Development of Quality Management Assessment and Improvement Tools and Techniques Appropriate to the Tourism Industry

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ABSTRACT

The thesis researched the development and implementation of a quality measurement and improvement strategy based on a specified combination of two TQM tools - SERVQUAL and QFD. The strategy was successively trialled and refined in three Rotorua based tourist attractions and centred on the appropriateness or otherwise of applying such quality improvement techniques to the small business sector of the New Zealand tourism industry. The significance of the research is outlined in the introductory chapter and related theoretical perspectives are developed in the literature review.

The study researched the following question: How to discover a tool for the measurement and therefore the improvement of the service quality for small to medium sized tour operators? Three case studies were selected to provide the location and data base for the research – one each in the cultural, heritage and environmental segments of the tourism industry. All are well established businesses with good industry and market profiles. The investigations through two complementary case studies have helped to refine the research instrument and supported the implementation of the research methodology in the extensive principal case study. Statistical analyses were employed to compare the reliability of the data from the different surveys and to explain variances in the results.

Research findings indicate that with further refinement and modification through on-going usage, the combination of the two tools would provide the small business operator with a means of linking customer service satisfaction measurement to the underlying operational components of their business. The visitor profiles of the tourist attractions obtained from the surveys can help to explain the reasons for any significant differences in customer expectations in relation to quality service standards. The findings suggest that the combined SERVQUAL and QFD quality management technique should be regularly used by small tourist attractions both as a quality improvement tool to meet customer satisfaction and to assist in the attainment of external quality service recognition.

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CHAPTER 1

INTRODUCTION - SCOPE OF THE RESEARCH

1.1 Background of the Study

This thesis is focused on the application of Total Quality Management (TQM) principles to a service industry, in this case the New Zealand tourism industry with particular emphasis on the smaller tourist attraction providers. The aim has been to investigate the adaptation of TQM tools and techniques to meet the needs of small service organisations within the tourism industry. Most of the principles and techniques of TQM have been developed for large sized manufacturing or production companies and are, in general, too complex for small operators. Additionally, they also need to be adapted to meet the organisational requirements of service organisations rather than production companies. For this reason, several specialised tools such as SERVQUAL have been developed for service industries. However, TQM is recognised as an important methodology for the configuration and implementation of competitive strategy at both national as well as international levels for the small and medium sized enterprises (SMEs).

An international tourist visiting New Zealand interacts with a chain of organisations beginning and ending with the airline or cruise ship on which they arrive. In between arrival and departure, the tourist interacts with a variety of small attractions and destination experiences that are of often variable quality. The larger organisations such as the airlines already have significant quality assurance programmes. However, for small operators, the full TQM requirements as encapsulated in the Malcolm Baldrige type award are too complex and costly to implement. Simpler but still robust techniques are required to help the SME operators to satisfy their customer's service quality needs. The quality assurance research group at Massey University has been working to develop a portfolio of quality improvement tools for small service operators and this thesis represents a continuation of this programme. An important further aim is to educate the operators to use these tools to assist their companies to meet the existing industry sponsored quality assurance assessment programmes such as Qualmark and the New Zealand Tourism Awards (Liu, Smith, & Barnes, 2002). Because every interaction the

tourist has with the host can affect their perception of the country they visit, it is extremely important that all parts of the service delivery chain provide a highly satisfying experience for the tourist.

The tourism industry is a major component of the service sector in New Zealand. Tourism is a very significant contributor to the New Zealand economy. It is the country's single largest export sector. In 2004, tourism brought 2.8 million international visitors into the country, which contributed over $7.5 billion to the New Zealand economy. The New Zealand tourism industry is diverse in size, spread, and character. A small number of the operators are large, but most of them are niche and small. With the successful *100% Pure New Zealand* campaign since 2000, New Zealand has now become one of the most sought-after tourist destinations in the world (Tourism Industry Association New Zealand, 2005). This growth in demand brings with it a challenge to the industry to improve quality standards in order to meet increasing levels of visitor expectation. It is therefore important to investigate quality management assessment systems and determine quality improvement tools and techniques appropriate to the industry's needs and requirements.

Previous research on quality management practices in the New Zealand tourism industry showed that in many business organisations there was a general lack of awareness or understanding of TQM techniques and other quality management systems and models (Tan, 1997). Considerable potential therefore existed for tourism operators to improve their economic performance and gain enhanced competitiveness through the introduction of TQM into their management practices and routines. Additionally, they may gain further benefits from TQM by undertaking training in this area of knowledge and by implementing internal assessment programmes to complement the existing industry-based and market-driven external assessment initiatives.

Within the New Zealand tourism industry, there are two quality assessment programmes, namely the Qualmark programme and the New Zealand Tourism Quality Awards. Both are linked to the more universal quality assessment systems used in all forms of business, specifically the ISO 9000 standards and the Malcolm Baldrige Quality Awards. Both the ISO 9000 standards and the Baldrige criteria have a requirement to implement a continuous improvement programme with a cycle of

customer satisfaction measurement, an identification of areas in need of improvement and the development of a programme of action to improve customer satisfaction. This is followed by a repeat of the measurement process. For example, the Baldrige criteria relative to this process are described by the following questions:

(1) What are your current levels and trends in key measures or indicators of customer satisfaction and dissatisfaction? How do these compare with competitors' levels of customer satisfaction?

