and the experience of the visitors are the independent variables. The dependent variables are the expectations of visitors in terms of the seven major aquarium offerings: (1) educational program, (2) regional aquatic theme, (3) special collection, (4) dangerous fish, (5) gift shop, (6) marine mammal shows, and (7) outdoor exhibits and activities.

The data is collected by self-administered questionnaire given out at Underwater World Pattaya in the month of February 2004, a high season for tourism in Thailand. The data is later analyzed by the Mann-Whitney U-Test. This test is performed to test the relationships of the status of visitors and the expectations of these visitors on the seven aquarium offerings.

The results show that there are significant differences of visitor expectations on several aquarium offerings between residents and tourist. The results show no significant differences of expectations between residents and tourists on education programs, special collection, and dangerous fish. This shows that these aquarium offerings are crucial in the success of attracting both residents and tourists. However, the tests show that there are significant differences in expectations on regional aquatic theme, gift shop, marine mammal show, and outdoor exhibits and activities. Of the

differences in expectations, foreign tourists tend to expect more out of those aquarium offerings. Therefore, different aquariums may offer different exhibits depending on the aquarium operator and developer's target visitors.

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I would like to take this opportunity to dedicate this research project to the following intriguing individuals. Without their help and dedication, this research project will never take place.

First and foremost, I would like to thank my parents for their unconditional love and support that have allowed me to live and learn.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1: INTRODUCTION

1.1 Background

Aquarium is a form of museum which includes exhibits and enclosures of freshwater and marine plant and animal species (Benbow 1997). One of the main goals of museum is education, where family education and school field trips emphasize the traditional role of educational activities at an aquarium (Leichter, Hensel, and Larsen 1989). Another purpose for constructing aquariums is for urban renewal, which will help the government to attract visitors (Deeter-Schmelz, Solomon, and Pettegrew, 1995). The need for focused marketing is becoming important to aquariums as they are being quickly developed in Thailand.

Information about consumer expectations can facilitate aquariums in developing marketing strategies. Expectation is a part of consumer behavior and helps visitors in decision making. Expectation is defined as the anticipation of a product or service. Consumer beliefs about what the future holds determine consumer confidence (Solomon 2000). However, the visitor expectation and the definition of aquariums may be ambiguous to many Thai residents because aquariums are rare in Thailand. Many of the foreign visitors may also have a similar problem if they lack the exposure to aquariums.

Aquariums are still primarily focused on education and awareness, but are also attempting to attract visitors through an increase in entertainment value and unique exhibits. The attempt to increase entertainment value has sometimes resulted in the addition of marine mammal exhibits, such as dolphin and whale shows, those were previously the domains of marine-oriented theme parks such as Sea World (San Diego) and Ocean Park (Hong Kong). The creation of these entertainment venues creates confusion between marine-oriented parks and aquariums. Aquariums are primarily

aimed at education while marine-oriented park are aimed at recreation and entertainment. Marine-oriented parks have strong regional and national advertising campaigns which will cause aquarium attendance to suffer, especially where a marine-oriented park and an aquarium are in close proximity (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

Now the questions lie in what are the visitors' perceptions on aquariums and their expectations on aquarium offerings in terms of the visitor's status as a local resident or a foreign tourist, and his/her experience. The answers to these questions will reveal the information for current and future aquarium developers to decide on who they want to target their customers and what offerings they should focus to market on. For example, if the aquarium developers want to focus on education for the local residents they would build something with less entertainment value. If the aquarium would like to attract both tourists and residents they would aim for a more challenging world-class marine park with other marine mammal shows and exhibits. But this example will only hold the hypothesis of foreign tourists who will have higher expectations of aquarium offerings than local residents.

To obtain the information on visitor expectations, marketing research is needed. With market research, corporations will be able to identify their customers and practice market segmentation. Market segmentation is defining the market according to a corporation's diverse customers by examining their demographic, psychographic, and behavioral characteristics (Kotler 2003). By focusing on the different segments of the market, the aquariums will have a clearer idea of what marketing strategies implement towards each of the different segments of the market.

1.1.1 Country background

The location of this study is based in Thailand because of its rapidly developing aquarium market and flourishing tourism industry (See Appendix 5).[1] It is important to understand the country background in order to relate to the local situation of the aquarium industry.

Its population of 60.2 million contributes to its GDP of $166 billion a year in 2002. Its main industries are agricultural products, gems and jewelry, textiles, rubber, and tourism (U.S. Department of State). Tourism is already a flourishing industry in Thailand and is still constantly growing. Thailand has received numerous awards for its tourism industry. Internationally, Thailand is ranked second in country of holiday destination, and Bangkok as the third in most desirable city to visit for vacationers by Travel and Leisure Magazine (Tourism Authority of Thailand). The Scandinavian travel trade also rated the Kingdom of Thailand the "Best Tourist Country 2003" and given Thailand the "Grand Travel Award 2003" (Tourism Authority of Thailand).

The plan to promote Thailand's tourism industry by the Thai government has lead to many projects and strategies to boost the country's image. A recent development is the aquarium. Thailand has recently opened Underwater World Pattaya, an aquarium in South Pattaya which includes the Asia's longest underwater tunnel. The government has also planned to erect other aquatic attractions such as a new aquarium for the International Horticulture Expo 2006 in Chiang Mai. Oceanis Australia Group, the world's second-largest aquarium operator, will also be spending one billion baht to build what would be the largest aquarium in Thailand at the Siam Paragon shopping centre. Siam Ocean World will attract both local and overseas visitors in response to the government's policy to promote Thailand as the tourism

[1] Boonsom, Arphiradee. Personal interview. 25 October 2003.

capital of Asia (*Bangkok Post*, August 2003).

With this anticipated aquarium "explosion", it will soon be accompanied by a change in aquarium exhibits and activities in the future. Aquariums around the world are now offering more than the traditional fish and underwater plant life exhibits (Deeter-Schmelz, Solomon, and Pettegrew, 1995). In order for Thailand to catch up with this developing industry, more research on visitor's expectation and satisfaction should be taken into consideration. Today's visitors seek both recreational and educational experiences when visiting aquariums.

1.1.2 Industry Background

The aquarium plays a significant part in the tourism industry because it is also used for urban renewal which will be able to attract regional and international visitors (Deeter-Schmelz, Solomon, and Pettegrew, 1995). Tourism and travel have become a global industry, and can be considered to be one of the fastest growing industries if not the fastest growing industry in the world (WTTC, 1995). It ranks as the largest industry in the world in terms of employment (one out of every 16 employees is in the tourism industry) (Mowlana and Smith, 1993). Therefore, the industry has become a major contributor to the gross national product of many nations. The importance of marketing in the tourism industry has been overlooked by many institutions (Riege and Perry, 2000). The study of consumer (or tourist) behavior is a way to identify the tourism market and its potential as well. A tourist attraction, such as the aquarium may be the next place for a break-through research in marketing and tourism.

The following tables (Tables 1.1, 1.2, 1.3) show the trends of the tourists contributing to the tourism industry of Thailand. We can see that the domestic tourists comprise about 40% of the total tourism industry in 2002, and exceed the

foreign tourist consumption in 2003 due to SARS outbreaks and terrorism (Tourism Authority of Thailand). As we can see local tourists are just as important as the foreign tourists in contributing to the tourism industry.

Table 1.1: International Tourists Contribution in Thailand

Year	International						
	Tourist		Average	Average Expenditure		Revenue	
	Number	Change	Length of Stay	/person/day	Change	Million	Change
	(Million)	(%)	(Days)	(Baht)	(%)	(Baht)	(%)
1995/1	6.95	12.73	7.43	3,693	9.48	190,765	31.37
1996/1	7.19	3.46	8.23	3,706	0.34	219,364	14.99
1997/1	7.22	0.41	8.33	3,672	-0.92	220,754	0.63
1998/1	7.76	7.53	8.4	3,713	1.12	242,177	9.7
1999/1	8.58	10.5	7.96	3,705	-0.23	253,018	4.48
2000/1	9.51	10.82	7.77	3,861	4.23	285,272	12.75
2001/1	10.06	5.82	7.93	3,748	-2.93	299,047	4.83
2002/1	10.8	7.33	7.98	3,754	0.16	323,484	8.17
2003/2	9.7	-10.15	7.96	3,750	-0.1	289,600	-10.47
2004/3	11.01	13.48	8	3,860	2.93	340,000	17.4

Source: Tourism Authority of Thailand

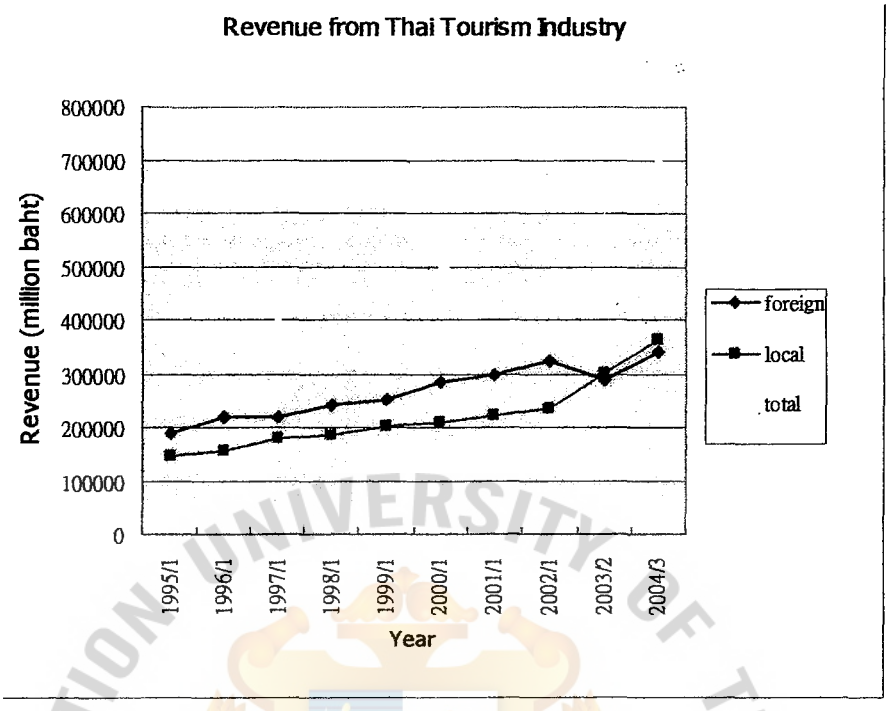
Table 1.2: Domestic Tourists Contribution in Thailand

	(Million)	(%)	(Days)	(Baht)	(%)	(Baht)	(%)
1995/1	52.26	22.53	2.27	1,248	-	148,112	-
1996/1	52.47	0.4	2.22	1,314	6.41	157,323	6.2
1997/1	52.05	-0.78	2.31	1,466	11.58	180,388	14.66
1998/1	51.68	-0.72	2.37	1,513	3.18	187,898	4.16
1999/1	53.62	3.02	2.43	1,523	2.26	203,179	7.42
2000/1	54.74	2.08	2.48	1,718	12.79	210,516	3.61
2001/1	58.62	7.09	2.51	1,703	-0.89	223,732	6.28
2002/1	61.82	5.45	2.55	1,690	-0.77	235,337	5.19
2003/2	65.1	5.31	2.65	1,750	3.58	301,900	28.28
2004/3	67.12	3.1	2.7	2,000	14.29	362,500	20.07

1. Actual, 2. Trend, 3. Forecast

Source: Tourism Authority of Thailand

Figure 1.1: Revenue from Thai Tourism Industry



Source: Tourism Authority of Thailand

The Thai government is proposing the construction of various aquarium projects to boost the Thailand's image to attract visitors from aboard. Since the aquarium is relatively new to Thailand and information on the aquarium industry of Thailand is limited, we will categorize the aquarium as a part of the tourism industry. Tourism industry holds a significant amount share in the entire GDP of Thailand. According to statistics whole tourism industry is about 18% of the whole GDP of the country (National Statistical Office of Thailand). This includes transportation of travel agencies, recreational activities, and hotel-related businesses.

Although there are aquariums being constructed in Thailand, the industry has not been fully developed. According to Ms. Arphiradee Boonsom, the marketing manager of the Underwater World Pattaya, there are only a few small-scale aquariums in Thailand as of now. However, future aquariums that the developers are planning

are with a greater magnitude. The Underwater World Pattaya has set a new benchmark for the aquariums in Thailand because it is currently Thailand's largest aquarium and has projected to attract the most visitors. The following aquariums in table 1.1 are what Ms. Boonsom considers as the major players currently in the aquarium industry in Thailand[2].

Table 1.3: Comparison of Major Aquariums in Thailand

Name	Cost	# of species	Ticket Price
Aquarium and Marine Science Museum (1982)[1]	N/A	100+	20 Baht
Phuket Aquarium (1985)[2]	N/A	100+	5-20 Baht
Samui Aquarium (& Zoo)[3]	N/A	50	150-250 Baht
Underwater World Pattaya (2003)[2]	275 million Baht	200	120-360 Baht
Siam Ocean World (2005)[2]**	One billion baht	400	200-400 Baht
International Horticulture Expo in Chiang Mai (2006)[2]**	200 million Baht	N/A	N/A

Sources: 1. Thailand.Com, 2. Bangkok Post, 3. Samui Orchard Resort & Aquarium

** *future projects*

[2] *Boonsom, Arphiradee. Telephone interview. 18 November 2003.*

1.1.3 Company Background

This research will be based on the information that will be gathered from the Underwater World in Pattaya for several reasons. First, information on aquariums in Thailand is scarce. Second, Underwater World Pattaya is the newest and the only noticeable aquarium project in Thailand. Thirdly, the ease and accuracy of the information for research is available.

Underwater World Pattaya is a leisure attraction showcasing the variety of marine life of the region. The goals of this aquarium are to increase awareness of marine life preservation, education, and recreation. School visits are actively supported, and a number of new educational programs are being planned for 2004. This aquarium is managed by Sovereign Marketing, a subsidiary of Haw Par Group which also manages the Underwater World at Sentosa in Singapore. The Underwater World Pattaya is built on 12 rais of land with a total cost of 275 million Baht. There are currently about 50 employees including seven divers. Located in Pattaya, it fits well with the many other educational and recreational activities of the sea.

There are over 4,500 animals from more than 200 species at the Underwater World. It also includes a 100 meter-long tunnel, which the visitors are separated just an acrylic window apart from the home to great shoals of fish, prowling predators and a host of other creatures that inhabit the ocean depths (See Appendix 1).

Current marketing strategies for the company include advertising through local newspaper and radio. It is also promoting its tropical fish with last year's hit movie animation 'Finding Nemo'. It also has a dual pricing strategy which it costs 360 for foreigners and 250 for Thais (See Appendix 5).

1.2 Statement of Problem

Although the number of actual visitors is exceeding the expected visitors of 600,000 a year, Underwater World Pattaya faces many challenges. The actual number of visitors is considered classified data for the aquarium but according to Khun Boonsom the number of visitors on the weekday is about 2,000 and 10,000 on weekends, totaling around 1.4 million visitors a year. The lack of parking space and organization has caused many problems. The insufficient parking space has caused traffic problems around its vicinity. The government is threatening to close down the aquarium if this problem is unsolved. The over crowding of people has lead to poor quality of service.

The dual pricing of tickets for residents and foreign tourists has also led to the fall of the number of foreign tourists to the aquarium (the ratio of local to foreign is 95 to 5) (Thailand Explorer.com). Underwater World Pattaya is currently planning new facilities and exhibits to solve these problems. However, in the long-run there is a need to look at what exhibits are likely to attract both residents and tourists, and what will make visitors come back to visit. Potential regional and local competitors will also be a threat to Underwater World Pattaya. From these existing and potential problems, the ultimate question will be:

What offerings can the aquarium provide to meet the expectations of both local residents and foreign tourists?

1.3 Research Objective

The purpose of the study is to determine:

1. If there are any significant differences between the expectations of residents and tourists on various aquarium offerings
2. If there are any significant differences between the expectations of experienced and inexperienced visitors on various aquarium offerings
3. What aquarium offerings will attract these different market segments

1.4 Scope

In this research, the main focus is on the consumer behavior of the visitors to the Underwater World Pattaya. The main variables in the research will consist of the existing facilities at the aquarium and the status of the visitors. The dependent variable will be the existing facilities which will include educational programs, regional aquatic theme, special collections, gift shops, marine mammal shows, and outdoor exhibits and activities. The independent variables that will be measured are the status of the visitors, which include the origin and the experience of the visitors. They will be important factors in the future marketing strategies if their needs are different. The area of focus will solely be at the Underwater World Pattaya because the research is based on the consumer expectations and preferences of the aquarium.

