

Enhancing Visitors' Experiences at Underwater World Singapore

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ABSTRACT

Underwater World Singapore (UWS) expressed their interest to study ways to enhance their visitors' experiences at UWS. The scope of this study is the visitors of UWS. The study looks into factors of visitors' concerns when visiting an attraction, factors that will influence their expectations and perceptions, and their expectations of an attraction and perceptions of UWS' service quality.

Primary data was collected through a user survey. The targeted population in this study was the visitors to UWS, both Singaporeans and foreign visitors. The sampling method adopted was convenience sampling. For this purpose, a questionnaire was designed. In total, 88 questionnaires were completed.

From the study, it was concluded that Responsiveness and Assurance are the priorities in visitors' expectations when visiting an attraction. It was also found that the demographic and behavioural profiles of visitors, namely the nationality and whether they are first-time visitors, affect their expectations and perceptions.

In an attempt to narrow Gap 3 – Delivery Gap and Gap 5 – Service Gap, it is therefore recommended that UWS management looks into ways to make UWS more elderly and child friendly to cater to these groups of visitors.

Keywords:

F&B: Food and Beverage

GRO: Guest Relations Officer

SPSS: Statistical Package for Social Science

UWS: Underwater World Singapore

P-E Gap: Perceptions minus Expectations Gap

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INTRODUCTION

The purpose of this report is to study the types of visitors and investigate ways to improve service quality at Underwater World Singapore (UWS). This report will detail the findings from the survey conducted on visitors' expectations of an attraction, and their perceptions of their experience at UWS. Based on the findings, recommendations will be made to improve the service quality at UWS.

UWS is a unique and well-known oceanarium displaying different species of marine life from around the region and is a popular attraction for leisure. Currently, a Guest Service Standards guide with the service theme "I Know, I Care, I Try" is circulated among all employees. However, there has been inadequate follow-up re-training for the existing front line employees. Part-time employees are given on-the-job training and are attached to full-time employees for a period of three days. Due to time and budget constraints, there is also no orientation, thorough training or probation period for newly employed front line employees. UWS hopes to provide services that are of match to world-renowned attractions, such as, Disney Land, and attain a level of service that will be recognised in the region.

The objectives of this research project are to provide information about visitors' perceptions of UWS and their expectations of an attraction, which will help in improving UWS' service standards in future.

The specific objectives are:

1. To understand visitors' perceptions about UWS based on the SERVQUAL dimension
2. To identify factors that will influence visitors' expectations and perceptions
3. To understand service performance of front line employees

This study is of significance, as it will provide important insights and feedback on the expectations and perceptions of visitors to UWS based on the various aspects of the SERVQUAL instrument. Findings will provide information to understand the profile of visitors and how it will influence their expectations and perceptions, and to assist UWS in charting the direction for improving its service quality.

LITERATURE REVIEW

Rendering quality service is a key for subsistence and success (Parasuraman, Zeithaml & Berry, 1985; Reichheld, Sasser & Earl, 1990; Zeithaml, Parasuraman & Berry, 1990). Only when a service provider knew how the service would be assessed by the consumer, would he/she be in a position to propose how best to direct these assessments in the preferred direction (Grönroos, 1984).

Singapore's competitive service industry, which is distinguished by its high level of service quality, is a key contributor to the economic growth (H.K. Lim, 2009). Service quality is generally conceptualised as the gap between consumers' expectations about a service and their subsequent perception of service performance (Grönroos, 1984; Lehtinen & Lehtinen, 1991; Parasuraman et al., 1985, 1988). This conceptualised service quality consists of five dimensions, namely *Tangibles*, *Reliability*, *Responsiveness*, *Assurance* and *Empathy*. These five dimensions were operationalized by means of a two-part, 22-item SERVQUAL instrument which is now regarded as one of the most widely accepted measures of service quality (Caruana and Money, 1997).

In this report, the above instrument will be adopted to identify the specific areas where gaps between perceived service quality and expected service quality occur. In addition, the findings will allow UWS to evaluate its current performances, and find

out exactly what the visitors expect and the employees' perceptions of the visitors' expectations. These will be based on the five SERVQUAL dimensions.