(2) How do you determine key value creation process requirements, incorporating input from customers, suppliers, and partners, as appropriate? What are the key requirements for these processes?

(3) How do you design these processes to meet all the key requirements? How do you incorporate new technology and organisational knowledge into the design of these processes? (NIST, 2004).

The customer and market focus examines how the organisation determines requirements and expectations of customers and markets; builds relationships with customers; and acquires, satisfies, and retains customers. The measurement, analysis, and knowledge management criteria, on the other hand, examine the management, effective use, analysis, and improvement of data and information to support key organisation processes and the organisation's performance management system. The Qualmark and New Zealand Tourism Awards process incorporate requirements similar to these and are discussed further in Chapter Two.

As indicated above, the New Zealand tourism industry consists of a few large companies such as airlines and hotel chains and a multitude of small to medium sized tourism companies such as motels, backpackers, home-stays and local tours and attractions as well as facility operators. The larger corporations tend to have their own in-house quality assessment programmes, with the smaller operations being more dependent on externally supplied and supported systems. This research restricts its focus to the development and evaluation of appropriate quality improvement processes and systems in small to medium sized tourism companies providing attraction products and services to visiting tourists.

1.2 The Nature and Significance of the Study

To set up the boundaries of the research framework, the characteristics of the New Zealand tourism industry and quality improvement systems were reviewed. Tan's research work in 1997 investigated the present status of quality management practice in the New Zealand tourism industry and identified the suitability of SERVQUAL as a measurement tool for small heritage attractions. However, a gap remains in meeting the need to develop a more practical quality measurement and continuous improvement tool better tuned to the needs and constraints of the small tourism operator. This study looks at combined and modified applications of SERVQUAL as well as Quality Function Deployment (QFD) to attractions in tourism, so as to achieve this better match of tools with the needs of the SMEs. It was also considered that such simplified procedures should be able to be adapted to small business operators in other service sectors in the future.

The review of literature found that the *simplification and application* of both QFD and SERVQUAL was an area in which a contribution could be made to the field of research on service quality. No research has been published about the linkage between the two techniques in the small service organisations within the tourism industry. Consequently, this thesis aims at making a distinct contribution, not only to knowledge of TQM within the New Zealand tourism industry but also to the international body of literature on the scholarship of quality management and continuous improvement processes. It will hopefully serve as a new direction for more studies of these issues and of the discipline of tourism management.

The fundamental approach of this study is based on a generalised process improvement methodology. This has been derived and adapted from the approaches and underlying methodologies employed by SERVQUAL and QFD to assist companies in improving their delivery of service quality. They have also been used to assist participating companies to prepare for Qualmark accreditation and to meet the entry requirements for the New Zealand Tourism Awards programme. Both of these industry sponsored initiatives contribute to benchmarking and branding strategies that help to differentiate their recipients in the market place.

The basic purpose of any continuous quality improvement programme is to ensure that it becomes established and maintained as part of a management process, and that it does not simply exist as an occasional add-on or requirement imposed as part of a compliance regime established by an external agency. Historically, and up to now, the use of Quality Assurance systems in New Zealand has been part of a voluntary process involving the operator and an external rating agency. In the past this service was provided by such organisations as the AA (Automobile Association) and largely focused on the accommodation sector within tourism and travel. Qualmark, although it has its origins in such rating initiatives, represents an adaptation and advancement beyond their somewhat minimalist approach to include a measure of quality assessment and benchmarking. Its adoption and use have proceeded on the basis of what it delivers to its adopters in terms of industry and customer recognition and for the competitive advantages that quality branding delivers. Quality at this business level and scale is viewed mostly in terms of customer or visitor satisfaction with their service experience and whether the expectations associated with their experience have been met, or preferably, exceeded. For the small tourist operators, the measurement of this usually comes from a simple questionnaire left in a visitor's room or handed out at the end of a tourist's visit to an attraction or experience.

SMEs that participate in existing quality award, business excellence or international standardisation programmes can still be left in some doubt as to how to actually proceed to improve their situation. There are many tools and techniques that can be used, most of which are relevant to large organisations, some for various product manufactures and some for selected service industries, such as the Malcolm Baldrige National Quality Award, ISO 9000, and Service Process Control. The management of small organisations often does not have the time, or in many cases the skills, to select or apply the appropriate tools and techniques for their particular organisation from the plethora of approaches available.

The service quality measurement tools trialed and applied in this study may assist managers in the tourism industry by facilitating the selection and use of appropriate techniques for their product and service improvement. These techniques can be bundled into a sequence of management activities that in a step by step way assists the operator and manager to progress from service problem identification through to solution

implementation. According to Rao *et al.* (1996), such a sequence is represented by the following seven steps:

Step 1. Selecting the project area for improvement. For an SME, it is probable that the total business organisation may need investigation but in the larger organisation, it is equally likely that only a part of the business needs to be targeted for improvement. The area selected should be particularly relevant and at this stage broad enough that improvement in this area will significantly improve the performance of the overall organisation. For this reason in the case of a small organisation, it is often appropriate at this stage to choose the whole organisation.

Step 2. Reviewing the present system and carrying out a measurement of current customer satisfaction to identify problem areas. In this step, the current system or systems are documented. A gap analysis using, for example, the SERVQUAL method is used to identify where performance falls below the ideal in the eyes of the customers and where shortfalls in the relevant processes occur.