1.5 Limitations

There are certain limitations to this research. The data collection at a single location may leave out the information of other potential visitors from other parts of Thailand. The time frame is also another limitation in this research. The data collected in February, although the second highest month of tourism activities may not be representative because it may neglect the respondents of other months (see

appendix 3). The tourist sample may also have flaws because we use simple random sampling instead of gathering information by their background such as nationality.

1.6 Significance

The information that the research yields is primarily important to developing marketing strategies for several reasons. First, cities using aquariums as tourist attractions will enable urban renewal, which possesses the potential ability to attract visitors (Underwood 1992). Attendance statistics from existing aquariums indicate that residents and tourists represent important target markets for aquariums. In order to effectively and efficiently attract both groups, aquariums may be required to undertake a segmentation approach, addressing tourist expectations in communications aimed at tourists and resident expectations in communications aimed at residents. Useful information on the expectations of targeted segments will be able to assist in developing appropriate marketing strategies and communications.

Marine activities, such as diving are considered one of the main attractions of Thailand by the Tourism Authority of Thailand. The newly developed aquarium market is contributing to the tourism industry by giving tourists incentives to visit. By conducting a marketing research the information will allow the existing Aquarium (Underwater World Pattaya) to understand its customers. Important information such as visitor's expectation will be able to let the aquarium operators to improve its quality of attractions and future planning for visitor retention. The study will also reveal the preferences of visitors which will able to formulate marketing strategies that will aid in attracting both international and domestic visitors. The research will not only benefit the current aquarium operators but also potential developers, visitors, and the economy as a whole.

1.7 Definition of Terms

Aquarium –Aquarium is a form of museum which includes exhibits and enclosures of freshwater and marine plant and animal species for the purpose of education and recreation (Benbow 1997).

Dangerous Fish - the dangerous fish collection is one of the most attractive displays of an aquarium. This collection includes sharks, barracuda, and piranhas. At Underwater World Pattaya, dangerous animals include stonefish, scorpion fish, lionfish, and puffer fish (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

Education programs - programs relating to educational purposes such as providing extensive research opportunities for a marine biology class. Providing explanations and profiles of various marine creatures is also a form of education. Education programs are important for aquariums because it brings knowledge, not only entertainment for the public. However, education programs are not often expected as visitors focuses more on leisure and entertainment (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

Expectation – the anticipation or looking forward to the occurrence or appearance of. Wish for and be confident of receiving; tentative (mental or neural) representations of future events or unfinished learning process (Gnoth 1997).

Experience - It is one of the primary statuses of the visitors. Experience indicates if the visitor has visited the aquarium before or the first time. It is believed that the expectations of the visitor will differ depending on their experience (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

Focused marketing – process of marketing strategies aimed at a particular market segmentation (Kotler 2003).

Gift Shop - a major gift shop is usually placed in national aquariums. These gift shops provide visitors with souvenirs and also help the aquarium to generate additional revenues. Gift shops are often expected (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

Marine Mammal Shows - these shows are often seen in a marine-oriented theme park like Sea World, which is different from an aquarium because people expect the aquarium to be more entertaining over educating. Marine mammal shows generally offer dolphins or sea lions performances (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

Marine-oriented theme park – a type of theme park that offers marine mammal specialty exhibits and shows with high entertainment value (Deeter-Schmelz, Solomon, and Pettegrew 1995).

Marketing – is the process of creating, promoting, and delivering goods and services to consumers and business. Examples of marketing activities are market research, advertising, packaging, promotion, distribution and pricing (Kotler 2003).

Market research – the systematic design, collection, analysis, and reporting of data and findings relevant to a specific marketing situation facing the company (Kotler 2003)

Market segmentation – breaking a market down into sub-groups which share similar Characteristics (Kotler 2003).

Outdoor exhibits and activities - outdoor exhibits are marine animal displays which are not fully contained in a tank. These exhibits include seals and walruses. They are left outdoors because of their need for sunlight (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

Regional Aquatic Theme - This is the setting of the aquarium based on the regional environment. For example, if the aquarium is located in the tropics that aquarium will construct the aquarium with a tropical setting as if the visitors in the tropical ocean. (Deeter-Schmelz, Solomon, and Pettegrew,1995). At Underwater World Pattaya, the stone temple waterfall is reconstructed to feature its Southeast Asian theme to attract visitors.

Resident – a person is considered to be resident in a country (place) if that person has lived in that country (place) for at least six to twelve consecutive months prior to his/her arrival in another country (place) for a period not exceeding six to twelve months (Chadwick 1994).

Satisfaction – the fulfillment of desire, demand, hope, and/or needs; the function of the closeness between the buyer's expectations and the product's perceived performance (Kotler 2003).

Special Collection - special collection includes unusual or rarely seen marine animals or plants, such as sea snakes or tropical fish. Special collection is often the most attractive displays of the aquariums (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

Tourism – industry of travel and leisure (Chadwick 1994).

Tourist – A person who travels to a country (place) other than in which he/she has his/her usual residence that is outside his/her usual environment for a period note exceeding one six months to a year and whose main purpose of visit is other than the exercise of an activity remunerated from within the country (place) visited (Chadwick 1994).

Visitor – one who pays a visit; all types travelers engaged in tourism are described as visitors, and represents the basic concept for the whole system of tourism statistics (Jacob and Strutt 2003). A visitor in this research is defined as any single person who visits the aquarium, which includes both local residents and foreign tourists.

Chapter 2: LITERATURE REVIEW

This chapter is divided into three major parts which includes literature to support framework, literature to support methodology, and summary to support empirical findings. These literatures are able to compare, evaluate, and relate to my current research.

2.1 Literature to Support Framework

2.1.1 Key concepts

Aquariums

Aquariums are a form of museum that include exhibits and enclosures of freshwater and marine fish, plant and animal species (Benbow 1997). The number of national caliber aquariums is rapidly increasing, having risen from 10 to 25 over the past decade in the United States. Moreover, further increases are expected (Underwood 1992). This aquarium "explosion" has been accompanied by a change in aquarium exhibits and activities. Aquariums are now offering more than the traditional fish and underwater plant life exhibits. Today's visitors seek recreational and educational experiences when visiting aquariums (Russo 1983).

Many visitors may not recognize the differences between aquariums and theme parks. If visitors are expecting Sea World-type shows at an aquarium and such shows are not offered, they may view the aquarium visit negatively. It is important to address any visitor confusion in aquarium marketing strategies. In order to present a differentiated product in a competitive environment, aquarium marketers may need to educate visitors regarding what to expect from an aquarium.

Information on the expectations of those people who have been to an aquarium compared to the expectations of those people who have not been to an aquarium could

help aquariums identify what aspects or characteristics are the source of confusion, thereby facilitating appropriate marketing strategies and communications. (Deeter-Schmelz 1995)

Focused Marketing

Focused marketing is marketing towards a specific segment of the target market. Marketing according to segmentation is very important not only to aquariums as well as other businesses. To ensure success and survival, aquariums will need to use the tools of marketing (Kotler and Levy 1969). Accordingly, many aquariums are using distinct, special collections, and/or regional themes to differentiate their "product." Indeed, in an apparent effort to become more viable tourist attractions, some aquariums have added marine mammal exhibits, featuring the antics of seals, whales, dolphins, and/or penguins (Leimbach 1992a; Oceans 1988).

Attendance statistics from existing aquariums indicate that residents and tourists represent important target markets for aquariums (Florida Aquarium Promotion Proposal 1992). In order to effectively attract both groups, aquariums may be required to undertake the segmentation approach, addressing tourist expectations in communications aimed at tourists and resident expectations in communications aimed at residents. Useful information on the expectations of targeted subgroups could assist in developing appropriate marketing strategies and communications (Brown and Swartz 1989).

Expectation

In the tourism industry, planners are often best advised to study visitor behavior in psychological terms (Lewin 1942), as expectation is one of the important factors involving the tourists' motivation process. Expectations determine performance perceptions of products and services as well as perceptions of experiences. Logically, what is important to the tourist is inherent and more difficult to influence, whereas what is expected relates to previous knowledge, marketing, image creation and can vary more easily between destinations. This issue is important in understanding the marketability of destination attributes. If it can be shown that expectations are results of attribute importance, then marketing to expectations is also marketing to what tourists consider important and will be inherently more effective (Turner 1999). Expectation influences and motivates visitors in decision making. Urge is developed within a person and sets up an action tendency (See Appendix 2).

Expectations are often the dependent variables, as the literature review suggested. Regardless if it's the expectation of aquarium offerings (Deeter-Schmelz, Solomon, and Pettegrew, 1995) or the expectation of vacation destination (Turner and Reisinger 1999) they depend on the visitor's perception and experience on the exhibits and destination attributes.

Previous literature by Turner and Reisinger also suggests that there is a major link between expectation and importance (in visitor's decision in choose destination). Expectation can be related to and altered by previous knowledge, image creation, and marketing. Therefore, understanding the marketability of destination attributes can facilitate the marketing strategies to attract visitors.

Experience

Experience is one of the key concepts that effect the expectation and the decision making of the customers and visitors. Experience gives customers and visitors the knowledge of the different products or service attributes, which enables the visitors to form perceptions and expectations on these attributes.

One of the previous literatures suggests that visitation or direct experience with a destination is likely to modify the image of the destination. It states: *visitor who has previously been to an aquarium may have a significant difference of expectation to a visitor who has never been to an aquarium* (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

Another literature relating to experience and aquarium also suggests that the experience has an impact on the visitors' perception and attitude towards the aquarium exhibits and marine life preservation (Adelman, James, and Falk 2000).

Origin of Visitors

The experience and perception of the visitors is influenced by the place where they are from, or country of origin. Ultimately it has a great important factor in the visitors' decision making. Below is an example of how visitors from different countries view their destination in terms of experience and perception:

Australia is a desirable tourism destination for Koreans and well matched with their expectations. Cleanliness and safety are the key strengths, while the cost of travel and relative inaccessibility are regarded as weakness (King and Choi, 1997). Koreans primarily travel to Australia for the chance of experiencing the natural environment and climate. Australia is evaluated as a more favorable international holiday destination for "relaxing" and "recovering health" than "other overseas" destinations, and Australia is also perceived as a safe country. However, the view of

Australians as being friendly and welcoming to foreigners rated very low, while Australian culture and history is perceived as having little attraction, and local cuisine rated moderately (Kim, 1997).

Hong Kong travelers perceived Australia as an expensive place to visit with poor entertainment (night-life facilities). However, both the Hong Kong and Taiwanese tourists perceive Australia as having beautiful scenery, pleasant climate, friendly local people, good recreation and sports facilities, and safety (Mok and Armstrong, 1995).

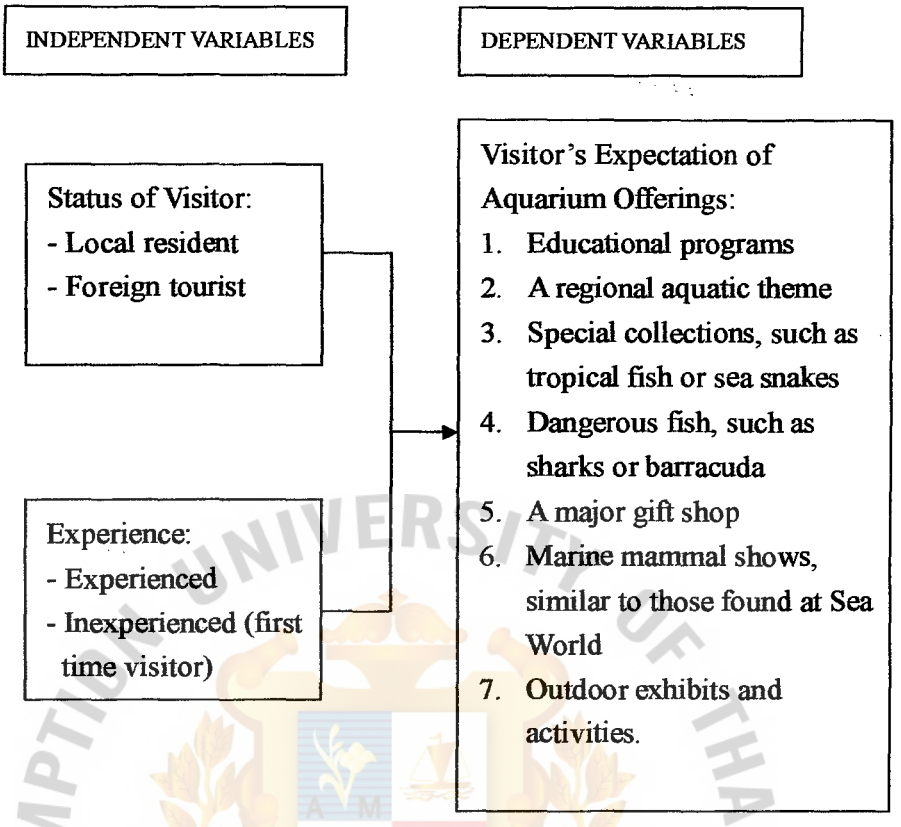
As we can see the different origins of the tourists have different perceptions on the same subject. This shows that the experience and expectation of visitors from different origins may differ in many ways, and this is also why that origin of a visitor is an important factor when it comes to expectations.

2.1.2 The Relationship between Key Concepts

The Expectations of Visitors on Aquarium Offerings in Terms of Experience and Visitors' Origin.

The collective results of the literatures suggest that expectations and the perception of the visitors/travelers are influenced by their origin and experience. When these factors are applied to the aquarium as a visitor's destination, the expectations of the visitors on various aquarium offerings differ in terms of the visitor's experience and origin. The degree of expectations also varies among these groups. The relationship between the variables can be seen in Figure 2.1.

Figure 2.1: Framework



Source: "The Age of Aquariums: A Need for Focused Marketing." *Journal of Travel Research,* (Winter 1995)

The variables are defined as both dependent and independent. There are seven dependent variables which are the various aquarium offerings: (1) educational programs, (2) regional aquatic theme, (3) special collection, (4) dangerous fish, (5) major gift shop, (6) marine mammal shows, and (7) outdoor exhibits and activities. These aquarium offerings are identified based on the literature reviews from *The Age of Aquariums: A Need for Focused Marketing* by Deeter-Schmelz, Solomon, and Pettegrew, *Impact of National Aquarium in Baltimore on visitors' conservation attitudes, behavior, and knowledge* by Adelman, James, and Falk. These aquarium offerings are also included in the Florida Aquarium Promotion Proposal of 1992, and

are considered aquarium offerings of existing national aquariums in the World. These dependent variables (aquarium offerings) will be explained in detail in the next chapter where the research will share the same framework.

With respect to expectation of tourists and residents, the previous literature concludes that tourists, when compared to residents, tend to have higher expectations of finding marine mammal shows and outdoor exhibits and activities at an aquarium. This is an interesting finding and is consistent with out suggestion that tourists may be more interested in recreational activities. In the previous literature residents are referred to as visitors residing in the area, whereas tourists are visitors from out of state. Additionally, this finding may have implications for the study's second sets of hypotheses regarding the confusion of aquariums with marine-oriented theme parks. Possibly, national theme park advertisements that Sea World, for example, is an aquarium. No differences were found with respect to the remaining dependent variables. That is, both tourists and residents had similar expectations of finding educational programs, a regional aquatic theme, special collections, dangerous fish, and a major gift shop at an aquarium. Still, in terms of rankings of expectations, tourists and residents appear to differ in the strength of their expectations (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

With respect to experience and inexperience aquarium visitors, inexperienced aquarium visitors, when compared to experienced aquarium visitors, had lower expectations of educational programs and higher expectations of marine mammal shows. While not surprising, these results do suggest the existence of some confusion among visitors who have never been to an aquarium. That is, people who have never been to an aquarium seem less able to distinguish between an aquarium and a marine-oriented theme park like Sea World, and expect recreational activities over educational activities (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

2.2 Literature to Support Methodology

There are several literatures which supports the methodology of the study. *The Age of Aquariums: A Need to Focused Marketing* (Deeter-Schmelz, Solomon, and Pettegrew, 1995) used stratified sampling in conducting this research. The sample consisted of two subgroups: (1) a tourist sample and (2) a resident sample. The tourist sample included tourists visiting Pinellas and Hillsborough Counties in Florida and was collected at the pier in St. Petersburg and Harbor Island in Tampa. These locations were chosen because of their similarity to the proposed location of the aquarium and because of the high percentage of tourists visiting these locations. Tourists were randomly intercepted at these sites, told the purpose of the study, and were to fill out a self-administered questionnaire.