According to Metters, Metters, Pullman & Walton (2006) the five dimensions are specifically, tangibles, reliability, responsiveness, assurance and empathy. *Tangibles* refer to the entire physical environment where the service is conducted. It may include the furniture, tools or equipment used to provide the service, appearance of service providers, and physical presentation of the service. Consistency of performance and dependability constitutes the reliability of service, specifically in the areas of accuracy of bills, bookkeeping, and performing service at a specific time.

Responsiveness is the readiness of employees to provide service, for example, timeliness of service, prompt follow-ups, and specific action such as mailing a transaction slip immediately. Assurance refers to the knowledge, competence and courtesy of service employees, and their ability to convey trust and confidence. Competency of service points out to the knowledge and skills required to perform the service, while courtesy is the politeness, respect, consideration and friendliness of contact personnel. This also includes trustworthiness and integrity of service employees. Empathy refers to caring for and providing the personalised attention, which includes being approachable and easily contactable to the customers, and an efforts to recognize customers' needs and wants.

According to Rosenberg (1996), for evaluation of the quality of a service, a measure often employed is that of customer satisfaction. A measure of this satisfaction is the difference between perceived service quality and expected service quality; this difference is known as disconfirmation (Carman, 1990; Parasuraman et al., 1988; Shim & Morgan, 1990; Zeithaml et al., 1993), which is then represented by the Service Quality Model (Refer to Figure 1). Once the differences are identified under

the five gaps in Service Quality Model appropriate solutions then can be derived and implemented to attempt to close these gaps.



Figure 1: Service Quality Model

The Knowledge Gap shows the actual difference of customers' expectations and the management perceptions of the customers' expectations, and this is usually caused by the failure to identify customers' expectations. In order to meet up to the customer's expectation, it is suggested that a market research to be conducted, dialogue and feedback. The Standard Gap shows the manager's expectations of service quality which may not match up to the service quality specifications. A list of service goals and standardization of job scope for the employees will be able to help. The Delivery Gap shows that employees are equipped with inadequate training, communication, and preparation by the organization who usually have direct interact with the clients and when these happens the quality of service delivered will usually have a lower standard. The Communication Gap shows the differences between services delivery/provided and not living up to the levels of service performance as promised or applied to the customers. The Service Gap, also known as the expectation and perception gap, is mainly influenced by the previous four gaps and is actually the difference between the customers' expectations and their perceptions.

METHODOLOGY

Primary data was collected through a survey which asked the respondents to response to a number of questions that have been adopted from the generic 22-questions of the SERVQUAL instrument, which had previously been determined as valid and reliable by Caruana and Money (1997). This will lead to a result that is

more generalizable to the target population. Thus, a survey was designed. The survey was administered outside the entrance of UWS. The main advantages of this method are fast collection of data, immediate feedback to respondents, rapport with respondents, better quality control and adaptability to respondents' differences (Zhang, 2004).

The targeted population was all the visitors to UWS. The sampling method adopted was convenience sampling. Using this method, the sampled members are chosen because they are easily accessible. The project team was onsite to guide each respondent in completing the survey. The survey was conducted on two weekdays and one weekend, in order to achieve a balance of locals and foreign visitors. According to management of UWS, there is a trend of more foreign visitors during the weekdays and locals during the weekends. Thus to capture the local group, a weekend is chosen, whereas to capture foreigners as the majority of this survey, two weekdays are chosen.

The survey would collect information on the behavioural and demographic profile of the respondents, their expectations of an attraction and perceptions (in the five dimensions: *Tangibles*, *Reliability*, *Responsiveness*, *Assurance*, and *Empathy*) of the experience in UWS. In addition, information on the service performance of the frontline employees would be gathered. There were two parts of the survey; Part 1 was carried out prior to the respondent's experience at the UWS, whereas Part 2 was carried out after the entire experience by the same respondent. Coloured stickers were given out to the respondents before their entry to UWS to facilitate the team's identification of the same respondents on their exit. Complimentary postcards endorsed by UWS were presented to the respondent at the end of the survey as a token of appreciation for participating in the survey.