Step 3. Identifying the possible causes of the gaps identified in step 2. Possible causes for the gaps identified in Step 2 are identified by brainstorming with staff focus groups.

Step 4. Identifying possible solutions and the actions to be taken. A list of possible actions is again developed through brainstorming and the options considered suitable for implementation are selected.

Step 5. Developing an action implementation plan. An analytical technique, in this case a simplified version of QFD is used to prioritise the actions, identify their probable effects and then schedule the actions using a Gantt chart. The QFD process is undertaken using the framework of the House of Quality. It should be noted that the QFD process was originally developed for complex product development and manufacture and as such is quite complicated. For the process to be used by SMEs in the tourism industry, it needs to be simplified considerably and adapted to the improvement of service delivery rather than product quality in the physical product sense.

Step 6. Implementing the improvement plan. It includes carrying out the important action chosen and monitoring the progress throughout against schedule.

Step 7. Returning to step 1. At this stage it will be necessary to update all documentation and to assess the effectiveness of the changes using steps 1 and 2. The results may now show that some of the gaps have been reduced and that others, although less important at the start, have moved to the front for consideration and possible actions. The process is therefore cyclic until the returns are insignificant. At the appropriate point in this continuous cycle the organisation should obtain an independent assessment through the appropriate award scheme or benchmarking using an industry recognised standard such as Qualmark.

One of the concerns with using the SERVQUAL information was how well it captured true customer requirements on a consistent and long term basis. For this reason a series of "reliability" tests were undertaken in this study to identify the possible causes of variation and to make sure that the appropriate data was fed into the QFD for the development of an improvement programme. The investigations therefore covered the possible variation within each survey by using a split sample methodology. The variation from survey to survey was addressed by taking more than one survey in each pilot case study and statistical analysis was carried out to identify the possible causes of the variation. The experience from these three pilot case studies was fed into the development and execution of a single large study from which more in-depth analysis and conclusions could be drawn.

As stated above, the goal of this project was to develop a programme of action for small to medium sized tourism and travel companies that they may use to continuously improve both their levels of customer satisfaction and their underlying service delivery processes. Further, the programme sought to implement the improvement process by taking the results from the SERVQUAL measurements and by using them in conjunction with QFD to identify areas of service delivery that need immediate improvement. These processes are defined and actioned in terms of **what** visitors want and **how** to go about achieving that. QFD is a method that identifies and ranks customer desires, details the technical requirements needed to fill those desires, and provides an organised plan to achieve customer satisfaction (Kinni, 1993). It was anticipated that

when combined and integrated these methods would enable a tourism business organisation to clarify the quality components demanded by the customer and, through internal assessments, establish the improvement strategies and action plans necessary for their achievement.

1.3 Benefits of the Research Project

The research project evolved out of the recognition that operators of SME businesses in New Zealand would benefit from having a means of translating the results of visitor satisfaction surveys into a concrete plan of action. Tourist operators frequently attempt to collect visitor opinions but can find it difficult to make use of the results of these surveys in any strategically significant manner. Using appropriate tools in a synergistic way may help to close this gap between awareness and action.

The successful adoption and implementation of such a formula would make a contribution towards achieving the following:

- The on-going growth of New Zealand tourism companies through the application of TQM techniques to the provision of better quality and more cost-effective services to both international and domestic tourists.
- An increased share in international and domestic tourism through improved customer satisfaction.
- An enhanced competitiveness in New Zealand tourism organisations achieved by continually improving the quality of the services they provide.

1.4 Aims of the Study

The subject of this research is the development and implementation of quality measurement and improvement tools in small tourist attractions in New Zealand. The purpose of the study is to offer an integrative framework for quality management. This framework will further allow the tour operators to understand and examine the strategic importance of continuous improvement and what is needed to be done to gain the potential benefits from adopting a quality management system. There are three important questions associated with the attainment of the main research aim or purpose.

1). What are the appropriate service quality measurement techniques that are applicable to small tourist attractions?

2). How can SERVQUAL be used as a quality and customer satisfaction measurement in these tourist attractions?

3). How effective can the contribution by internal quality assessment tools such as SERVQUAL and QFD be towards the continuous improvement of service quality in small tour attractions?

The responses to these research questions are examined by using three pilot case studies and a full implementation of the quality improvement programme. More specific research objectives are provided in the research methodology section in Chapter Three.

1.5 Structure of the Thesis

The report of the study consists of seven chapters. Chapter One introduces the overall rationale and justification for the research. It briefly sets the scene of the research, and then discusses the purposes of the study and gives an overview of the thesis. In Chapter Two, the conceptual frameworks of quality management are examined followed by a review of service quality and tourism industry literature relevant to the study. The third chapter focuses on the research methodologies used for the research design and the rationale for the sample selection and data analysis strategies for the present study. It also highlights the ethical issues in this research setting and limitations of this study. Chapter Four details the processes employed and the results achieved through the full implementation of the quality improvement techniques of SERVQUAL and QFD in the principal case study. Chapter Five describes the pilot applications of the combined SERVQUAL and QFD methodology in two other tourist attractions in Rotorua as complementary case studies to support the generalisability of the research findings. The results and discussions from the two pilot case studies are presented to draw preliminary conclusions and make comparisons in Chapter Six which discusses and interprets the key findings. The findings from multiple case studies have provided empirical evidence of the efficacy of the combined application. In the final chapter – Chapter Seven, the primary findings of the research are summarised both in relation to the literature and quality management best practices in New Zealand. The report of the results makes a case for the original contribution of the present research to the continuous quality improvement of small tourist attractions. Implications of the research findings and

recommendations are also presented for future research to be conducted in the same areas.