A comprehensive list of issues was mutually identified by the researchers and executives from the proposed Tampa aquarium; this list provided the foundation for hypothesis development and consequently guided question content. Before the survey, a final version of the questionnaire was pretested on a small sample of respondents to ensure clarity. In addition to questions investigating the proposed hypotheses, the questionnaires contained inquiries on respondent demographics and the viability of the proposed aquarium in Tampa. Questionnaires for tourists and residents were identical. Respondents were questioned on their expectations of finding a particular exhibit, activity, or feature offered at a national caliber aquarium. The seven dependent variables (identified above) were involved in questioning. Questions were measured on a four-point (ordinal) scale, ranging from definitely expect (1) to definitely do not expect (4). In other words, the lower the respondent scores, the higher the expectations of that feature.

Another literature regarding ordinal scale uses five-point scale rather than four, ranging from (1) very little influence to (5) very strong influence. This scale is from

the literature *The Future of Theme Parks and Attraction Industry: A Management Perspective* by Ady Milman. This literature involves the perception of manager's on the influence of various facilities and attractions on customers. This literature also uses self-administered questionnaire.

The literature, *U.S. International Pleasure Travelers' Image of Four Mediterranean Destinations: A Comparison of Visitors and Non-visitors* (Baloglu 1999) talks about the differences of perception and expectation of the visitors from different background, which relates to my current study, in which the background differences of the visitors will have significant differences in expectation of aquariums. This literature also uses self-administered questionnaire.

Another literature, *Importance and Expectation of Destination Attributes for Japanese Tourists to Hawaii and The Gold Coast Compared* by Turner and Reisinger: also uses the same data collection methods as the previous literature mentioned above. The specific destination attributes selected from this study, were adopted from previous destination attractiveness and image studies. A sample of 607 Japanese tourists visiting Hawaii and 663 visiting the Gold Coast has been collected, giving a total sample of 1270 tourists. The instruments were translated into the Japanese language via a process of original and back translation. The surveys were distributed and collected using Japanese speaking interviewers. Pilot testing of 34 Japanese tourists was conducted on the instrument to ensure all questions could be understood and did not contain ambiguous questions or interpretive problems. Questionnaire on expectations were given out to arriving tourists on their tour destination.

The methods of statistical analysis used in the literatures reviewed are the independent t-test and the MANOVA test. The independent t-test is used to determine the significant differences between the different subgroups and is used to measure interval data. MANOVA tests are used to assess whether an overall

difference exist between groups. Among the literature review, one suggests the use of Mann-Whitney U-test (Milman 2001). This statistical test involves the use of ordinal data with independent selection. Therefore they all seem appropriate to be used for data analysis of this research. However, the appropriate statistical analysis that will be used will be discussed in chapter four.

2.3 Summary

From the previous literatures, they all conclude that the expectations and perceptions of the visitors differ according to their origin and experience. It is not surprising that there were differences between visitors' and non visitors' perceptions of the countries in the study. Non-visitors must form their perceptions on the basis of secondary information such as brochures, movies, work of mouth, and other media, while visitors can incorporate direct impressions gathered during time spent at the tourist destination (Baloglu and McCleary 1999). Table 2.1 shows the methodology and findings of the compared literatures.

Table 2.1 Comparison of Literature Among Authors

Title/Author	Objective	Framework	Methodology	Findings
U.S. International Pleasure Travelers' Images of Four *Mediterranean Destinations: A Comparison of Visitors and Nonvisitors* by Seyhmus Baloglu Ken W. McCleary	To compare U.S. international pleasure travelers' current images of four Mediterranean destinations: Turkey, Egypt, Greece, and Italy.	*Independent Variables*: Destination image (cognitive, affective, and overall image) *Dependent Variables*: Tourist destinations (Turkey, Egypt, Greece, and Italy)	Self-administered questionnaire Independent T-Test	There are significant differences among the images of the four countries.
Impact of National Aquarium in Baltimore on visitors' conservation attitudes, behavior, and knowledge. by Adelman, Leslie M., James, Sylvia., Falk, John H.	To determine the differences of visitor perception on marine conservation before and after the visit to the National Aquarium in Baltimore	*Independent Variables*: Visitor knowledge, experience, and attitude of marine life preservation *Dependent Variables*: Exhibits and Activities of the aquarium	Face-to-face interviews and telephone interviews Paired T-Test	The exhibits and activities gave a positive impact on visitors, but there are no significant differences on visitor perceptions and attitude before and after entering the aquarium

Table 2.1 Comparison of Literature Among Authors

Title/Author	Objective	Framework	Methodology	Findings
The Future of Theme Parks and Attraction Industry: A Management Perspective by Ady Milman	To survey decision makers in the theme parks and attraction industry and solicit their vision regarding future trends	*Independent Variables*: Perceived factors that would impact the parks' and attractions' future operations *Dependent Variables*: Theme park attributes	Self-administered Questionnaire Mann-Whitney U-test	Consumers seek more interactive attractions, and prefer fantasy and futuristic themes, More family oriented

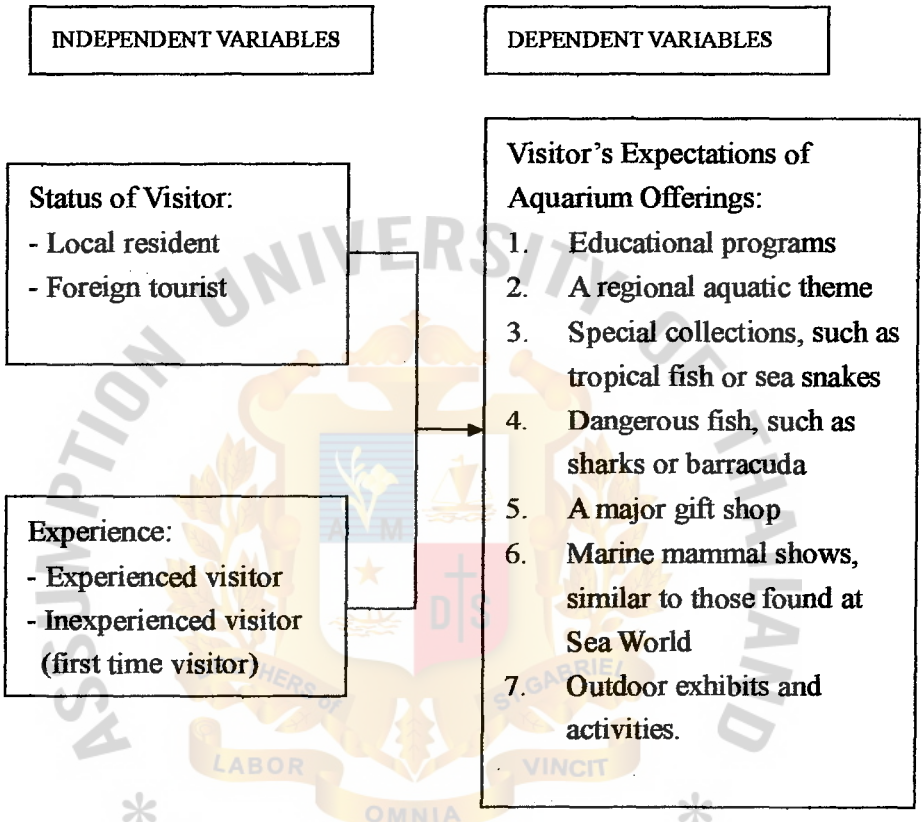
Chapter 3: FRAMEWORK

The framework or the research design of a research is a guide in collecting and analyzing data. The framework consists of dependent and independent variables. It shows the relationships and significance among the variables. The framework ensures that the study will be relevant to the problem and will follow appropriate procedures. The first step is to look at the nature of the research, and what type of designed will be applied. There are several research designs: exploratory, descriptive, and causal. Exploratory research is a research on the discovery of ideas and insights. Descriptive research typically deals with studies with frequency with which something occurs or the relationship between two variables. A casual research design is concerned with determining cause-and-effect relationships.

This research is an exploratory research because it provides an insight of the aquarium market. This research project is set out to define and analyze the relationships among the variables of experience, status, and expectation on aquarium offerings of aquarium visitors. The framework design can be seen on the following page.

3.1 Diagram of Framework

Figure 3.1: Diagram of Framework



Source: "The Age of Aquariums: A Need for Focused Marketing." *Journal of Travel Research*, (Winter 1995)

3.2 Definitions of the Variables

3.2.1 Independent Variables

Experience: It is one of the primary statuses of the visitors. Experience indicates if the visitor has visited the aquarium before or the first time. It is believed that the expectations of the visitor will differ depending on their experience (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

Residents: Visitors who are residents of Thailand (See Glossary).

Tourists: Visitors from abroad (See Glossary).

3.2.2 Dependent Variables

The following variables are taken from the literature review and the offerings of existing major national aquariums around the world which we will be using in our study. Five of seven of these offerings (educational programs, regional aquatic theme, special collection, dangerous fish, and gift shop) now exists in Underwater World Pattaya. This shows that the framework is applicable to this research and will also answer if the other two variables (marine mammal shows and outdoor exhibits and activities) are crucial for the aquarium in Thailand (see appendix 1). These variables are crucial to a national caliber aquarium (*Florida Aquarium Promotion Proposal 1992*) If Thailand wishes to catch up with the rest of the world in the aquarium industry it should follow a developed country's aquarium industry as an example.

Education Programs: programs relating to educational purposes such as providing extensive research opportunities for a marine biology class. Providing explanations and profiles of various marine creatures is also a form of education. Education programs are important for aquariums because it brings knowledge, not only entertainment for the public. However, education programs are not often expected as visitors focuses more on leisure and entertainment (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

Regional Aquatic Theme: This is the setting of the aquarium based on the regional environment. For example, if the aquarium is located in the tropics that aquarium will construct the aquarium with a tropical setting as if the visitors in the tropical ocean. (Deeter-Schmelz, Solomon, and Pettegrew,1995). At Underwater World Pattaya, the stone temple waterfall is reconstructed to feature its Southeast Asian theme to attract visitors.

Special Collection: special collection includes unusual or rarely seen marine animals or plants, such as sea snakes or tropical fish. Special collection is often the most attractive displays of the aquariums (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

Dangerous Fish: the dangerous fish collection is one of the most attractive displays of an aquarium. This collection includes sharks, barracuda, and piranhas. At Underwater World Pattaya, dangerous animals include stonefish, scorpion fish, lionfish, and puffer fish (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

Gift Shop: a major gift shop is usually placed in national aquariums. These gift shops provide visitors with souvenirs and also help the aquarium to generate additional revenues. Gift shops are often expected (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

Marine Mammal Shows: these shows are often seen in a marine-oriented theme park like Sea World, which is different from an aquarium because people expect the aquarium to be more entertaining over educating. Marine mammal shows generally offer dolphins or sea lions performances (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

Outdoor Exhibits and Activities: outdoor exhibits are marine animal displays which are not fully contained in a tank. These exhibits include seals and walruses. They are left outdoors because of their need for sunlight (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

3.3 Hypothesis Development

Foreign tourists (see page 17) refer to the visitors who are not Thai residents. These visitors can come from anywhere around the world. Foreign visitors to the aquarium are largely made of Asian tour groups from China, Hong Kong, Korea, and Taiwan (Boonsom 2003). ***Local residents*** (see page 17) are visitors who are residents of Thailand. It is important to identify visitor's identity because the expectation is likely to differ. Foreign tourists' expectations will differ from those of local visitors because of the region they come from. A foreign tourist would expect to see tropical fish or those of similar characteristics of the regional marine life. A resident will probably expect all types of fish whether they are regional or imported. Expectations of facilities and services might also differ due to the facilities or services those the visitors are familiar with in their own countries. Below are the hypotheses regarding local residents and foreign tourists.

$H1_0$: There is no significant difference between the expectations of local residents and foreign tourists on education program at an aquarium.

$H1_A$: There is a significant difference between the expectations of local residents and foreign tourists on education program at an aquarium.

$H2_0$: There is no significant difference between the expectations of local residents and foreign tourists on regional aquatic theme at an aquarium.

$H2_A$: There is a significant difference between the expectations of local residents and foreign tourists on regional aquatic theme at an aquarium.

$H3_0$: There is no significant difference between the expectations of local residents and foreign tourists on special collection at an aquarium.

$H3_A$: There is a significant difference between the expectations of local residents and foreign tourists on special collection at an aquarium.

$H4_0$: There is no significant difference between the expectations of local residents and foreign tourists on dangerous fish at an aquarium.

$H4_A$: There is a significant difference between the expectations of local residents and foreign tourists on dangerous fish at an aquarium.

$H5_0$: There is no significant difference between the expectations of local residents and foreign tourists on major gift shop at an aquarium.

$H5_A$: There is a significant difference between the expectations of local residents and foreign tourists on major gift shop at an aquarium.

$H6_0$: There is no significant difference between the expectations of local residents and foreign tourists on marine mammal shows at an aquarium.

$H6_A$: There is a significant difference between the expectations of local residents and foreign tourists on marine mammal shows at an aquarium.

$H7_0$: There is no significant difference between the expectations of local residents and foreign tourists on outdoor exhibits and activities at an aquarium.

$H7_A$: There is a significant difference between the expectations of local residents and foreign tourists on outdoor exhibits and activities at an aquarium.

Experience is important when it comes to customer expectations. When customers have experienced a certain product or service they will be more knowledgeable and are able to identify their needs and wants in possible future encounters. With more experience, the customer will be able to compare the previous experiences with future expectations. In this research, visitor experience is an important factor in determining the expectation of an aquarium offering. An experienced visitor would expect more from the aquarium because he/she has already been to other aquarium and will be expecting to see the same offerings, if not, more displays that Underwater World Pattaya has to offer. Whereas a visitor who has never been to an aquarium would expect less since they have no experience or knowledge about aquariums. Thus we can form these following hypotheses:

$H8_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on education program at an aquarium.

$H8_A$: There is a significant difference between the expectations of experienced visitors and inexperienced visitors on education program at an aquarium.

$H9_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on regional aquatic theme at an aquarium.

$H9_A$: There is a significant difference between the expectations of experienced visitors and inexperienced visitors on regional aquatic theme at an aquarium.

$H10_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on special collection at an aquarium.

$H10_A$: There is a significant difference between the expectations of experienced visitors and inexperienced visitors on special collection at an aquarium.

$H11_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on dangerous fish at an aquarium.

$H11_A$: There is a significant difference between the expectations of experienced visitors and inexperienced visitors on dangerous fish at an aquarium.

$H12_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on major gift shop at an aquarium.

$H12_A$: There is a significant difference between the expectations of experienced visitors and inexperienced visitors on major gift shop at an aquarium.

$H13_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on marine mammal shows at an aquarium.

$H13_A$: There is a significant difference between the expectations of experienced visitors and inexperienced visitors on marine mammal shows at an aquarium.

$H14_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on outdoor exhibits and activities at an aquarium.

$H14_A$: There is a significant difference between the expectations of experienced visitors and inexperienced visitors on outdoor exhibits and activities at an aquarium.

3.4 Expected Outcome

Past research indicates that tourist expectation varies among the characteristics of the visitors in terms of experience and tourists/residents. With the variables of various aquarium offerings: educational programs, special collections, dangerous animals, outdoor exhibits and activities, regional theme, marine mammal shows, and a major gift shop, the results suggest that there is a difference of expectation between experience and inexperienced visitors as well as a difference between foreign and local visitors (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

The significant discoveries of previous findings indicated that the expectations of marine mammal shows and expectations of outdoor exhibits and activities were significantly higher in tourists than those of the residents'. Between experienced and inexperienced visitors, the expectations of educational programs are higher among experienced visitors. However, the expectations of marine shows are significantly higher among inexperienced visitors (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

With the current research we are expecting a similar outcome. We are also expecting that the expectations of local residents and foreign tourists, and the expectation of experienced and inexperienced visitor will vary. Moreover, we expect the degree of expectation to vary among the different groups as well.