In total, 120 questionnaires were issued, but only 73.3%, that is, 88 questionnaires were usable. This is a result of several issues such as the respondents were unable to complete the post-experience questions due to time constraints and respondents' unwillingness, or the surveyors were unable to identify respondents when they exited from UWS. This consequence is mortality, or also known as sample attrition (Zikmund, 2003).

The surveys questions were derived from the generic 22-questions of the SERVQUAL instrument. Ten questions were selected and revised based on the relevance to the research problem and the nature of UWS, out of which two questions measured in each of the five dimensions. These ten questions used the Likert scale. This technique presents the respondents with a series of attitude dimensions, for each of which they were asked whether, and how strongly they agree or disagree, usually on a five-point scale. Also, in an attempt to measure the weighted importance of each dimension as regarded by the respondents, they were asked to rank the importance of the five dimensions from five to one, with five being the most important and one being the least important.

Furthermore, in order to understand if the behavioural profile and demographic of the visitors will affect the expectations and perceptions of the service experience at UWS; the General section was included in the questionnaire. The behavioural profile includes visitors' past experience and knowledge and the demographic profile includes age, gender, nationality and whether or not they are on a tour group.

RESULTS

Of the 120 questionnaires issued, 88 were completed. It was found that the majority of the respondents (31.8%) were Singaporeans while the foreigners were from

Malaysia (21.6%), Philippines (9.1%), India (8.0%), Sri Lanka (4.5%), Australia and Indonesia which each makes up 3.4%, China, New Zealand, United Kingdom which each makes up 2.3% and other countries making 1.1% (Refer to Figure 2).

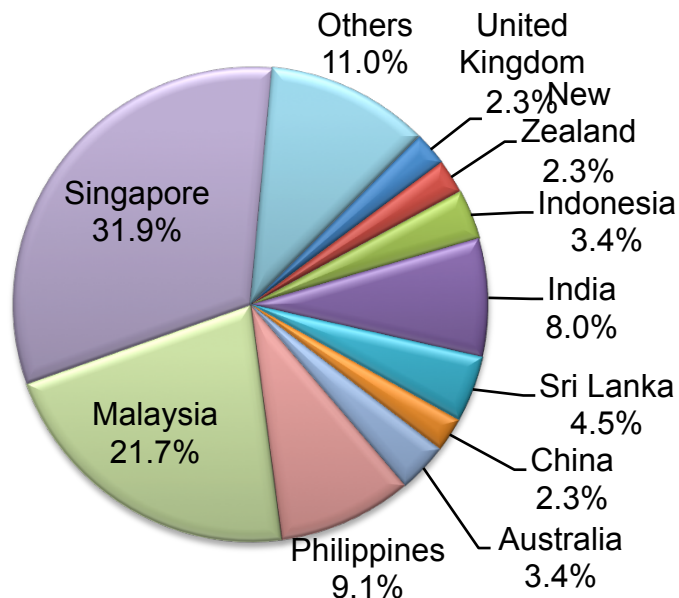


Figure 2: Visitors' Nationality

It was also found that 30.7% of the respondents were aged 18 to 25, 27.3% aged 26 to 35, 17.0% aged below 18 and another 17.0% aged 36 to 45, 6.8% aged 45 to 55 and only 1.1% aged above 55. 60.2% of the respondents were females and the remaining 39.8% were males. Out of the 88 respondents, only 8.0% were from tour groups. 47.7% of all respondents were first-time visitors.