1.6 Chapter Summary

This opening chapter introduces the background and context of the research and sets out the major research questions. It also highlights the importance of the study and objectives to be investigated. The organisation of the thesis is previewed to indicate the relationship between various components. The next chapter comprises a literature review which evaluates the major quality management frameworks applied at an international level and then focuses more particularly on the quality measurement and improvement techniques in the tourism industry context in New Zealand.

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CHAPTER 2

QUALITY ASSESSMENT AND IMPROVEMENT TOOLS IN THE SERVICE AND TOURISM INDUSTRY

2.1 Introduction

As stated in Chapter One, this research project reviews the applicability of SERVQUAL as a technique for the identification of tourists' service requirements and priorities as an input to Quality Function Deployment (QFD). The House of Quality in QFD in turn is the next progressive step required to establish a programme of quality improvement for the provision of services to tourists. The target group for this study is the small to medium sized provider of tourist attractions. In many cases, they constitute part of the "front line" of the tourism industry on which the larger organisations such as tour operators, airlines and accommodation suppliers rely on attracting and satisfying tourists needs.

The purpose of the literature review is to place quality service improvement as an issue within both the national and international research context. For this reason, a review of the current state of research on quality in the tourism industry, SERVQUAL and QFD provided the basis from which to establish the research methodology. This chapter therefore reviews these three fields and leads to the confirmation and detailed identification of the actual research problem studied in this project. Also for this project it was important to relate the quality improvement tools and processes to the external assessment quality award programmes in New Zealand. These award programmes are important for tourist operators to compare their performance with others in the industry via an independent external assessment process based on international criteria. Accordingly, a brief review of the award programmes currently used in the New Zealand tourism industry is provided. Much of the process described in this thesis could also be used in partial fulfilment of the requirements of the ISO 9000 quality standards but, at this stage this has not been the focus of the programme.

This chapter examines the key quality management assessment and improvement tools, which are applicable in the service and tourism industry by reviewing the fundamental concepts of quality, Total Quality Management system as well as the internationally recognised quality management practices documented in the literature.

The chapter is divided into five sections. The first part of the related literature reviews the various definitions of quality and Total Quality Management, followed by an introduction to ISO 9000 quality systems and the Malcolm Baldrige National Quality Awards. The New Zealand Business Excellence Awards is investigated next as one of the internationally recognised quality management programmes. From the general to specific, the third part of the literature examines the service quality measurement models, such as the SERVQUAL instrument and QFD, on which the study is grounded, as outlined by referring to leading writers. Next the literature covers the quality management system and practices developed in the New Zealand tourism industry. It identifies the significance of quality improvement programmes for the New Zealand tourism industry and problems that exist for small and medium sized enterprises in the implementation of quality management systems. The final part of the chapter summarises the appropriateness or otherwise and the issues associated with existing quality assessment and improvement tools and techniques currently being applied in the service and tourism industry. It looks at the present research in developing specific quality management techniques applicable in the New Zealand tourism industry.

2.2 Quality Management Frameworks for the Service Industry

2.2.1 Concepts of quality

Quality has been conceptualised and interpreted differently by many authors. For example, Crosby (1980) defined quality as 'conformance to requirements'. It was believed that a product or service either conforms to requirements or it does not. Quality is a characteristic which, by comparison to standards or a reference point, is judged to be correct or incorrect. Crosby's requirements address all the actions needed to produce and/or deliver a service that meet the customer's expectations, and that it is management's responsibility to ensure that adequate requirements are created and specified within the organisation (Dale & Cooper, 1992). 'Fitness for purpose or use'

relates to the evaluation of a product or service to its ability to satisfy a given need. Quality is judged by the purchaser, customer or user of the product and/or service (Juran, 1988).

While the definition of "conformance to requirements" and "fitness for purpose" have their starting points with satisfying customers, it is further emphasised that "quality should be aimed at the needs of the consumer, present and future" (Deming, 1982). International Standard Organisation (ISO) 9000:2000 defined quality as the degree to which a set of inherent characteristics fulfils requirements (Besterfield *et al.,* 2003). The ISO 9000 family is primarily concerned with "quality management". This means what the organisation does to fulfil:

- the customer's quality requirements, and
- applicable regulatory requirements, while aiming to
- enhance customer satisfaction, and
- achieve continual improvement of its performance in pursuit of these objectives. (ISO 9000:2000 Information & Resource Centre, 2002).

Overall, quality can be considered as the attributes of a product and/or service, which as perceived by the customer, make the product/service attractive to them, and give them satisfaction. Quality focuses on adding value to the product/service (Dale & Cooper, 1992).

2.2.2 Importance of the service quality system

Service quality has become an important issue for many tourism organisations due to the growing sophistication of customer demand and the globalisation of such attitudes and skills. The adoption of quality management techniques is generally regarded as having positive implications for business performance and is viewed as an effective means for organisations to achieve competitive advantage.