Chapter 4: METHODOLOGY

This chapter explains the methods used for conducting this research. This chapter will be discussing target population, sampling method, sampling element & unit, sample size, data collection, data measurement, and data analysis.

4.1 Population

The population of the research will be the actual visitors visiting the Underwater World Pattaya in February of 2004.

4.2 Sampling Method

Stratified random sampling method has been used. By using this method, the population was divided into mutually exclusive groups, and random samples were drawn from each group. In this research, the population was divided into two groups: (1) local residents and (2) foreign tourists. We categorized these two groups because these two groups are believed to have different expectations. Within these two groups we are also interested if they are experienced or inexperienced aquarium visitors. Stratified sampling is a type of probability sampling. Probability sampling was used to avoid biasness and to produce more accurate results. It gave the sample an equal chance to get selected in mutually exclusive groups.

To ensure more accuracy, simple random sampling was used within these two mutually exclusive groups in order that each person would have an equal chance of being selected for participation and where each combination of participants was equally similar (Anderson, Screeney, Williams 2000).

4.3 Sampling Element & Unit

The sampling element is the collection of objects with desired information. In this research the sampling element is the visitor of the aquarium. The desired information we are looking for is the visitor's expectations on the aquarium. The sampling unit is one single visitor. The sampling frame is the visitors of the Underwater World Pattaya before they enter the aquarium because we are to find expectation, which is the anticipation before seeing the actual attraction.

4.4 Sample Size

The sample was taken from the population which was the actual visitors to the Underwater World Pattaya. The sample size should be representative of the population. However, it was difficult to determine the actual number of the population, therefore, an estimation of expected visitors has been used. The number of the population is 1.4 million per year from July 2003. This figure is based on the estimation done by Underwater World Pattaya (Boonsom 2003). The research and data collection were done in the month of February 2004 because it was the month with the second highest tourism activity (behind December). February consumes about 9% of the inbound tourists in year 2002 (See appendix 3). With this assumption, 9% of the 1.4 million expected visitors per year would likely be in February. Therefore, the expected visitors visiting the Underwater World Pattaya in February of 2004 and the sample population would be 126,000.

There are several methods to determine the sample size. Since this research has used probability sampling we used the table of determining sample size for research activities adapted from R.V. Kriecie and D.W. Morgan (Table 4.1). N stands for the size of the population, n stands for the size of the recommended sample, and the sample sizes were based on the .05 confidence level.

Table 4.1: Sample sizes for various populations of size 10 to 500 million (95% Confidence level)

N	n	N	n	N	n	N	n	N	n
10	10	110	86	300	169	950	274	4500	354
15	14	120	92	320	175	1000	278	5000	357
20	19	130	97	340	181	1100	285	6000	361
25	24	140	103	360	186	1200	291	7000	364
30	28	150	108	380	191	1300	297	8000	367
35	32	160	113	400	196	1400	302	9000	368
40	36	170	118	420	201	1500	306	10000	370
45	40	180	123	440	205	1600	310	15000	375
50	44	190	127	460	210	1700	313	20000	377
55	48	200	132	480	214	1800	317	30000	379
60	52	210	136	500	217	1900	320	40000	380
65	56	220	140	550	226	2000	322	50000	381
70	59	230	144	600	234	2200	327	75000	382
75	63	240	148	650	242	2400	331	100000	384
80	66	250	152	700	248	2600	335	250000	384
85	70	260	155	750	254	2800	338	500000	384
90	73	270	159	800	260	3000	341	1000000	384
95	76	280	162	850	265	3500	346	10000000	**384**
100	80	290	165	900	269	4000	351	500000000	384

Source: R.V. Krejecie and D.W. Morgan, Educational and Psychological Measurement, p.608

According to the table above the population yields a sample size of 384. Keep in mind that there are 2 subgroups in this study, residents and tourists. The two groups are equally important for this research, and therefore we have divided the sample size into half, giving us 192 residents and 192 tourists.

4.5 Data Collection

Who:

Data collectors: The questionnaires were given out by ten ABAC students. Five students gave out the questionnaires to residents and the other five to tourists. They would wait for each respondent to finish the questionnaire before giving out the next one. This would allow the respondents to ask questions if they were unclear about the questions.

Respondents: The respondents were the actual visitors visiting the Underwater World Pattaya. The respondents include both foreign and local visitors as well as experienced and inexperienced aquarium visitors.

How:

The primary data were collected with self-administered questionnaires because it was the most flexible method of data collection since it was simple and direct. The visitors were picked by the data collector according to the visitors' origin. The data collector observed and determined if the respondent was a foreign or a local visitor. At this site, the respondents were told the purpose of the study, and asked to fill out the questionnaire. Visitor status was confirmed before each interview to ensure the validity of the sample. To ensure more accurate data, reduce interviewer bias, and selecting respondents so that every potential respondent got an equal chance, the data collector must select their respondents randomly. The data collector used random numbers to select their respondents while they were lining up to purchase tickets (See Appendix 6).

When:

The questionnaire was given in the month of February because it was the high season of tourism in Thailand (See Appendix 3). The information was more accurate because of more diverse visitors. The research was conducted on one day on any days of the weekend and one day on any days of the weekdays, assuming that the results would be the same on any given day of the week and any given day on the weekend. Therefore, the sample size was be divided into two groups (weekend and weekday), assuming that every hour would yield the same results from 9 am to 5 pm (opening hours).

Where:

The respondents were interviewed at entrance of the aquarium or the ticketing area before the visitors entered the aquarium. Interviewing these visitors before they actual entered the aquarium would allow us to get more accurate information because they would not confuse the concept of expectation to satisfaction (See next page).

Figure 4.1: First Floor Layout

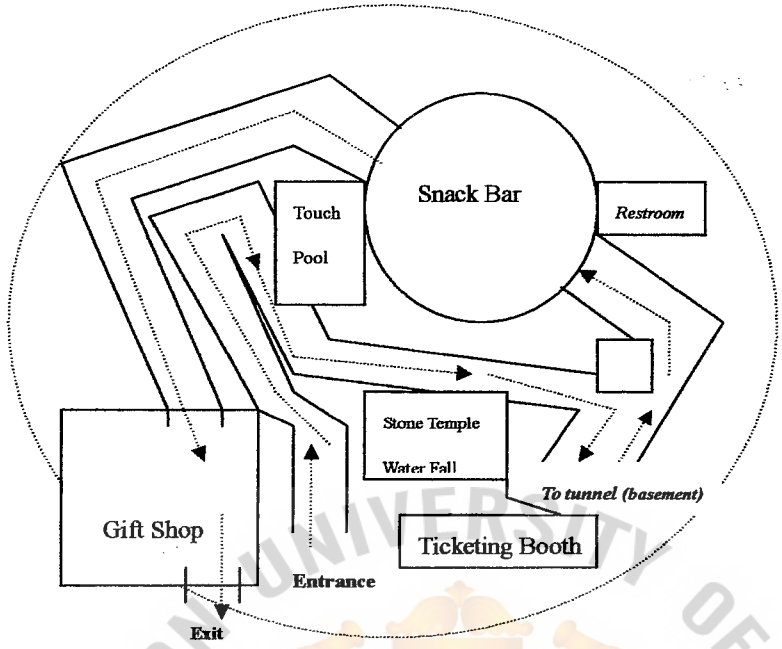
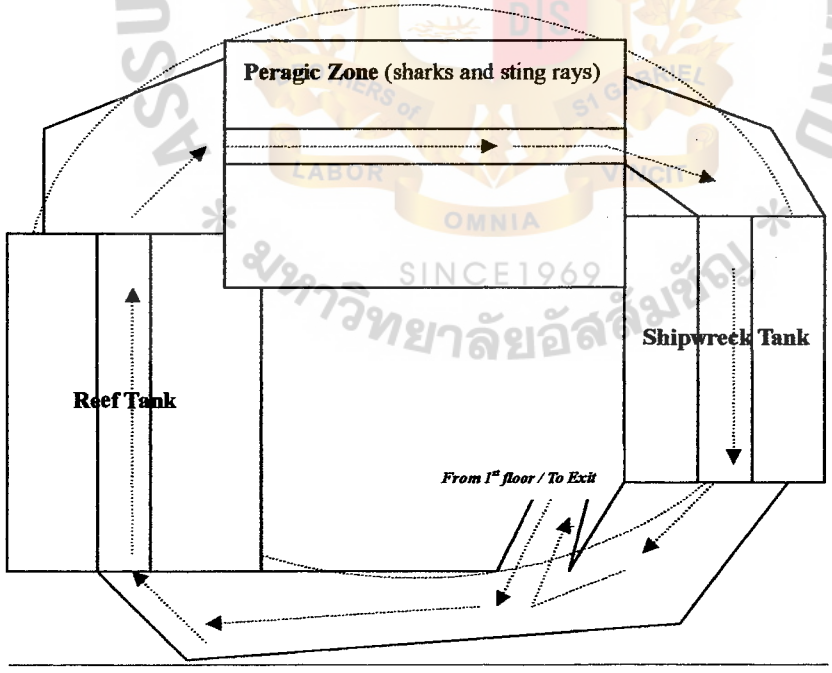


Figure 4.2: Basement Layout



Source: Underwater World Pattaya

4.6 Data Measurement

This study used ordinal and nominal level of data measurements. ***Ordinal level*** measurement was used to measure visitor satisfaction to show the degree of satisfaction. (The scale will be from 4-definitely expected 3-expected 2-not expected 1-definitely not expected). ***Nominal level*** measurement was used to determine the status of the visitors (i.e. foreign vs. local visitors, and previous versus first time visitors). Table 4.2 will explain the relationship between the data measurement and the variables of the research.

4.7 Questionnaire (See Appendix 4)

Table 4.2: Table of Operationalization

Variables	**Operationalization**	**Measurement Scale**	**Question Number**
Experience	● Experience of respondents, whether or not they have been to an aquarium.	Nominal	Part 1 Q 1,2,3,4
Origin of Visitors	● The status of the respondents, whether they are foreign or local visitors	Nominal	Part 3 Q 4
Educational Programs	● Organized school trips ● Programs teaching students about marine life and conservation	Ordinal	Part 2 Q1
Marine Mammal Shows	● Shows displaying talents of marine mammals such as dolphins or seals ● Usually seen in marine theme parks, not aquariums as most visitors might mistaken	Ordinal	Part 2 Q2
Regional Aquatic Theme	● Settings of the aquariums ● Surroundings those make the aquarium unique	Ordinal	Part 2 Q3
Special Collection	● Marine animals those are rare or only seen in the region such as sea snakes and tropical fish	Ordinal	Part 2 Q4
Dangerous Fish	● Marine animals those are dangerous such as sharks, stonefish, scorpion fish, lionfish, and puffer fish.	Ordinal	Part 2 Q5
Outdoor Exhibits and Activities	● Displays those are outdoor or not fully contained in a tank ● Seals and sea otters	Ordinal	Part 2 Q6
Major Gift Shop	● Shops selling souvenirs and memorabilia	Ordinal	Part 2 Q7

Table 4.3: Table of Opeartionalization 2 (Questionnaire)

Variables	**Question Number**
Experience	Part 1 Q1. Have you ever been to an aquarium before? Q2. How many times have you been to an aquarium? Q3. Frequency Q4. Aquariums previously visited
Origin of Visitors	Part 3 Q4. Place of residence
Educational Programs	Part 2 Q1. Expectation of educational programs
Marine Mammal Shows	Part 2 Q2. Expectation of marine mammal shows
Regional Aquatic Theme	Part 2 Q3. Expectation of regional aquatic theme
Special Collection	Part 2 Q4. Expectation of special collection
Dangerous Fish	Part 2 Q5. Expectation of dangerous fish
Outdoor Exhibits and Activities	Part 2 Q6. Expectation of outdoor exhibits and activities
Major Gift Shop	Part 2 Q7. Expectation of major gift shop

4.8 Data Analysis

The test performed to analyze the data that we have obtained from our respondents is the Mann-Whitney U-test. **Mann-Whitney U-test** was used to analyze ordinal data of the hypothesis of difference between two independently selected random samples. This test is nonparametric and the ordinal counterpart of independent t-test. We have used it to analyze the significant differences in expectation between foreign and local visitors, and experience and inexperienced visitors.

Although previous literatures suggest the use of independent t-test or MANOVA, it is more appropriate to use the U-test in this study because of the nature of the data involved. This study involves ordinal data which is appropriate to use the U-test, whereas independent T-tests are used with interval data. MANOVA tests were used to assess whether an overall difference exist between groups, however, this research has measured individual differences among the dependent variables with the independent variables. MANOVA is also a complicated statistical tool which has a higher chance for misuse (Richmond 2004).

Table 4.4: Table of Hypothesis & Statistics

Hypothesis	***Concept***	***Statistics***
$\mathbf{H1_0}$	There is no significant difference between the expectations of local residents and foreign tourists on education program at an aquarium.	Mann-Whitney
$\mathbf{H2_0}$	There is no significant difference between the expectations of local residents and foreign tourists on regional aquatic theme at an aquarium.	Mann-Whitney

$H3_0$	There is no significant difference between the expectations of local residents and foreign tourists on special collection at an aquarium.	Mann-Whitney
$H4_0$	There is no significant difference between the expectations of local residents and foreign tourists on dangerous fish at an aquarium.	Mann-Whitney
$H5_0$	There is no significant difference between the expectations of local residents and foreign tourists on a major gift shop at an aquarium.	Mann-Whitney
$H6_0$	There is no significant difference between the expectations of local residents and foreign tourists on marine mammal shows at an aquarium.	Mann-Whitney
$H7_0$	There is no significant difference between the expectations of local residents and foreign tourists on outdoor exhibits and activities at an aquarium.	Mann-Whitney
$H8_0$	There is no significant difference between the expectations of experienced visitors and inexperienced visitors on education programs at an aquarium.	Mann-Whitney
$H9_0$	There is no significant difference between the expectations of experienced visitors and inexperienced visitors on regional aquatic theme at an aquarium.	Mann-Whitney
$H10_0$	There is no significant difference between the expectations of experienced visitors and inexperienced visitors on special collection at an aquarium.	Mann-Whitney

$H11_0$	There is no significant difference between the expectations of experienced visitors and inexperienced visitors on dangerous fish at an aquarium.	Mann-Whitney
$H12_0$	There is no significant difference between the expectations of experienced visitors and inexperienced visitors on major gift shop at an aquarium.	Mann-Whitney
$H13_0$	There is no significant difference between the expectations of experienced visitors and inexperienced visitors on marine mammal shows at an aquarium.	Mann-Whitney
$H14_0$	There is no significant difference between the expectations of experienced visitors and inexperienced visitors on outdoor exhibits and activities at an aquarium.	Mann-Whitney

4.8.1 Rules for Accepting or Rejecting Hypothesis

The decision of accepting or rejecting the hypothesis will depend on the outcome of analysis. If the outcome is equal or more than 0.025 we will accept the hypothesis, and if it is less than 0.025 we will reject the hypothesis

4.9 Pre-test

The purpose of a pretest is to detect if there are any problems in the questionnaire design with a group of respondents (Zikmund, 1997). The pretest is essential for a self-administered questionnaire to ensure reliability. In a pretest the researcher looks for ambiguous questions that could cause respondents misunderstanding to any questions.

Vanichbancha (2001) mentioned that the number of respondents in a pre-test should be at least 25. In this research 30 respondents were chosen to conduct this pre-test to ensure the respondents responded in accordance to the researcher's objective with no communicate bias and ambiguity.

Chapter 5: DATA ANALYSIS

In this chapter, the data collected from the questionnaire is translated into information which will be useful for marketing strategies and project planning. The results will be explained with quantitative and qualitative interpretations. The results should be relevant to the objective of the study, which is to determine if there is any significant difference between the expectation of local residents and foreign tourists on various aquarium offerings.