By examining the mode of the rank of each dimension, it is found that *Responsiveness* and *Assurance* are often ranked by respondents as being important features, followed by *Reliability*, *Empathy* and *Tangibles*. The results showed that 73.9% of the respondents ranked “the willingness to help customers and provide prompt service” (*Responsiveness*) as 3 and above. Moreover, 68.2% of the respondents ranked “the knowledge and courtesy of the employees and their ability to convey trust and confidence” (*Assurance*) as 3 and above. 67.0% of the respondents ranked “the ability to perform the promised service dependably and

accurately" (*Reliability*) as 3 and above. 48.9% of the respondents ranked "the caring and personalized attention that is provided to customers" (*Empathy*) as 3 and above. 43.2% of the respondents ranked "the appearance of the personnel and physical facilities at the attraction" (*Tangibles*) as 3 and above. Comparing the cumulative percentages, it is concluded that *Empathy* and *Tangibles* are less important compared to the other features namely *Responsiveness*, *Assurance* and *Reliability*.

The results shows that *Responsiveness* has the highest value of weighted expectation with an average score of 12.62 followed by *Reliability*, 12.12, *Assurance* 11.56, *Tangibles*, 8.90 and *Empathy*, 8.77. In addition, *Responsiveness* has the highest value of weighted perception with an average score of 11.39 followed by *Reliability* 11.14, *Assurance* 10.59, *Empathy* 8.59 and *Tangibles* 8.48.

The gap of the dimensions are as follows: *Responsiveness* -1.23, *Reliability* -0.98, *Assurance* -0.97, *Tangibles* -0.43, and *Empathy* -0.18. These values are the differences between the mean weighted scores for perceptions and the mean weighted scores for expectations. These negative values indicate that the visitors' expectations are higher than their perceptions.

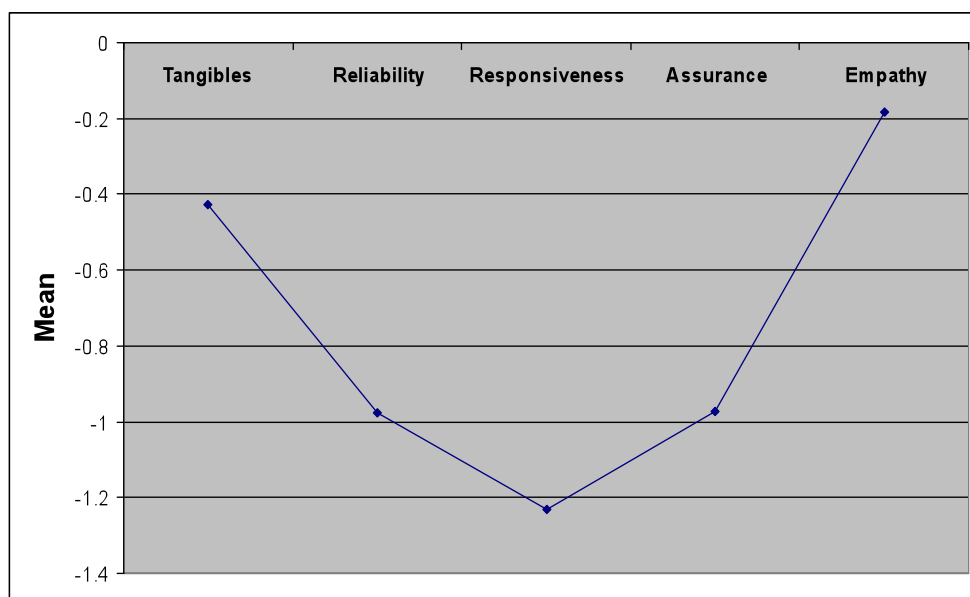


Figure 3. P – E Gap (Weighted)

Based on the above findings, *Responsiveness* has the largest gap between expectations and perceptions among the five dimensions. This indicates visitors' expectations of employees having the willingness to help customers and provide prompt service is not met by UWS to a considerable level. On the other hand, *Empathy* has the smallest gap. This shows that on average, the visitors' expectations of employees in providing caring and personalised personal attention is almost equivalent to what they have perceived from their experience at UWS, though UWS performance is still below their expectations.