A quality management system is defined as the organisational structure, responsibilities, procedures, processes and resources for implementing total quality management (Oakland, 2000). The purpose of a quality system is to set up a framework of reference points for the company to ensure that every time a process is performed the same information, methods, skills and controls are used and applied in a consistent manner. A

quality system is considered as one of the key building blocks for an organisation's TQM programme (Dale & Bunney, 1999). Earlier research in the New Zealand tourist attraction sector showed, however, at that stage that only 13% of companies surveyed had used TQM for managing service quality and 30% of the companies used customer surveys and customer feedback to measure service quality (Tan, 1997).

According to Gronroos (2001), the most important characteristic of services and probably the only unique one is the fact that services are processes, not things. Other characteristics, such as the fact that consumption and production are partly simultaneous activities and that customer's participation in the service production process, follow from the process characteristics. Whereas the consumption of physical products can be described as outcome consumption, the consumption of services can be characterised as process consumption (Gronroos, 1990). This has implications for tourism SMEs both in their day-to-day operations as well as for their strategic positioning within their industry segment and area of business activity.

Service customers usually have different needs, tolerance and expectations and there also exists a wide difference in their willingness and ability to pay for the desired service that is on offer. The service provider therefore has to make available a range of different types of services to cater for its range of customers. The control of service process standards is often in practice dependent on the behaviour and attitudes of staff, their training, and commitment to continuous improvement and customer care (Dale *et al.,* 1997).

A common definition of service quality is that the service should correspond to the customers' expectations and satisfy their needs and requirements. Edvardsson (1998) argues that the concept of service should be approached from the customer's perspective. It is the customer's total perception of the outcome which is the service. It forms the perception of quality and determines whether they are satisfied or not. However, customers have different values and different grounds for assessment, and they may perceive the same service in different ways. Beheshti and Lollar (2003) also state that in service organisations, as compared to manufacturing firms, the emphasis is on conformance to customer expectations as opposed to manufacturing activities where the focus is on conformance to specifications. The very nature of service requires that

the business must respond to the expectations of the customer and that post experience perceptions of the service match or equal such expectations. In addition, customer expectations and performance standards are normally difficult to measure because customer expectations vary from one to another and different mixes of needs and motivations. Services are also more labour intensive and employee behaviour and performance are the key factors in the perception of service quality by customers.

The above discussions show that the importance of quality in service organisations cannot be underestimated. Successful implementation and utilisation of a quality programme require leadership by top management and the inclusion of the employees in the programme. Informed employees understand the importance of quality in every aspect of their daily activities. Effective training and development of all employees is essential to the success of a quality management programme. Therefore, quality improvement efforts must be integrated in the organisation's strategic business plan. Viewing quality as a strategic operating policy allows the company to respond to increasing competition and growing consumer expectations.

In a study of quality management by service firms, three groups of service quality strategies used by companies in New Zealand were identified. The results indicate that sustaining service quality is an essential consideration for the companies and that the most common quality management practices used are quality control, quality measurement and service management (Kandampully & Menguc, 2000). In services, the development of quality practices is often driven by the marketing function and customer focus is the most important factor for the implementation of quality initiatives such as TQM (Hing & Antony, 2001).

2.2.3 Service quality measurement tools

Two of the main research instruments that have been developed over the years to analyse the concepts of quality and consumer satisfaction in the service industry are Importance-Performance Analysis (IPA) and SERVQUAL. IPA is a procedure that shows the relative importance of various product attributes and the performance of the firm. Its use has important marketing and management implications for decision-makers, and one of the major benefits of using IPA is the identification of areas for service

quality improvements. This method allows results to be displayed graphically on a two dimensional grid, and by a simple visual analysis of this matrix, policy makers can identify areas where the resources and programmes need to be concentrated (Hudson & Shephard, 1998).

SERVQUAL is an instrument developed by Parasuraman, Zeithaml, and Berry (1985) that focuses on the notion of perceived quality. It is based on the difference between customers' expectations and perceptions of service. Exploratory research conducted in 1985 showed that consumers judge service quality by using the same general criteria, regardless of the type of service. SERVQUAL is a concise scale, easy to use by managers, and is now referred to as a standard by other service researchers (Llosa, Chandon, & Orsingher, 1998).

Mowen (1995) argues that the expectancy disconfirmation approaches such as SERVQUAL help explain consumer perceptions and service quality as well as consumer satisfaction judgement. The confirmation-disconfirmation paradigm has been extensively incorporated into surveys of service quality. It suggests that expectations provide a frame of reference against which customers' experiences can be measured. According to Oliver (1980), customers form their expectations prior to purchasing or using a product or service. These expectations become the basis against which to compare actual performance. Expectations are confirmed when perceived performance meet them; expectations are affirmed when perceived performance exceeds them and expectations are disconfirmed when perceived performance falls short of them. This seeks to explore the relationship between a customer's pre-purchase expectations and their perceptions of service performance. As consumers evaluate the levels of the service performance, they typically cannot help but compare that performance to what they expected. In turn, these expectations provide a baseline for the assessment of a customer's level of satisfaction (O'Neill & Palmer, 2005).

There has been further development and variations in quality service assessment based on the SERVQUAL instrument. For example, Cronin and Taylor (1992) argue that a model measuring perceptions of service delivery results is more appropriate than the gap model, which relies on a difference between expectation and experience. Using the same items as SERVQUAL but referring only to the effect, service quality, they

proposed SERVPERF. Knutson (1988) and Knutson *et al.* (1992) propose LODGSERV, which has measurement items similar to SERVQUAL but reflects distinctive characteristics of lodging facilities. Their studies obtained statistical significant results on four of the five dimensions except the dimension of 'reliability'.