This chapter will contain the following sections:

1. Description of demographic factors
2. Hypothesis testing

5.1 Profile of Respondents

The respondents of this research are the actual visitors to the Underwater World Pattaya during the month of February of 2004. The demographic characteristics of the respondents in this research are the age, gender, whether they are local residents or foreign tourists, experience of visiting aquariums, purpose of visit, and their visiting groups. The profile of the respondents shows what kind of visitors are in the aquarium's target market.

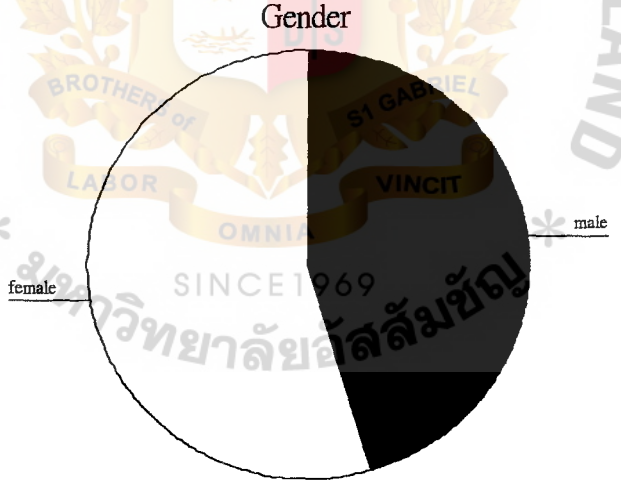
5.1.1 Gender

The distribution among gender was about equal but with female slightly higher at 54.7 percent and male with 45.3 percent.

Table 5.1.1 Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	174	45.3	45.3	45.3
	Female	210	54.7	54.7	100.0
	Total	382	100.0	100.0	

Figure 5.1.1 Gender



5.1.2 Age

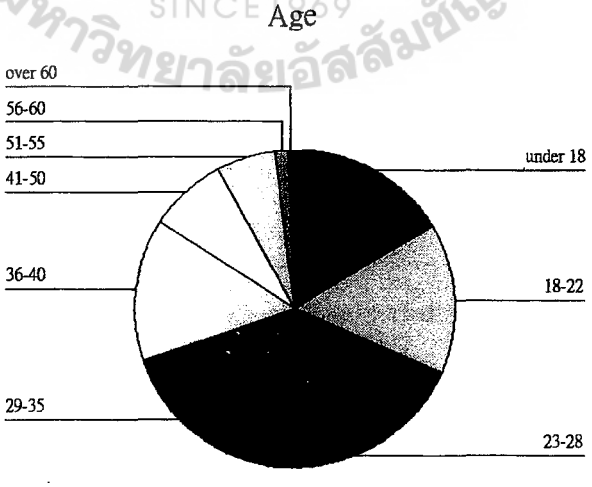
The respondents were divided into 9 different age categories. The largest age group represented was 23 to 28 years with 24 percent, followed by visitor aged under 18 with 16.4 percent. Children under 12 years were excluded by the judgment of the researcher. The least number of the age groups represented are visitors over 60 with 0.5 percent followed by visitors of 56-60 years with 1.3 percent.

Table 5.1.2 Age

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	under 18	63	16.4	16.4	16.4
	18-22	59	15.4	15.4	31.8
	23-28	92	24.0	24.0	55.7
	29-35	54	14.1	14.1	69.8
	36-40	55	14.3	14.3	84.1
	41-50	30	7.8	7.8	91.9
	51-55	24	6.3	6.3	98.2
	56-60	5	1.3	1.3	99.5
	over 60	2	.5	.5	100.0
	Total	384	100.0	100.0	

Figure 5.1.2 Age



5.1.3 Experience

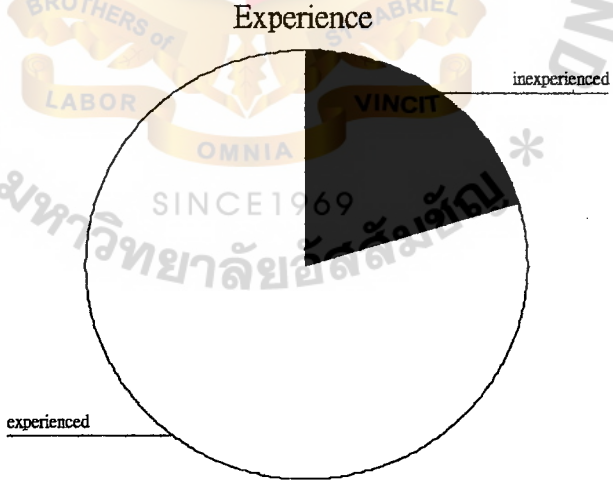
Experience is one of the main independent variables measured. With simple random sampling, the results show that 79.8 percent of the visitors are experienced aquarium visitors, and only 20.2 percent have never been to an aquarium.

Table 5.1.3 Experience

Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	inexperienced	78	20.3	20.3	20.3
	experienced	306	79.7	79.7	100.0
	Total	384	100.0	100.0	

Figure 5.1.3 Experience



5.1.4 Purpose of Visit

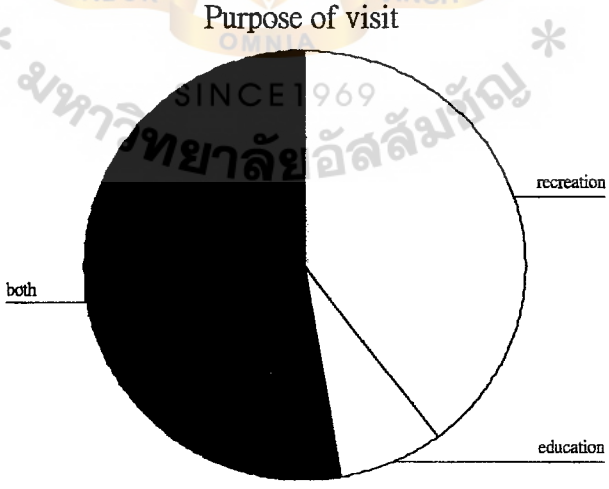
To understand the purpose of each visitor is important for the aquarium to better satisfy the need of the visitors. Recreation and education are important characteristics of modern aquariums. As the research shows, half of the visitors (52.9 percent) have both education and recreation purposes when attending an aquarium. 39.6 percent of the visitors are only looking for recreation, and only 7.6 percent of the visitors attend the aquarium just for education.

Table 5.1.4 Purpose of visit

Purpose of visit

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	recreation	152	39.6	39.6	39.6
	education	29	7.6	7.6	47.1
	both	203	52.9	52.9	100.0
	Total	384	100.0	100.0	

Figure 5.1.4 Purpose of Visit



5.1.5 Origin (Residents vs. Tourists)

The respondents were divided into two equal size groups according to their status as a local resident or foreign tourists.

Table 5.1.5 Origin

Origin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	resident	192	50.0	50.0	50.0
	tourist	192	50.0	50.0	100.0
	Total	384	100.0	100.0	

Figure 5.1.5 Origin

5.1.6 Visiting Group

Knowing the visitation groups of the aquarium is also important for making marketing strategies, such as providing family or tour packages. Separating the resident and tourist for visitation groups can better understand the differences of the two segments.

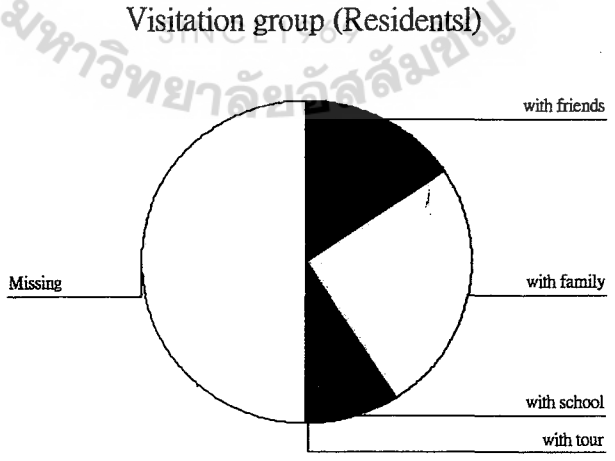
The second largest visiting group for resident was with friends, with 31.3 percent followed by school with 17.2 percent, and tour with 1 percent.

Table 5.1.6 Visiting Group (Residents)

Visitation group (Residentsl)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	with friends	60	15.6	31.3	31.3
	with family	97	25.3	50.5	81.8
	with school	33	8.6	17.2	99.0
	with tour	2	.5	1.0	100.0
	Total	192	50.0	100.0	
Missing	System	192	50.0		
Total		384	100.0		

Figure 5.1.6 Visitation Group (Residents)



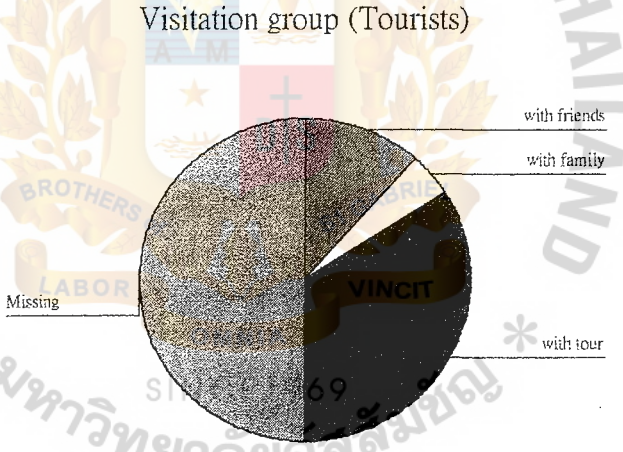
The largest visitation group for foreign tourists was tour groups, consists of 68.2 percent, followed by friends with 22.9 percent, and family with 8.9 percent.

Table 5.1.7 Visiting Group (Tourists)

Visitation group (Tourists)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	with friends	44	11.5	22.9	22.9
	with family	17	4.4	8.9	31.8
	with tour	131	34.1	68.2	100.0
	Total	192	50.0	100.0	
Missing	System	192	50.0		
Total		384	100.0		

Figure 5.1.7 Visitation Group (Tourists)



5.2 Test of Hypothesis

This research contains fourteen hypotheses. The hypotheses were all analyzed with a nonparametric Mann-Whitney U test. This test was the ordinal counterpart of independent t-test. This test is used to measure ordinal data of the hypothesis of difference between two independently selected random samples. The ordinal data were the data from the dependent variables, which were measured with the two independent variables: origin and experience of the visitors.

In this research, we have analyzed each hypothesis by comparing the level of significance of each aquarium offering and the status of the visitor according to their aquarium experience and their origin, and computing using the 2 tailed significant tests. The significant level of this test is at the 0.025 level. Therefore, any result greater than 0.025 will lead us not to reject the null hypothesis, and any result less than 0.025 will lead us to reject the null hypothesis and accept the alternative hypothesis.

5.2.1 Hypothesis 1

$H1_0$: There is no significant difference between the expectations of local residents and foreign tourists on education programs at an aquarium.

$H1_A$: There is a significant difference between the expectations of local residents and foreign tourists on education programs at an aquarium.

Table 5.2.1 Test of Hypothesis 1

Ranks

	origin	N	Mean Rank	Sum of Ranks
Education program	resident	192	185.59	35632.50
	tourist	192	199.41	38287.50
	Total	384		

Test Statistics[a]

	Education program
Mann-Whitney U	17104.500
Wilcoxon W	35632.500
Z	-1.476
Asymp. Sig. (2-tailed)	.140

a. Grouping Variable: origin

Result: Do not reject Ho (P=0.140>0.025). There is no significant difference in the expectation of education programs at aquariums between the local residents and foreign tourists.

Explanation: There is no significant difference in the expectation of education programs between the residents and tourists because both groups have the knowledge that the main purpose of an aquarium is education. Therefore, both groups have a high expectation of seeing this offering in an aquarium (Deeter-Schmelz, Solomon, and Pettegrew, 1995)

5.2.2 Hypothesis 2

$H2_0$: There is no significant difference between the expectations of local residents and foreign tourists on regional aquatic theme at an aquarium.

$H2_A$: There is a significant difference between the expectations of local residents and foreign tourists on regional aquatic theme at an aquarium.

Table 5.2.2 Test of Hypothesis 2

Ranks

	origin	N	Mean Rank	Sum of Ranks
Regional aquatic theme	resident	192	179.30	34426.00
	tourist	192	205.70	39494.00
	Total	384		

Test Statistics[a]

	Regional aquatic theme
Mann-Whitney U	15898.000
Wilcoxon W	34426.000
Z	-2.614
Asymp. Sig. (2-tailed)	.009

a. Grouping Variable: origin

Result: Reject Ho and accept Ha (P=0.009<0.025). There is a significant difference in the expectation of regional aquatic theme at aquariums between the local residents and foreign tourists.

Explanation: Regional aquatic theme might not be appealing to local residents because they don't see it as an important factor in an aquarium. Whereas foreign tourists may think it's an attractive feature in an aquarium since they may have been to other aquariums around the world with other regional aquatic themes.[3]

[3] Boonsom, Arphiradee. Personal interview. 25 October 2003.

5.2.3 Hypothesis 3

$H3_0$: There is no significant difference between the expectations of local residents and foreign tourists on special collection at an aquarium.

$H3_A$: There is a significant difference between the expectations of local residents and foreign tourists on special collection at an aquarium.

Table 5.2.3 Test of Hypothesis 3

Ranks

	origin	N	Mean Rank	Sum of Ranks
Special collection	resident	192	190.01	36482.50
	tourist	192	194.99	37437.50
	Total	384		

Test Statistics[a]

	Special collection
Mann-Whitney U	17954.500
Wilcoxon W	36482.500
Z	-.575
Asymp. Sig. (2-tailed)	.565

a. Grouping Variable: origin

Result: Do not reject Ho (P=0.565>0.025). There is no significant difference in the special collections at aquariums between the local residents and foreign tourists

Explanation: Both resident and tourist see special collection in an aquarium as a necessity because they expect to see something unusual or interesting rather than normal exhibits (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

5.2.4 Hypothesis 4

$H4_0$: There is no significant difference between the expectations of local residents and foreign tourists on dangerous fish at an aquarium.

$H4_A$: There is a significant difference between the expectations of local residents and foreign tourists on dangerous fish at an aquarium.

Table 5.2.4 Test of Hypothesis 4

Ranks

	origin	N	Mean Rank	Sum of Ranks
Dangerous fish	resident	192	186.65	35836.50
	tourist	192	198.35	38083.50
	Total	384		

Test Statistics[a]

	Dangerous fish
Mann-Whitney U	17308.500
Wilcoxon W	35836.500
Z	-1.350
Asymp. Sig. (2-tailed)	.177

a. Grouping Variable: origin

Result: Do not reject Ho (P=0.177>0.025). There is no significant difference in the expectation of education programs at aquariums between the local residents and foreign tourists.

Explanation: With the similar reasons with special collections, all visitors are expecting to see something unusual or interesting when they visit an aquarium. Previous research also concludes that there are no differences in the expectations of this variable between residents and tourists (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

5.2.5 Hypothesis 5

$H5_0$: There is no significant difference between the expectations of local residents and foreign tourists on a major gift shop at an aquarium.

$H5_A$: There is a significant difference between the expectations of local residents and foreign tourists on a major gift shop at an aquarium.

Table 5.2.5 Test of Hypothesis 5

Ranks

	origin	N	Mean Rank	Sum of Ranks
Gift shop	resident	192	145.66	27967.00
	tourist	192	239.34	45953.00
	Total	384		

Test Statistics[a]

	Gift shop
Mann-Whitney U	9439.000
Wilcoxon W	27967.00
Z	-9.048
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: origin

Result: Reject Ho and accept Ha (P=0.000<0.025). There is a significant difference in the expectation of a major gift shop at aquariums between the local residents and foreign tourists.

Explanation: Tourists have a higher expectation on gift shop because they seek more entertainment values in aquariums. Tourists are also more likely be interested in souvenirs (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

5.2.6 Hypothesis 6

$H6_0$: There is no significant difference between the expectations of local residents and foreign tourists on marine mammal shows at an aquarium.

$H6_A$: There is a significant difference between the expectations of local residents and foreign tourists on marine mammal shows at an aquarium.