It is found that whether the respondent is a first-time visitor will influence their expectation of *Assurance*. The differences are statistically significant as the significance level presented in ANOVA test is less than 0.05. The respondents who were on a first time visit have a mean expectation score of 12.66 on the dimension as compared to 10.57 of those who were not first-time visitors. This means that first-time visitors will have higher expectations of the *Assurance*.

The survey results have also shown that the differences in the nationality of the respondents will influence his/her expectations on *Assurance* and *Responsiveness*. The differences are statistically significant as the significance level presented in ANOVA test is less than 0.05. Singaporean visitors have a mean expectation score of 10.09 on *Assurance* as compared to 12.25 of foreigners. This means that foreign visitor have higher expectations of the *Assurance*. Singaporean visitors have a mean expectation score of 14.52 on *Responsiveness* as compared to 11.73 of the foreigners, meaning Singaporeans have higher expectations of *Responsiveness*.

The age, gender of visitors and whether or not they have heard of UWS before, are proven not significant in affecting any aspects of the expectations as the significance levels presented in ANOVA test are greater than 0.05. In addition, First-time visitors

do not influence or cause any differences in the expectations of *Tangibles*, *Responsiveness*, *Reliability* and *Empathy*. Nationality also does not cause any differences in expectations of *Tangibles*, *Reliability* and *Empathy* as their significance levels presented in ANOVA test are greater than 0.05.

It is found that whether the respondent is a first-time visitor will influence their perceptions of *Assurance*. The differences are statistically significant as the significance level presented in ANOVA test is less than 0.05. The respondents who were on a first time visit have a mean perception score of 11.86 on the dimension as compared to 9.44 of those who were not first-time visitors. This means that first-time visitors will have better perceptions of *Assurance*.

Further analysis has shown that the differences in the nationality of the respondents on whether they are Singaporeans or foreigners will influence his/her perceptions on *Assurance*. The differences are statistically significant as the significance level presented in ANOVA test is less than 0.05. Singaporean visitors have a mean perception score of 9.13 on *Assurance* as compared to 11.28 of foreigners. This means that foreign visitors will have better perceptions of the *Assurance*.

It is found that the differences in the age of the respondents will influence his/her perception of *Empathy*. The differences are statistically significant as the significance level presented in ANOVA test is less than 0.05. Respondents of age 26 to 35 have the best perceptions of *Empathy* as it has the highest mean score of 10.63. It is noticed that as the age group of the respondent decreases or increases, their mean scores for this dimension drop.

The gender of visitors and whether have they heard of UWS before, are proven not significant in affecting any aspects of the perceptions as the significance level presented in ANOVA test is greater than 0.05. Nationality of visitors, and whether

they are first-time visitors to UWS, do not influence or cause any differences in the perceptions of *Tangibles*, *Responsiveness*, *Reliability* and *Empathy*. In addition to the above, the difference in age do not cause any differences in perceptions of *Tangibles*, *Reliability*, *Assurance* as their significance levels are greater than 0.05.

It is therefore concluded that *Responsiveness* and *Assurance* are the priorities in visitors' expectations when visiting an attraction. Disconfirmation between visitors' expectations and perceptions of their experiences at UWS exists in all the five dimensions. This shows that UWS generally does not meet the expectations of visitors. *Responsiveness* has the largest disconfirmation and *Empathy* has the smallest disconfirmation.

Based on the analysis, it is also found that the demographic and behavioural profiles of visitors affect the expectations and perceptions of visitors. The findings reveal that nationality does affect the visitors' expectation. It is found that foreign visitors have higher expectations of *Assurance* whereas Singaporean visitors have higher expectations of *Responsiveness*. It is also found that first-time visitors have higher expectations of *Assurance* compared to repeat visitors.

Likewise, it is found that first-time visitors have better perceptions of *Assurance* compared to repeat visitors. Also, foreign visitors have better perceptions of *Assurance* compared to Singaporean visitors. Moreover, age affects perception of *Empathy*. As the age group of the visitors decrease or increase from the age group of 26 to 35, their perceptions of the current service for this dimension drop.