Gronroos (1982) identifies two service quality dimensions: the technical aspect of what service is provided and the functional aspect (e.g. how the service is provided). Measurement of service quality allows for comparison before and after changes, for the location of quality-related problems and for the establishment of clear standards for service delivery (Brysland & Curry, 2001). The findings of Hudson, Hudson, and Miller's (2004) study have contributed to the continuing enhancement of the measurement of service quality in the travel industry. They suggest that the service quality measurements of IPA, SERVQUAL, and SERVPERF do not produce statistically different results. Using SERVPERF alone does produce relatively high levels of satisfaction, and many researchers argue that performance ratings alone may not lead to the same practical applications as difference scores. Each of the methods has great potential as a periodic monitoring device for detecting any shifts in tourist satisfaction, and can be effectively used to point out the company's strengths and weaknesses.

Direct disconfirmation measures such as SERVPERF provide an absolute measure of performance. It is a measure of how the service has performed on the basis of the consumer's absolute level of satisfaction or dissatisfaction with the service encounter. However, the SERVPERF instrument does not seek to estimate difference scores, and eliminated the need to measure expectations on the grounds that customer expectations change when the consumer experiences a service. It was argued that an accurate expectations measure can only be obtained prior to the service encounter. However, from an operational point of view, much useful information is lost when performance only measures are taken (O'Neill & Palmer, 2005). In reality, operators are more interested in the practicability of such tools, their ability to provide timely and relevant customer feedback and to assist with quality improvement and decision making. While the debate continues as to the one best method of evaluating customer perceived service quality, academics run the risk of forgetting about the original purpose for which such techniques were designed i.e. their value as diagnostic quality improvement tools. The

real power of disconfirmation modelling and in particular the SERVQUAL instrument lies in its ability to objectively identify fail points and to target quality improvement efforts throughout the organisation.

Through its ability to pinpoint and quantify the extent of actual gaps between pre-consumption consumer expectations and their post-consumption perceptions, the SERVQUAL technique is able to deliver a more meaningful discourse on operationally relevant performance data. Whilst there can be no doubt that the service under investigation requires targeted quality improvement in each of the gap areas identified, it is essential from a user's point of view that any such improvement effort be prioritised in line with consumer needs and wants. By considering both user expectations and perceptions, the SERVQUAL technique permits the service provider to do just that (O'Neill & Palmer, 2005).

A study in Australia shows that although the more direct disconfirmation technique may prove a more user-friendly measurement, it is felt that the inferred SERVQUAL approach offers the on-line operator more valuable information as an input to sustained quality improvement. The study demonstrates that both techniques can identify how on-line operators are performing and help target quality improvement efforts which have the greatest impact on users' online experience. Regardless of the approach taken, practitioners must be prepared to influence and manage both consumer expectations and perceptions, relative to the online service experience. Formed as a result of word of mouth, previous experience or some other external company communication, expectations are crucial in helping on-line users evaluate the quality of service they have received. It is found essential, therefore, that on-line operators undertake extensive research in order to identify those factors deemed most important by consumers in their evaluations of the on-line service experience (O'Neill & Palmer, 2005).

Today's service manager faces much choice when it comes to measuring customer perceptions of service quality, with a full range of measurement tools on offer. Each measurement technique available for the assessment of service quality has its own particular strengths and weaknesses, depending on what is being measured. The difficulty is that many of these techniques are too costly, too complicated or totally inappropriate for what is being measured (Kandampully, Connie, & Sparks, 2001, p.

171). The most critical challenge facing managers is to identify and implement the most appropriate methods for measuring the quality of the service experience (Ford & Bach, 1997).

2.2.4 Characteristics of tourism quality

Service quality has been increasingly identified as a major factor in differentiating service products and building a competitive advantage in tourism. The study of service quality in the tourism industry is a comparatively recent phenomenon, and service quality in tourism remains relatively understudied when compared to other industry sectors (Lenehan & Harrington, 1998). The issue of measuring service quality has received increasing attention in recent years in the tourism sector. However, only a few comprehensive attempts have been made to specifically assess service quality in the tourism industry (Chadee & Mattsson, 1996) and fewer still in the area of tour operations (Hudson & Shephard, 1998). The variety of product and service categories, the complex nature of the overall tourist experiences, and the largely unpredictable and ever-changing preferences and attitudes of tourists are the main reasons why quality definitions are general. Hence, an overall assessment of quality is probably based on information acquired before the holiday, experience gained on the spot, and reflections afterwards (Hjalager, 2001). The accumulated knowledge shapes the more general perception of what quality is or should be.

Tourism services have become market-focused. Poon (1993) advocated that there is a distinction between Old Tourism and New Tourism. Old Tourism is characterised by a standardised product, a focus on large destination resorts with cheap seaside holidays, inexperienced tourists, and a rigid and old-fashion industrial structure. New Tourism is regarded as much more customised. The product is individually tailored to suit the consumer and the experiences sought are more diverse, with a focus on quality environmental and tourist product features (Hall & Kearsley, 2001, p. 9). New tourists require a particular set of products and services and are motivated by a particular set of needs. The changes in travel pattern and market demand have put tourist operators under increasing pressure to modify their business structure so as to be able to incorporate elements of New Tourism and provide high-quality services to attract and retain customers. This is in part because the customers have become more discerning

and are shifting their loyalties between companies in the anticipation of continuing improvements in product and service quality. Tourism services' operators have to examine current processes against the demands of customers in the marketplace and update their operations in line with customer demands. Therefore, it is important to investigate quality assessment systems and integrate quality improvement tools and techniques that are appropriate to the tourist attractions in order to implement TQM systems successfully in this area.