Table 5.2.6 Test of Hypothesis 6

Ranks

	origin	N	Mean Rank	Sum of Ranks
Marine mammal show	resident	192	178.02	34179.00
	tourist	192	206.98	39741.00
	Total	384		

Test Statistics[a]

	Marine mammal show
Mann-Whitney U	15651.000
Wilcoxon W	34179.000
Z	-2.797
Asymp. Sig. (2-tailed)	.005

a. Grouping Variable: origin

Result: Reject Ho and accept Ha (P=0.005<0.025). There is a significant difference in the expectation of marine mammal shows at aquariums between the local residents and foreign tourists.

Explanations: Previous research also concludes that there is a difference in the expectations of this variable between residents and tourists. This suggests that tourists may be more interested in recreational activities although they also expect the purpose of education in aquariums (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

5.2.7 Hypothesis 7

$H7_0$: There is no significant difference between the expectations of local residents and foreign tourists on outdoor exhibits and activities at an aquarium.

$H7_A$: There is a significant difference between the expectations of local residents and foreign tourists on outdoor exhibits and activities at an aquarium.

Table 5.2.7 Test of Hypothesis 7

Ranks

	origin	N	Mean Rank	Sum of Ranks
Outdoor exhibits and activities	resident	192	164.01	31490.00
	tourist	192	220.99	42430.00
	Total	384		

Test Statistics[a]

	Outdoor exhibits and activities
Mann-Whitney U	12962.000
Wilcoxon W	31490.000
Z	-5.619
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: origin

Result: Reject Ho and accept Ha (P=0.000<0.025). There is a significant difference in the expectation of marine mammal shows at aquariums between the local residents and foreign tourists.

Explanations: Previous research also concludes that there is a difference in the expectations of this variable between residents and tourists. This suggests that tourists may be more interested in recreational activities (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

5.2.8 Hypothesis 8

$H8_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on education programs at an aquarium.

$H8_A$: There is a significant difference between the expectations of experienced visitors and inexperienced visitors on education programs at an aquarium.

Table 5.2.8: Test of Hypothesis 8

Ranks

	Experience	N	Mean Rank	Sum of Ranks
Education program	inexperienced	78	142.69	11130.00
	experienced	306	205.20	62790.00
	Total	384		

Test Statistics[a]

	Education program
Mann-Whitney U	8049.000
Wilcoxon W	11130.000
Z	-5.369
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: Experience

Result: Reject Ho and accept Ha (P=0.000<0.025). There is a significant difference in the expectation of educational program at aquariums between the experienced and inexperienced visitors.

Explanations: Previous research also concludes that there is a difference in the expectations of this variable between residents and tourists. This suggests that inexperienced visitors may be more interested in recreational activities or lack the understanding the purpose of an aquarium (Deeter-Schmelz, Solomon, and Pettegrew, 1995).

5.2.9 Hypothesis 9

$H9_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on regional aquatic theme at an aquarium.

$H9_A$: There is a significant difference between the expectations of experienced visitors and inexperienced visitors on regional aquatic theme at an aquarium.

Table 5.2.9: Test of Hypothesis 9

Ranks

	Experience	N	Mean Rank	Sum of Ranks
Regional aquatic theme	inexperienced	78	144.67	11284.00
	experienced	306	204.69	62636.00
	Total	384		

Test Statistics[a]

	Regional aquatic theme
Mann-Whitney U	8203.000
Wilcoxon W	11284.000
Z	-4.784
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: Experience

Result: Reject Ho and accept Ha (P=0.000<0.025). There is a significant difference in the expectation of regional aquatic theme at aquariums between experienced and inexperienced visitors.

Explanation: Most inexperienced visitors in this research are local residents (see Hypothesis 2), therefore, the regional aquatic theme is not highly expected.

5.2.10 Hypothesis 10

$H10_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on special collection at an aquarium.

$H10_A$: There is a significant difference between the expectations of experienced visitors and inexperienced visitors on special collection at an aquarium.

Table 5.2.10: Test of Hypothesis 10

Ranks

	Experience	N	Mean Rank	Sum of Ranks
Special collection	inexperienced	78	174.44	13606.00
	experienced	306	197.10	60314.00
	Total	384		

Test Statistics[a]

	Special collection
Mann-Whitney U	10525.000
Wilcoxon W	13606.000
Z	-2.110
Asymp. Sig. (2-tailed)	.035

a. Grouping Variable: Experience

Result: Do not reject Ho (P=0.035>0.025). There is no significant difference in the expectation of special collections at aquariums between experienced and inexperienced visitors.

Explanation: Experienced and inexperienced have similar expectations on special collection at aquariums. Although inexperienced visitors may not have been to an aquarium, they expect to see something more than normal marine animals.

5.2.11 Hypothesis 11

$H11_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on dangerous fish at an aquarium.

$H11_A$: There is a significant difference between the expectations of experienced visitors and inexperienced visitors on dangerous fish at an aquarium.

Table 5.2.11: Test of Hypothesis 11

Ranks

	Experience	N	Mean Rank	Sum of Ranks
Dangerous fish	inexperienced	78	179.01	13963.00
	experienced	306	195.94	59957.00
	Total	384		

Test Statistics[a]

	Dangerous fish
Mann-Whitney U	10882.000
Wilcoxon W	13963.000
Z	-1.571
Asymp. Sig. (2-tailed)	.116

a. Grouping Variable: Experience

Result: Accept Ho (P=0.116>0.025). There is no significant difference in dangerous fish at aquariums between experienced and inexperienced visitors.

Explanation: Experienced and inexperienced have similar expectations on dangerous fish. Although inexperienced visitors may not have been to an aquarium, they expect to see something more than normal marine animals.

5.2.12 Hypothesis 12

$H12_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on a major gift shop at an aquarium.

$H12_A$: There is a significant difference between the expectations of experienced visitors and inexperienced visitors on a major gift shop at an aquarium.

Table 5.2.12: Test of Hypothesis 12

Ranks

	Experience	N	Mean Rank	Sum of Ranks
Gift shop	inexperienced	78	134.44	10486.00
	experienced	306	207.30	63434.00
	Total	384		

Test Statistics[a]

	Gift shop
Mann-Whitney U	7405.000
Wilcoxon W	10486.00
Z	-5.663
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: Experience

Result: Reject Ho and accept Ha (P=0.000<0.025). There is a significant difference in the expectation of gift shop at aquariums between experienced and inexperienced visitors.

Explanation: Most inexperienced visitors in this research are local residents (see Hypothesis 5) therefore, a gift shop is not highly expected. Inexperienced visitors may not expect aquariums to sell souvenirs and merchandises.

5.2.13 Hypothesis 13

$H13_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on marine mammal shows at an aquarium.

$H13_A$: There is a significant difference between the expectations of experienced visitors and inexperienced visitors on marine mammal shows at an aquarium.

Table 5.2.13: Test of Hypothesis 13

Ranks

	Experience	N	Mean Rank	Sum of Ranks
Marine mammal show	inexperienced	78	177.33	13832.00
	experienced	306	196.37	60088.00
	Total	384		

Test Statistics[a]

	Marine mammal show
Mann-Whitney U	10751.000
Wilcoxon W	13832.000
Z	-1.479
Asymp. Sig. (2-tailed)	.139

a. Grouping Variable: Experience

Result: Do not reject Ho (P=0.139>0.025). There is no significant difference in marine mammal shows at aquariums between experienced and inexperienced visitors.

Explanation: Although most inexperienced visitors are also residents, it is surprising that they share the same expectation on marine mammal shows. This means that the inexperienced visitors may expect more recreational activities than educational ones since the aquariums these days are becoming more like marine-oriented theme parks.

5.2.14 Hypothesis 14

$H14_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on outdoor exhibits and activities at an aquarium.

$H14_A$: There is a significant difference between the expectations of experienced visitors and inexperienced visitors on education programs at an aquarium.

Table 5.2.14: Test of Hypothesis 14

Ranks

	Experience	N	Mean Rank	Sum of Ranks
Outdoor exhibits and activities	inexperienced	78	187.03	14588.50
	experienced	306	193.89	59331.50
	Total	384		

Test Statistics[a]

	Outdoor exhibits and activities
Mann-Whitney U	11507.500
Wilcoxon W	14588.500
Z	-.544
Asymp. Sig. (2-tailed)	.586

a. Grouping Variable: Experience

Result: Do not reject Ho (P=0.586>0.025). There is no significant difference in outdoor exhibits and activities at aquariums between experienced and inexperienced visitors.

Explanation: Similar to hypothesis 13, although most inexperienced visitors are also residents, it is surprising that they share the same expectation on marine mammal shows. This means that the inexperienced visitors may expect more recreational activities than educational ones since the aquariums these days are becoming more like marine-oriented theme parks.

Table 5.3: Table of Summary

Hypotheses	Level of Sig.	Result
$H1_0$: There is no significant difference between the expectations of local residents and foreign tourists on education program at an aquarium.	**0.140**	**Fail to reject Ho**
$H2_0$: There is no significant difference between the expectations of local residents and foreign tourists on regional aquatic theme at an aquarium.	**0.009**	**Reject Ho**
$H3_0$: There is no significant difference between the expectations of local residents and foreign tourists on special collection at an aquarium.	**0.565**	**Fail to reject Ho**
$H4_0$: There is no significant difference between the expectations of local residents and foreign tourists on dangerous fish at an aquarium. .	**0.177**	**Fail to reject Ho**
$H5_0$: There is no significant difference between the expectations of local residents and foreign tourists on a major gift shop at an aquarium.	**.000**	**Reject Ho**

$H6_0$: There is no significant difference between the expectations of local residents and foreign tourists on marine mammal shows at an aquarium.	**0.005**	**Reject Ho**
$H7_0$: There is no significant difference between the expectations of local residents and foreign tourists on outdoor exhibits and activities at an aquarium.	**0.000**	**Reject Ho**
$H8_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on education programs at an aquarium.	**0.000**	**Reject Ho**
$H9_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on regional aquatic theme at an aquarium.	**0.000**	**Reject Ho**
$H10_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on special collection at an aquarium.	**0.035**	**Fail to reject Ho**

$H11_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on dangerous fish at an aquarium.	**0.116**	**Fail to reject Ho**
$H12_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on major gift shop at an aquarium.	**0.000**	**Reject Ho**
$H13_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on marine mammal shows at an aquarium.	**0.139**	**Fail to reject Ho**
$H14_0$: There is no significant difference between the expectations of experienced visitors and inexperienced visitors on outdoor exhibits and activities at an aquarium.	**0.586**	**Fail to reject Ho**

Chapter 6: CONCLUSION & RECOMMENDATIONS

This chapter summarizes the research results from data analysis in the previous chapter. The interpretation and discussion of the results will yield a better understanding of the purpose of this research. Implications and recommendation of the research will also be discussed in this chapter.

6.1 Summary of Findings

The focus of this research is to determine the differences in expectations of various aquarium offerings of local residents and foreign tourists. Whether or not the visitors have ever been to an aquarium is also taken into consideration to show their understanding and the confusion between an aquarium and marine-oriented theme parks. There are seven different aquarium offerings tested to examine whether the status of the visitor (resident or tourist) has any association with the relationship between visitor expectation and the aquarium offerings. The aquarium offerings are:

1. Education Program (Hypotheses 1,8)
2. Regional Aquatic Theme (Hypotheses 2,9)
3. Special Collection (Hypotheses 3,10)
4. Dangerous Fish (Hypotheses 4,11)
5. Gift Shop (Hypotheses 5,12)
6. Marine Mammal Show (Hypotheses 6,13)
7. Outdoor Exhibits and Activities (Hypotheses 7,14)

From analyzing the collected data, it can be concluded that there are significant differences in the expectation from resident and tourist, and experience and inexperienced visitors among the different aquarium offerings. The differences are shown below:

Between Residents and Tourists:

Regional Aquatic Theme	(Hypothesis 2)
Gift Shop	(Hypothesis 5)
Marine Mammal Show	(Hypothesis 6)
Outdoor Exhibits and Activities	(Hypothesis 7)

Between Experienced and Inexperienced Visitors

Educational Program	(Hypothesis 8)
Regional Aquatic Theme	(Hypothesis 9)
Gift Shop	(Hypothesis 12)

6.1.1 Results

Although both residents and tourist are somewhat expecting to see all the aquarium offerings mentioned above, there is a significant difference in the level of expectation of regional aquatic theme, gift shop, marine mammal show, and outdoor exhibits & activities. Table 6.1 offers a summary of the expectation average of each aquarium offerings and the status of visitor as a resident or tourist.

Table 6.1 Average Score of Visitor Expectation

Aquarium Offering	Resident Avg.	Tourist Avg.	Experienced visitor Avg.	Inexperienced visitor Avg.
Education Program	3.57	3.66	3.70	3.28
Regional Aquatic Theme	2.61	2.79	2.41	2.78
Special Collection	3.71	3.74	3.64	3.75
Dangerous Fish	3.70	3.76	3.65	3.75
Gift Shop	2.68	3.36	2.56	3.14
Marine Mammal Show	3.19	3.66	3.31	3.16
Outdoor Exhibits & Activities	3.15	3.52	3.34	3.29

Expectations are measured with the following scale:

4-Definitely not expected **3-Expected** **2-Not Expected** **1-Definitely not expected**

From this table we can conclude that all visitors have the lowest expectations on regional aquatic theme followed by gift shop. However, with the statistical tests from the previous chapter, it shows a strong significant difference in expectation on those aquarium offerings between resident and tourist (Hypotheses 2 and 5). And with expectation of marine mammal show and outdoor exhibits, tourists also have higher expectation than those of the residents.

From the experienced and inexperienced groups, there are only three aquarium offerings, those of the two groups have a significant difference of expectation on educational program, regional aquatic theme, and gift shop.

6.1.2 Conclusion

There are two main objectives in this research. The first objective is to determine if there are any significant differences between the expectations of residents and tourists on various aquarium offerings. The findings conclude that there are different expectations from residents and tourists on four of the seven different aquarium offerings. The studies show that there are also differences in expectations from experience and inexperienced visitors on three out of the same seven aquarium offerings.

The second objective is to identify the aquarium offerings which the visitors have differences in the expectations. Identifying these expectations will allow aquarium operators and developers to form marketing strategies for these different market segments since the needs and wants of these two are different. This research indicates that education programs, special collection, and dangerous fish are highly expected by both residents and tourists. Tourists also look for more entertainment value while they visit aquariums where they are expecting gift shop, marine mammal shows, and outdoor exhibits and activities.

6.2 Implications and Recommendation

As the study suggests, all of these seven aquarium offerings are important to visitor expectation. The only difference is the degree of expectation from each group of the population sample. From the findings, marketing strategies and project planning can be developed with these information in accordance to the organization's strategy.

6.2.1 Recommendation for Underwater World Pattaya

From the fact that Underwater World Pattaya's lack space and organization, and has the plan to expand, it needs to redefine its target market. The goal to become an international accredit aquarium has changed its current resident to tourist ratio of 90:5, respectively, by targeting more towards tourists. And with the problem of overcrowding, the aquarium should come up with regulations to limit the amount of visitors per day.

Recommendation Based on Facts

The dual pricing is a current marketing strategy also partly to blame. There have been complaints about the dual pricing by foreigners (ThailandExplorer.com). By raising the price of local residents the demand from residents will likely to decrease. Setting a standard price may also eliminate pricing discrimination against foreign tourists, allowing to the aquarium to attract more foreign visitors.

Since the aquarium is often over crowded, the quality of service and comfort of the visitor are reduced. In the long-run, it is better to look at the quality of service for the visitors rather than the quantity of the visitor. With quality service and exhibits visitors are likely to visit again. There are several possible strategies to solve this problem (Pullman 2003):

Strategy 1: Price can be varied in an attempt to level demand, such as offering lower off-peak rates. In exchange for lower prices, customers are restricted from using peak times. Service businesses using this strategy include golf courses, restaurants, and telecommunications providers. Using this strategy, one sets the price in traditionally peak periods higher than the price in traditionally nonpeak periods. By

doing so, one expects a decrease in the number of customers at peak periods and an increase in the number of customers in the off-peak periods.

Strategy 2: Information can be provided about less crowded periods or shorter waiting times to encourage customers to move temporally. Some customer service telephone support lines implement strategies like this. This strategy could be dependent on the time period, such as hiring people to guide customers into the shorter waiting lines (often seen at toll booths and airline check-ins), or independent of time, such as investing in signage or audio technology to indicate current wait times at different locations.