RECOMMENDATIONS

In the light of the above, we present some recommendations made to the key issues identified. It was identified that *Responsiveness* has the largest disconfirmation,

which requires urgent attention of the management and employees. This further implies that employees should focus more on delivering service in *Responsiveness* in order to meet the expectations of the visitors by providing prompt services and being more willing to help.

It was concluded that both foreign and first-time visitors have a higher expectation of *Assurance* compared to Singaporean visitors and repeat visitors respectively. This is probably due to unfamiliarity with a new environment. Thus, employees should be knowledgeable to answer any of their queries and be courteous in delivering service. However, it can be seen that there are efforts made to meet the expectations of visitors. This is because the perceptions of both foreign and first-time visitors are better than that of the Singaporean visitors and repeat visitors.

In contrast, Singaporean visitors expect higher level of service in *Responsiveness*. This expectation is perhaps due to the value-for-money type of mentality Singaporean visitors possess. Employees should therefore deliver prompt services and be willing to help Singaporean visitors.

Although disconfirmation exists in all the five dimensions, analysis showed that efforts to meet the expectations of visitors can be seen with the current Guest Service Standards implemented by UWS. However, the service delivery still falls short of the visitors' expectations. It is identified that Gap 3, which is the Delivery Gap, and Gap 5, which is the Service Gap, exist. In an attempt to narrow these gaps, it is recommended to provide technical trainings, interpersonal skills trainings, teaching employees in handling guests and recognising and rewarding service quality through performance evaluation.

Due to time and budget constraints, it is proposed that training be given to all full-time employees. Subsequently, these trained full-time employees will provide on-the-

job guidance to the part-time employees. In addition, this will reduce the inconsistency of service provided. The proposed training programme could include a trainer's manual for the trainers, service manual and 'service bible' for all the employees.

As part of recognising and rewarding service quality, it is proposed that performances of the employees be evaluated with the help of an evaluation form. Subsequently, outstanding employees may be acknowledged through proposed Recognition Programmes, such as 'Employee of the Quarter'.

It is also suggested that UWS management looks into ways to make UWS more elderly and child friendly. It is noted that the perceptions of *Empathy* is affected by age. This is possibly caused by the different needs of the visitors, whose age falls under the two ends of the age groups, not being comprehended. Although employees had overestimated the importance of *Empathy*, it is noticed that the above-mentioned group of visitors' needs are not met. It was observed that parents with baby stroller and the physically disabled had difficulties manoeuvring within and exiting the premise. In spite of the sign for alternative exit, assistance given was minimal. With the implementation of the above suggestion, it is hoped that through this, visitors will feel that their needs are better understood and met.

LIMITATIONS

There were limitations present in this research. As a consequence of convenience sampling, the survey results were still considered rather unrepresentative. Despite presenting a composition of Singaporean visitors and foreign visitors, the foreign visitors captured in the survey results came from very diverse backgrounds. Hence, the results were not representative of visitor of a particular nationality as the number

of visitors from each specific country is too insignificant. Furthermore, the survey results were unable to reflect the differences in respondents from tour groups as only 8% of them is captured in the results. This was due to the time constraints of visitors from tour groups as they had very limited time at the attraction and was unwilling or unable to help in completing the questionnaire.

As the project team administrated the surveys, the respondents' identities were non-anonymous. As such, response bias error exists, namely the social desirability bias, that is, respondents tend to consciously or sub-consciously response in a manner favourable to the survey. Thus, there is a possibility for misrepresentation of the statistics. (Zikmund, 2003)

There were other factors that had put a limit to the collection of the total numbers of completed survey. Firstly, when visitors' crowd is at its peak, surveyors have difficulties in capturing the visitors to participate. In addition, many visitors were rushing to the Dolphin Lagoon for the show times after they visited UWS, which had resulted some participates in refusing to continue in completing the part two of the survey. Secondly, on the expense of the limited resources, time constraints and insufficient manpower, it led to a limited sample size. Thirdly, language was also a main barrier of communication. Therefore it is highly recommended that further in-depth studies be conducted to provide a more comprehensive result.

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