The definitions of quality examined above imply that the perception of quality can be seen to vary depending on the particular perspective, and which in turn can affect the quality practices of an organisation. Within the tourism industry, quality is commonly referred to as "consistently exceeding visitor expectations". According to Collier (2003), the provision of a quality tourism product depends on the interaction of many elements including:

- The provision of value for money by service providers.

Customers often shape the quality of goods and services as well as the price that will be charged in the marketplace. The value chain is composed of all the activities that organisations undertake to deliver value to the customer, such as product and service development, and distribution through convenient channels. A simple value chain starts by identifying customer needs. It is important that quality is built into each link in the chain (Harrell, 2002, p. 56).

- Variety within the tourism product.

The tourist product and services must appeal to more diversified customers with a broader range of expectations since the tourists come from many nationalities and often tourists from each nationality have different priorities and expectations from others. Attention to the diversity of tourist preferences can be reflected in increased market share.

- A skilled human resource base.

Quality personnel in a tourism venture are central to a quality tourism experience. There is a direct relationship between staff performance and profitability and it has become evident that operators who have made training and education a priority have gained an advantage over their competitors by consistently delivering a quality service and meeting customers' expectations (Collier & Harraway, 2003).

- Attention to detail by service providers.

The failure to ensure that even the fine detail of the support and delivery of the service can spoil the experience for the tourist. For example, the registration of a booking should be simple for the customer, and the service provider should ensure that the customer is clear on any special requirements in terms of clothing, time for preparation or briefing for departure, and availability of meals particularly in remote areas.

- Consistency in delivery.

Consistency means that customers will receive the expected product or service without unwanted surprises. Consistency is one of the key factors in the success of a service business (Kotler *et al.*, 1999). The high degree of contact between the service provider and the tourist means that product and service quality depend on the service provider's skills and performance at the time of the exchange. For example, the enthusiasm level of a tour guide should remain the same at all times.

- Host population acceptance of tourism.

For many destinations, the local residents are the products or part of the tourist's experience, since the culture and hospitality of the resident population is often one of the key attractions for visitors. Tour operators can attempt to control public behaviour towards tourists through education programmes, but there is very little that can be done in the way of quality control if some local residents maintain a hostile attitude (Weaver & Oppermann, 2000).

2.2.5 Quality management initiatives in tourism

Although the concept of service quality is gaining greater global recognition, few studies have examined quality practices in the tourism industry. Many organisations emphasise the importance of customer satisfaction but fail to develop effective measures and other quality tools in order to progress service quality beyond the superficial customer-relation programmes (Ovretveit, 1993). For example, comment cards, satisfaction surveys and customer compliments and complaints are instruments used to assess customer satisfaction. These efforts frequently suffer from low response rates, and the information obtained is often insufficient to provide actionable feedback to managers. These customer feedback tends to relate to complaints rather than to the customer's satisfaction with the service. However, they are simple to initiate and do provide some if limited information on customer assessment of their satisfaction with

the service. For a quality improvement programme a more rigorous approach is necessary.

In the tour operating sector, much of the customer research is still relying on traditional methods of customer feedback, such as customer service questionnaires, at the end of the holiday. However, they are unable to provide a measure of customers' original expectations about their holiday. All major package holiday companies have indicated the need to exceed customer expectations to deliver exceptional service. To do this successfully, the operators have to understand what customers expect from their holiday rather than assuming that they already know it (Hudson *et al.*, 2004). In tourism, surveys may provide some feedback, but there is however little evidence to show how this information is actively used for quality improvements.

Augustyn (1998) presents recent initiatives directed at quality improvement in tourism. The quality improvement initiatives in terms of developing quality systems are left primarily to the private sector. At the entrepreneurial level, most tourism businesses are nowadays aware of the need for quality improvement. Few of them however, emphasise this need in their strategies, and even less develop quality systems in order to improve their performance and satisfy the customer. A great deal of these systems have been established by big tourism companies, such as international hotel chains (e.g. Marriott, Hilton), multinational tour operators (e.g. Thomas Cook), airlines (e.g. British Airways), and visitor attractions (Disneyland) (Brown, 1992).

Despite the fact that the majority of small tourism enterprises appreciate the importance of quality improvement as a means of sustaining competition, they are mainly concerned with upgrading their facilities or inspecting their products in the case of retail outlets. In most cases, they do not develop formal quality systems. Many of the small tourism enterprises that participate in national quality schemes, for example, aim at obtaining a certificate in order to magnify their promotional strengths rather than to increase customer satisfaction. Increasing competition in the tourism market impels individual tourism enterprises to focus on quality improvement as a source of competitive advantage. Small tourism enterprises typically lack adequate inputs and ability to manage effectively internal and external relationships in order to develop comprehensive quality systems (Augustyn, 1998). Investigation in service quality in the

wine tourism industry in Australia by O'Neill and Charters (2000) suggests that an integral part of any organisation's attempt to deliver high level of service quality is a commitment to a process of continuous improvement, which requires a systematic approach to quality measurement. The intangible nature of the tourist's experience is such that all industry segments (accommodation, catering, entertainment, transport, environmental management, attractions, information provision and marketing) must be of sufficient standards if the tourist is to return to the destination on a repeat visit. Most of the larger customer-oriented companies have systems and take actions that deliver quality goods and services to customers. An emphasis on quality brings more satisfaction to customers. Tourism is a service industry where quality is assessed by the visitor every time they come into contact with either a tourist product or a service provider.