Strategy 3: Capacity expansion refers to investments in additional fixed capacity to reduce waiting time. Expansions usually require capital investments such as purchasing or leasing new terrain and adding more uphill capacity.

Strategies 1 and 2 are used for short term solution to improve the overcrowding of the visitors. However, strategy 3 is more appropriate for long term planning. Purchasing land for further expansion and creating parking spaces is crucial for the future success of Underwater Pattaya. The additional exhibits and capacity will not only allow the aquarium to attract more visitors but also contain them. Capital budgeting needs to be performed before making any further decision.

Recommendation Based on Research Findings

When looking at expansion to attract foreign visitors, regional aquatic theme, marine mammal shows, and outdoor exhibits & activities must be taken into consideration. From the scale of 4 to 1, 4 being definitely expected and 1 being definitely not expected, marine mammals show has a score of 3.66 and outdoor exhibits & activities with 3.52. This shows that it is fairly important for tourists when it comes to entertainment. Underwater World Pattaya can invest in marine mammal shows such as dolphin or whale shows to improve the quality of entertainment. Having these shows will also enable Underwater Pattaya to compete with the regional aquariums such as Underwater World in Singapore and Ocean Park in Hong Kong.

Second to the marine mammal shows and outdoor exhibits is the regional aquatic theme. Even though it has a score of only 2.79, slightly higher than that of the resident (2.61), the Mann-Whitney test proves that it has a significant difference of expectation between the two groups. Although there is currently a stone temple wall in Underwater World Pattaya to set the theme of South East Asia, it is still not quite a regional aquatic theme. A suggestion of regional aquatic theme would be having similar surroundings of a beach or wetlands in Thailand. With the exotic scenery of the Phi Phi Islands or similar environment of sandy beaches of Thailand will add more appeal to the aquarium.

With the existing aquarium offerings, dangerous fish and special collection leads the attraction with 3.76 and 3.74 respectively for tourists. The current dangerous fish Underwater World Pattaya offers are anemome fish, stonefish, scorpion fish, sharks, lionfish, and puffer fish. Underwater World Pattaya should maintain and focus on these offerings as its main attractions.

A major gift shop is also an expected offering by tourists with a score of 3.36.

Providing merchandise and souvenir such as t-shirts and towels will give Underwater Pattaya more exposure to the outside world, especially foreign country if the visitor is a tourist. Giving the aquarium exposure from its visitor is a good way to advertise and create awareness.

The findings show that there are 68.2 percent of tourists visiting with tour groups. This could suggest that Underwater World Pattaya providing more tour packages to attract more tours.

6.2.2 Recommendation for Aquarium Focusing on Residents

Not all aquariums need to have spectacular marine mammal shows or 100-meter tunnels. A traditional aquarium can serve its original purpose for education.

Recommendation Based on Facts

An important thing to keep in mind is that a traditional aquarium should avoid developing near a marine-oriented theme parks or a large national aquarium. A traditional aquarium cannot compete with a marine-oriented theme parks because it contains both educational and entertainment venues which will draw potential visitors from the traditional aquarium.

Recommendation Based on Research Findings

Offerings such as regional aquatic theme and gift shops are not necessary for aquariums focusing on local residents since education is its main goal, but having special collection and dangerous fish will be able to attract more visitors. These two aquarium offerings are ranked at the top for resident expectation on aquariums with a score of 3.71 and 3.70 respectively. Since Education is the main goal of traditional

aquariums, educational programs cannot be neglected. From Underwater World Pattaya, only 17 percent of the visitors are with school tours, comparing to with family (50.5 percent), and with friends (31.3 percent). This implies that education is still not focused on enough in Thailand. In order for the organization to meet its goals more education programs and tours should be promoted. Since 50% of residents visit with family, it is also an opportunity of aquarium operators to provide family packages or discounts.

Table 6.2 Summary of Findings & Recommendations

Findings	Interpretations	Recommendation
Reject $H_0$2	There is a significant difference in the expectations of regional aquatic theme at an aquarium between local residents and foreign tourists. Tourists have a higher expectation on regional aquatic theme.	**For Underwater World Pattaya:** Provide regional themes such as sandy beaches of Thailand or similar settings to Thailand's islands.
Reject $H_0$5	There is a significant difference in the expectations of gift shop at an aquarium between local residence and foreign tourists. Tourists have a higher expectation on gift shop.	**For Underwater World Pattaya:** Gift shop is important for building awareness for tourists, and bringing in extra revenue. Provide merchandise and souvenir will also build up visitors' interest in the aquarium as well as creating more exposure in their home town.

Reject $H_0$6	There is a significant difference in the expectations of marine mammal show at an aquarium between local residents and foreign tourists. Tourists have a higher expectation on marine mammal shows.	**For Underwater World Pattaya:** Entertainment is very important for tourist visitors. Provide dolphin shows or whale shows to add more appeal and attraction. **For Aquariums Focusing on Local Residents:** Focus on education instead of large marine shows for entertainment value. Educating the visitors about the difference between a traditional aquarium and a marine-oriented theme park.
Reject $H_0$7	There is a significant difference in the expectations of outdoor exhibits and activities at an aquarium between local residents and foreign tourist. Tourists have a higher expectation on outdoor exhibits and activities.	**For Underwater World Pattaya:** Provide outdoor exhibits such as seal or sea lion exhibits. Visitors like to see other marine animals other than just fish.
Respondents Profile	**Findings**	**Recommendations**
Visitation Group	68.2 percent of tourists visit with tour groups	Provide tour packages to tourist and travel agents.
	17.2 percent of residents are with school tour	Since education is an important goal of the aquarium it should encourage and promote more school tours and education programs
	50.5 percent of residents visit with family	Provide family packages and discounts.

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Appendix

APPENDIX 1:

A PROFILE OF UNDERWATER WORLD PATTAYA

June 2003

INTRODUCTION

Underwater World Pattaya is a leisure attraction showcasing the rich variety of marine life to be found around the region. Situated at Pattaya, it complements the many other educational and recreational activities available at this beautiful seaside resort.

At Underwater World Pattaya, visitors are taken on a 'voyage to the bottom of the sea', which begins at the sandy beaches and shallow rock pools at the water's edge. From here, they start their descent, passing brightly colored corals and all kinds of exotic ocean-dwellers along the way. Finally they come to a spectacular 100 metre-long tunnel with acrylic windows, home to great shoals of fish, prowling predators and a host of other creatures that inhabit the ocean depths.

Besides opening visitors' eyes to the brilliance and diversity of undersea life, Underwater World Pattaya also plays an important role in education and marine conservation. School visits are actively supported, and a number of new educational programmes are being planned for 2003.

VISITORS' GUIDE

A step-by-step guide to Underwater World Pattaya

TOUCH POOL

The first stop is the Touch Pool, which allows visitors to interact with the marine animals. Our touch pool displays a selection of animals found in rock pools and coastal areas around Thailand. The sharp spines of a sea urchin, the sticky tube feet of a starfish and the spiny shell of a crab tell you something about their habitat and behavior. Visitors can handle marine creatures such as the smooth-textured (and de-barbed) blue-spotted stingrays and the rough texture of the bamboo sharks. Other interesting exhibits include the starfish.

STONE TEMPLE WATER FALL

The reconstruction of an old stone temple features prominently as an icon in the aquarium and will be a major draw for visitors as it will provide an excellent photo opportunity of a memorable visit to Underwater World Pattaya.

ANEMOME FISH

Anemone fish don't get stung by the anemones they live in. They are protected by a slimy coat of mucus. The anemone provides a secure home for the fish, while the fish attracts food for the anemone by luring other fishes which will be stung by the anemones. This mutually beneficial relationship is called "Symbiosis". The clownfish has stripes that break up their outline so they are difficult for predators to see. There are many different kinds of anemone fishes, each one living in its own species of anemone.

CUTTLEFISH

Down the ramp, you will see our Cuttlefish display. Cuttlefishes are invertebrates and belong to the class 'Cephalopoda' which also includes squid and octopus. Cuttlefishes have the most advanced brains and eyes among all invertebrates. Try waving at a cuttlefish, it will respond to you by forming some kind of "sign language" with its tentacles - just like an alien communicating with humans.

MORAY EELS AND OTHER DANGEROUS MARINE ANIMALS

Moray eels can be found in tropical coral reefs, hidden in caves and crevices. Moray eels are generally shy and don't attack without provocation but their sharp teeth can inflict severe wounds.

Sharks are not the only dangerous sea animals. Stonefish, scorpion fish, lionfish and puffer fish can also be dangerous. A puffer fish can puff itself by gulping in water or air when it's threatened. It is also commonly called "Fugu, Globefish, Blowfish or Swellfish". Its liver, ovaries, intestines and skin contain one of the most deadly poisons known - tetrodotoxin. When eaten, this poison can paralyze and kill a person in less than an hour.

Stepping on a stone can be fatal if the stone turns out to be a stonefish. Disguised along the back of the stonefish is the most efficient venom injection system to be found in a marine animal. The instant agonizing pain can leave a victim in pain for life if he is lucky enough to live.

SEAHORSES

Seahorses are fish. They swim with their bodies' upright in the water and move by the ripple action of their dorsal fins. Seahorses have no teeth; they feed by sucking small animals into their mouth. They live amongst seaweed where they can hang on with their tails. They are social creatures and can often be found in large numbers at one place. Seahorses are masters of camouflage as they are able to change their colours to blend with their surroundings to escape from predators and to seek out their prey. Some species' males can even change colour when they are courting the females! A unique feature of the seahorses is that the males become pregnant; they carry the eggs around in a sealed pouches on their abdomens and give birth to live young. Look around in this tank and try to spot a pregnant male seahorse.

REEF TANK

Coral Communities.

For colour, beauty, shapes, forms and variety of living things, few natural areas can equal coral reefs. The coral reefs of the tropical seas exist in a fragile yet stable balance. Many of the creatures and plants which live in and around the coral reef are dependent upon each other for shelter, for food, and for their lives. Every reef creature has a specific place in this complex ecosystem from the largest fish to the tiniest shrimp.

Amazing Creatures

Some of the world's most beautiful creatures grow in tropical waters. Corals in all shapes and colours are formed by millions of tiny animals called polyps. Some of the 2500 species of soft and hard coral can be found in Asian waters, but the Great Barrier Reef in Australia is a famous example of coral wonder. This 30 million year old reef stretches for 2027km and is the largest single structure on earth built by living organisms.

Colour

A striking feature of the coral reefs is the shoals of brilliantly coloured fish which swim in and around the coral. Colour is important for camouflage, species recognition and to warn off predators.

Growth

Polyps that build coral reefs live together in colonies. The polyp collects calcium carbonate from sea water forming a limestone coat around each animal. New animals grow slowly on the hard dead remains of previous generations and so the reef develops.

Behind-the-scenes Information

In the aquarium most of the coral reefs look real but are artificially made. Using living coral has two drawbacks: living coral is difficult to maintain and removing it from the ocean floors is destructive to our environment.

Coral Reef Destruction

No other underwater habitat is home to as many different species of fish as the coral reefs. This makes the coral reefs areas of commercial interest as well as beauty. Unfortunately, it is for these very reasons that put them in danger. Fishermen and tourists create pollution and disturb the corals.

Despite a ban in 1977 huge amounts of live coral are torn out of the sea every year to feed the jewellery and souvenir trade. In a single year, more than 1456 tonnes were exported into America from the Philippines.

Saving the World's Coral Reefs.

It takes a reef 50-100 years to recover from man-made damage or natural disasters such as hurricanes, typhoons, or a population explosion of sea stars which eat coral.

Shell collectors are responsible for the decline in the lovely Triton shell, a natural predator of the Crown of Thorns starfish. Allowed to breed freely these starfish are now eating their way through tonnes of coral reef each year.

With careful management and harvesting the great coral reefs of the world could be saved from destruction and hence benefit mankind in many ways: cancer fighting drugs and the use of hard coral in bone transplants, just to name a few.

If you would like to help keep our Thai oceans pristine, these are things that can be done:
Stop sewer pollution, open-ocean dumping and offshore oil spills.
Stop mining coral reefs for building material.
Stop dynamiting to stun fish and capture them for the hobby trade and pet stores.

Tunnel Vision

Upon entering the tunnel, visitors are greeted by the breathtaking spectacle of hundreds of fishes of all shapes, sizes and colours sweeping past them and soaring overhead. The tunnel have informative wall plaques identifying the many species living here. The first section is known as the Reef Colony which is habitat to schools of long fin banner fish, angle fish, brightly coloured surgeonfish.

SHARK AND RAY TANK

Shark - The name evokes an almost universal fear, tinged with a certain admiration for this awesome predator of the seas.

The Shark's Future

Sharks have been on earth for 400 million years, but the last 15 years have been very difficult for them and many species may be on the road to extinction because of humans' misunderstanding and cruelty.

tingrays

ays are closely related to sharks. The skeleton is made of cartilage, just like that of harks. Rays swim so gracefully that they are sometimes called "birds of the sea". Their ectoral fins look like wings and when their fins flap, they dislodge food from the sandy ottom for the bottom-feeding fish. Stingrays have a serrated, razor-sharp spine on the op of their whiplike tail. The stinger has venom, but it is not used as an attacking veapon, only for protection. For safetym the barbs are occasionally removed in the quarium setting. However, they will grow again.

n the second section

/isitors come face-to-face with the big, powerful predators that prowl the ocean depths. Shark species living here include the leopard sharks and blacktip reef sharks. Whilst the najority has rows of sharp teeth commonly associated with 'Jaws', the leopard and nurse sharks actually have smaller teeth to crush their prey. Other large, but perhaps less menacing residents include the large brown stingrays, strange-looking shovelnose rays and giant groupers.

SHIP WRECK TANK

Artificial Reefs

Sunken ships have long been part of the underwater landscape. And whether they end up at the bottom as a result of natural calamity, war or as artificial reefs- one thing is certain - fish love them. Countless shipwrecks produce a habitat for marine life. Over time a large fish population will congregate around the shipwreck which helps to populate surrounding oceans.

FROM TRASH TO TREASURE - NATURE CLAIMS THE WRECK

Building a new community
Through war, misadventure or accident, shipwrecks become silent memorials to their past- while becoming the skeleton to a new reef- and a new marine community.

Shipwrecks have significant ecological value providing shelter for the very creatures threatened by human intrusion into the underwater world - many becoming thriving coral communities. These artificial reefs attract divers, thereby easing human pressure on natural reefs.

Ships made of steel make successful reefs - the steel structure is quickly covered by calcareous algae which provides a good surface for coral larvae to grow on.

When a ship sinks it immediately becomes a shelter for marine organisms. The new habitat is used by fish very quickly as it provides food sources and greater protection for young marine life. Coral, which is composed of small and delicate polyps, develops more slowly, covering a shipwreck's surface over a period of many years

Great steamships of a bygone era, like the famous TITANIC resting quietly on the ocean floor offer a new role in underwater venture.

Coral reefs around the world are experiencing substantial decline due to human activities and the presence of artificial reefs as an alternative dive site can reduce the stress placed on the natural reefs.

Off Pattaya

There are many shipwrecks off the coast of Sattahip and Samasan, including the Hardeep shipwreck, which was sunk by allied bombers in the latter part of World War 2. The Hardeep is a 64m long Indonesian cargo ship, which now lies on her starboard side just a few hundred meters from the coral island of Koh Chuang. Her hull is largely intact and there is access to the engine room. After nearly 60 years nature has worked her magic on the wreck and it is home to angelfish, batfish, groupers, stingrays, barracuda, wrasse, butterfish, crabs and nudibranchs. Whale sharks also sometimes visit. Most shipwrecks present vertical structures that attract soft corals, such as the colourful *dendronphya and scleronephthya* which add an attractive framework to many reefs.

EDUCATION AND ACTIVITY

EDUCATIONAL PROGRAMMES

School visits are actively encouraged, offering students and teachers alike a unique opportunity to learn more about the diversity of undersea life and the fragility of the marine environment. Supporting programmes provided by Underwater World Pattaya's Education Department include the Marine Life Workshop, Sea life Talk, Teacher's Orientation Tour and Video Presentation.

AQUARIUM FACTS

GENERAL INFORMATION

Date of Opening:	4th July 2003
Cost of Development:	275million
Land Area:	12 Rais
Location:	Pattaya
Marine Animal Population:	Over 4,500 animals from more than 200 species

Opening Hours:

Underwater World Pattaya	9 a.m. to 6 p.m. daily (last admission 5.30 p.m.)

FEEDING TIMES (in Underwater World Pattaya)
Please note that these times are subject to change without prior notice.

	Daily including Sunday and Public Holidays
Reef Tank	10.00 am** and 2.30 pm**
Shark and Ray Tank	10.15 am*, 11.00 am** and 3.30 pm**
Ship Wreck Tank	10.30 am*, 12.00 am** and 4.30 pm**

*Surface feed**
*Diver feed***

It is worth the wait to watch the fish feed. This is the time when they become most active. It is particularly interesting to see how the various species actually feed. Visitors will also notice that many of the residents at Underwater World Pattaya have developed quite interesting relationships with the divers who hand-feed them!

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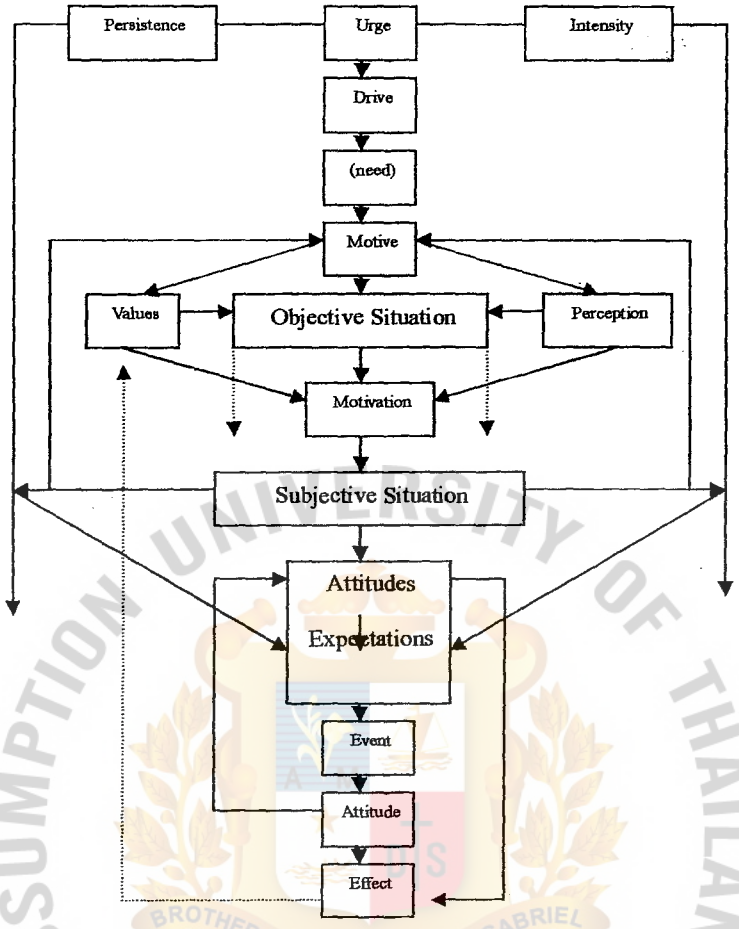
APPENDIX 2: The Process of Motivation and Expectation Formation



Structurally, expectations are thus similar to attitudes. They are positively or negatively inclined and contain measures of cognitions, affect, and conations. Both feelings and cognitions contained in expectations direct perception and behavior in that objects are targeted according to their instrumentality to satisfy the values underlying the expectations. Subsequent learning processes that seek to find fulfillment of these expectations are characterized by prior motivations, the shape and form of the expectational attitude, the process of stabilizing and integrating prior tentative neural or mental representations, and by a reduction of drives resulting in a feeling-state of awareness of their absence and/or the confirmation of cognitive structures of attitudes (Harvey, Hunt and Schroder 1961; Tolman 1932).

APPENDIX 3					
Monthly International Tourist Arrivals to Thailand 2002					
	Number of Tourists	%			
January	940,653	8.65%			
February	1,008,422	9.27%			
March	967,194	8.90%			
April	855,353	7.87%			
May	811,955	7.47%			
June	779,349	7.17%			
July	885,229	8.14%			
August	906,804	8.34%			
September	794,898	7.31%			
October	863,389	7.94%			
November	954,194	8.78%			
December	1,105,536	10.17%			
TOTAL	10,872,976	100%			
Source: Tourism Authority of Thailand					

APPENDIX 4: Underwater World Pattaya Aquarium Visitor Expectation Questionnaire

Greetings! This questionnaire is given out as an important research project. The results will able to improve the quality of your experience at Underwater World Pattaya. Thank you for your time and consideration. Your feedback and opinion is very important to us.

PART I – Please indicate your experience with aquariums:

1.) Have you been to an aquarium before? ___Yes ___No (go to **PART II**)

2.) How many times have you been to an aquarium? _____ Times

3.) Frequency: ___once a year ___less than once a year others: _____

4.) Aquariums previously visited (please list all): _____

_____

PART II – Please indicate your expectations of the aquarium offerings by using the scale below:

4-definitely expected 3-expected 2-not expected 1-definitely not expected

AQUARIUM OFFERINGS:

1.) Educational Programs (i.e. school tours)	4	3	2	1
2.) Regional Aquatic Theme (i.e. indoor rainforest exhibit, mountain trails, arctic settings)	4	3	2	1
3.) Special Collections (i.e. sea snakes, shark embryos)	4	3	2	1
4.) Dangerous Fish (i.e. sharks, lion fish)	4	3	2	1
5.) Gift Shop (i.e. souvenirs, t-shirts)	4	3	2	1
6.) Marine Mammal Shows (i.e. dolphin, whale shows)	4	3	2	1
7.) Outdoor Exhibits and Activities (i.e. seals, walrus)	4	3	2	1

PART III – PERSONAL INFORMATION:

1.) AGE: __under 18 __age 18-22 __age 23-28 __age 28-35
__age 36-40 __age 41-50 __age 51-55 __age 56-60
__age 60 & above

2.) SEX: __male __female

3.) PLACE OF RESIDENCE: _____

4.) PURPOSE OF VISIT: __Recreation __Education __Both __Other:_____

5.) VISITING GROUP:
___alone
___with friends
___with family
___with school
___with tour

Underwater World Pattaya Aquarium Visitor Expectation Questionnaire

สวัสดีครับ! แบบสอบถามฉบับนี้มีความจำเป็นสำหรับโครงการการวิจัยอย่างมาก ผลที่ได้รับสามารถที่จะปรับปรุงคุณภาพของประสบการณ์ของท่าน เมื่อได้เข้าไป "อันเดาร์วอเตอร์เวิล์ด" ความคิดเห็นและการตอบกลับของท่านมีความสำคัญมาก ขอขอบพระคุณครับ

ส่วนที่ 1 - กรุณาบอกประสบการณ์กับพิพิธภัณฑ์สัตว์น้ำของท่าน:

1.) ท่านเคยไปพิพิธภัณฑ์ สัตว์น้ำมาก่อนหรือไม่ ___เคย ___ไม่เคย (ไปส่วนที่2)

2.) ท่านเคยไปพิพิธภัณฑ์สัตว์น้ำกี่ครั้ง _____ ครั้ง

3.) ความถี่: ____ ปีละครั้ง ____ น้อยกว่าปีละครั้ง อื่นๆ: _____

4.) พิพิธภัณฑ์สัตว์น้ำที่ท่านเคยไป (มากกว่า1ที่) _____

_____

ส่วนที่ 2 - กรุณาบอกความหมายของพิพิธภัณฑ์สัตว์น้ำของท่านโดยการจัดลำดับต่อไปนี้

4-คาดหวังแน่นอน 3-คาดหวังแล้ว 2-ไม่ได้คาดหวัง 1-ไม่ได้คาดหวังอย่างยิ่ง

สิ่งที่พิพิธภัณฑ์สัตว์น้ำเสนอได้:

1.)โครงการเกี่ยวกับการศึกษา (i.e. ทัวร์โรงเรียน)	4	3	2	1
2.)ปลาของแต่ละภูมิภาค (i.e. ปลาปิรันย่า)	4	3	2	1
3.)ปลาสะสมพิเศษ (i.e. งูทะเล)	4	3	2	1
4.)ปลาอันตราย (i.e. ฉลาม)	4	3	2	1
5.) ร้านซื้อของที่ระลึก (i.e. เสื้อที่ระลึก)	4	3	2	1
6.)การแสดงของสัตว์น้ำ (i.e. โลมา,วาฬเพชรฆาต)	4	3	2	1
7.) การแสดงในที่แจ้ง (i.e. แมวน้ำ,สิงโตทะเล)	4	3	2	1

ส่วนที่ 3 – ข้อมูลส่วนตัว:

1.) อายุ: __น้อยกว่า 18 __อายุ 18-22 __อายุ 23-28 __อายุ 28-35

__อายุ 36-40 __อายุ 41-50 __อายุ 51-55 __อายุ 56-60

__ 60 ขึ้นไป

2.) เพศ: ___ชาย ___หญิง

3.) ที่อยู่ (place of residence): _____

4.) จุดประสงค์ที่มาเยี่ยม: __การพักผ่อน __การศึกษา __ทั้งคู่ __อื่นๆ:_____

5.) กลุ่มที่เยี่ยม:

____คนเดียว

____กับเพื่อนๆ

____กับครอบครัว

____กับโรงเรียน

____กับทัวร์

Underwater World Pattaya Aquarium Visitor Expectation Questionnaire

您好! 這個問卷調查是一向非常重要的研究報告的一部份. 填完後的結論能夠改善您以後來 Underwater World Pattaya 旅遊的經驗. 謝謝您的時間與回應.

PART I –請表示您對水族館的經驗:

1.) 您有去過水族館嗎? ___有 ___沒有 (請去 **PART II**)

2.) 如果您有去過水族館您去過幾次? _____ 次

3.) 次數頻率: _____ (列：一年一次)

4.) 以前去過的名稱與地點 (請列全部): _____

_____

PART II – 請表示您對水族館的期待

4-非常期待 3-普通期待 2-不期待 1-非常不期待

AQUARIUM OFFERINGS:

1.) 教育 (列: 學校旅遊)	4	3	2	1
2.) 本地海洋主題環境 (列: 熱帶雨林, 北極)	4	3	2	1
3.) 稀有海洋動物 (列: 海蛇)	4	3	2	1
4.) 危險魚類 (列: 鯊魚)	4	3	2	1
5.) 禮品店 (列: 紀念品, T-血)	4	3	2	1
6.) 海洋哺乳動物秀 (列: 海豚秀)	4	3	2	1
7.) 戶外展覽與活動 (列: 海狗, 海豹)	4	3	2	1

PART III – 個人資料:

1.) 年齡: __ 18 以下 __ 18-22 __ 23-28 __ 28-35
__ 36-40 __ 41-50 __ 51-55 __ 56-60
__ 60 以上

2.) 性別: __男 __女

3.) 居住地: _____

4.) 來旅遊的目的: __娛樂 __學識 / 教育 __都有 __其他:_____

5.) 旅遊團體:
___一個人
___跟朋友
___跟家人
___跟學校
___跟旅行團

APPENDIX 5

Attn: Khun Arphiradee Boonsom (Marketing Manager)
Khun Phraethong

Subject: Interview Request
Date: 22 October 2003

To Ms. Arphiradee Boonsom,

We are a group of MBA students from Assumption University (ABAC) performing a research on "**Visitor Expectation(s)**" of the Underwater World, Pattaya.

We paid a visit to your aquarium on Monday 20th Oct, 2003. However, we were not able to schedule an interview with you. Hence, this letter is to indicate our purpose and to request an appointment in meeting you. As stated above, we would like to learn more about the recent opening of Asia's longest tunnel of the Underwater World, in terms of visitor demographic marketing strategies.

The brief interview questions will be attached with this letter for your consideration. Your assistance would be greatly appreciated. Thank you for your time and reference. Please feel free to contact us if there any further inquiry at (Mobile) 01-613-3010 or (Fax) 02-712-6496. We are looking forward to meeting you.

Sincerely,

Charnchai Leelaprad

Attn: Khun Arphiradee Boonsom

Questionnaire

1. What are the objective(s) and goal(s) of the aquarium?
   education, marine preservation, touring
2. Who is the target market for the Underwater World?
   family, school, tour groups
3. How many visitors are expected per year?
   600,000 to 800,000 expected
4. What are the actual numbers of visitors per month since the opening?
   —
5. What are the demographics of visitors? * estimation
   i. Percentage of each age group (i.e. 2-6, 7-12, 13-17, 18-23, etc.)?
   ii. Percentage of male and female?
   43% male 57% female
   iii. Percentage of foreign / local?
   5% foreign 95% local
   iv. Nationalities of foreign visitors?
   Korean, Hongkong, China, Taiwan, European, Australian
   v. Percentage of nationalities?
   —
   vi. Percentage of each visiting groups (i.e. tour group, family, school)?
   avg. 8 to 10 tour groups per day
   vii. Percentage of visiting groups within foreign / local visitors?
   5% foreigners
   viii. Percentage of social class(s) (i.e. lower, middle, high)?
   —
   ix. Percentage of each education level of the visitors (i.e. primary, secondary, upper secondary, bachelor, masters, doctorial, and etc.)?
   —
6. What are the main attractions?
   The 100-meter-long tunnel, the touchpool, stone temple waterfall.
7. How is the Underwater World, Pattaya different from other aquariums?
   It is currently the biggest in Thailand, offers more spieces of fish
8. What are the operating challenges?
   lack of parking space, overcrowding,
9. What are the marketing challenges towards foreign and local visitors?
10. What marketing strategies have been implemented (currently)?
    newspaper, radio
11. What marketing strategies are being developed for future plans?
    Aggressive marketing, working on websites, tv, radio
12. What are the future plan(s) for the aquarium?
    planning to expand, more individual tanks, possibly shows

Telephone Interview with Khun Arphiradee Boonsom
Additional Questions to the interview

Date: November 18, 2003

13. What is the aquarium industry like in Thailand?

There are some existing aquariums but
Nothing comparable to aquariums of other countries.
There are new developments currently in the planning process.

14. Does Underwater World Pattaya have any competitors?

Phuket Aquarium, Samui Aquarium, Aquarium Science Museum ... etc

Appendix 6 – Table of Random Numbers

Table 7.1 RANDOM NUMBERS

63271	59986	71744	51102	15141	80714	58683	93108	13554	79945
88547	09896	95436	79115	08303	01041	20030	63754	08459	28364
55957	57243	83865	09911	19761	66535	40102	26646	60147	15702
46276	87453	44790	67122	45573	84358	21625	16999	13385	22782
55363	07449	34835	15290	76616	67191	12777	21861	68689	03263
69393	92785	49902	58447	42048	30378	87618	26933	40640	16281
13186	29431	88190	04588	38733	81290	89541	70290	40113	08243
17726	28652	56836	78351	47327	18518	92222	55201	27340	10493
36520	64465	05550	30157	82242	29520	69753	72602	23756	54935
81628	36100	39254	56835	37636	02421	98063	89641	64953	99337
84649	48968	75215	75498	49539	74240	03466	49292	36401	45525
63291	11618	12613	75055	43915	26488	41116	64531	56827	30825
70502	53225	03655	05915	37140	57051	48393	91322	25653	06543
06426	24771	59935	49801	11082	66762	94477	02494	88215	27191
20711	55609	29430	70165	45406	78484	31639	52009	18873	96927
41990	70538	77191	25860	55204	73417	83920	69468	74972	38712
72452	36618	76298	26678	89334	33938	95567	29380	75906	91807
37042	40318	57099	10528	09925	89773	41335	96244	29002	46453
53766	52875	15987	46962	67342	77592	57651	95508	80033	69828
90585	58955	53122	16025	84299	53310	67380	84249	25348	04332
32001	96293	37203	64516	51530	37069	40261	61374	05815	06714
62606	64324	46354	72157	67248	20135	49804	09226	64419	29457
10078	28073	85389	50324	14500	15562	64165	06125	71353	77669
91561	46145	24177	15294	10061	98124	75732	00815	83452	97355
13091	98112	53959	79607	52244	63303	10413	63839	74762	50289

Source: A Million Random Digits with 100,000 Normal Deviates, The Free Press 1983