Based on the service quality models reviewed, a research programme was carried out (Hudson *et al.*, 2004) from winter 1999 to 2000 for a medium-sized UK tour operator. The idea was to use the results to form an action plan of improvement for customers and allow the company to identify the key drivers of customer satisfaction. (It was the first study of its kind for a tour operator). The objectives of the study were:

- Understand what consumers expect from each individual aspect of their holiday;
- Understand what aspects are important to them;
- Examine each aspect of service delivery and identify service quality gaps; and
- Compare the different methodologies for calculating service quality.

Ritchie (1987) identifies two major categories of strategic tourism research (policy and evaluation research). For instance, policy research relates to the planning activities on the tourism destination as a whole, whereas evaluation research is viewed as the complement to policy research, being a measure of the extent to which objectives and strategies have been achieved. An example of an effective quantitative research tool for policy and evaluation research is IPA. The findings of a study were used by ski-resort managers to develop potential management and marketing strategies. The procedure has great potential as a periodic monitoring device for detecting any shifts in skier satisfaction, and was effectively used to point out ski-resort strengths and weaknesses. One of the management implications of the technique is that it enables the company to redirect their resources and allocate them effectively as suggested by the action grid

(Hudson & Shephard, 1998). Oh (2001) has revisited the IPA methodology and its main underlying assumptions. The IPA literature was critically reviewed to address several conceptual and practical issues that warrant further attention and research and in particular, the validity and reliability of IPA itself has been questioned. The main limitation is seen to lie in the survey instrument itself. For instance, the Likert scale does not have the ability to distinguish between subtle differences in levels of importance and performance.

2.2.6 The Five-Gap Model of service quality

Research conducted by Berry, Zeithaml, and Parasuraman identified five general dimensions that influence customers' assessment of service quality (Berry & Parasuraman, 1991). These generic dimensions of service quality must be present in the service delivery in order for it to result in customer satisfaction. In order of relative importance they are:

1. Reliability - The ability to perform the promised service dependably and accurately.
2. Responsiveness - the willingness to help customers and to provide prompt service.
3. Assurance - The knowledge and courtesy of employees and their ability to convey trust and confidence.
4. Empathy - The provision of caring, individualised attention to customers.
5. Tangibles - The appearance of physical facilities, equipment, personnel, and communication materials.

The tangibles can create an atmosphere. The tangible aspect of a service is one of the few dimensions that a potential customer can know and evaluate in advance of participation. Promises made to an organisation's promotional efforts can contribute to participants' expectations. Consistency of performance at the highest standard is crucial to reliability. Assurance contains elements of the organisation's credibility, competence and security. Empathy expresses an understanding of the participants' needs (Juwaheer, 2004).

In the tourism industry, the five dimensions cover the major factors influencing the tourists' judgement of the quality of tourism service: the tangibles of the tourism service, the reliability of the service performance, the responsiveness of employees, the assurance they feel from the tourism provider, and the empathy they are shown during

their tourism experience (Cook *et al.*, 2002). Research suggests that these five service quality dimensions do not necessarily apply to all services, and in some cases only one or two dimensions are significant. This implies that an in-depth understanding of any particular service requires a careful study of its characteristics and what customers expect from the service (Haksever *et al.*, 2000). For example, tourist expectations tend to be different between various tourist attractions.

Zeithaml *et al.* (1990) proposed a model explaining the underlying causes of customer satisfaction. The multi-gap model conceptualised service quality as a series of gaps between customers' expectations and their perception of the service providers' performance. According to Parasuraman *et al.* (1985), service quality should be measured by subtracting customer's perception scores from customer expectation scores (Q=P-E). The more positive the gap difference score, the greater is the positive amount of service quality. The reverse also holds true. The gap that may exist between the customer's expected and perceived service is not only a measure of the quality of the service, but also a determinant of customer satisfaction/dissatisfaction (Pizam & Ellis, 1999).

Expected service is what customers want or desire before encountering a service. Perceived service is the customer's perception of the service level received. It is the consumer's judgement of the service organisation's performance. The result of the comparison between expected quality and the perceived actual quality is used to determine the customer's level of satisfaction. Robledo (2001) summarises the following main sources of expectations, based on related research on expectation studies:

- Past experience of the consumer, not only with the service provider but with competitors and companies of other sectors.
- Informal recommendations i.e. word-of-mouth communication, which is the most influential source of expectations.
- Formal recommendations e.g. recommendations from travel agents or quality assessments found in certain publications.
- The price to be paid for a service determines in the customer's mind the level of quality to be demanded.

- All elements of the promotional mix convey a message to the customer that has an influence on expectations.
- Personal needs determine what is important for the customer and what is not.
- A good corporate image is a very important asset because it shapes positively the expectations of the customers.

These factors influencing expectations indicate that if an organisation is dealing with customers with too high a level of expectations, it will have to act upon those expectations in order to meet customers' satisfaction level. The five gaps that collectively indicate successful or unsuccessful service delivery are explained in Figure 2.1.

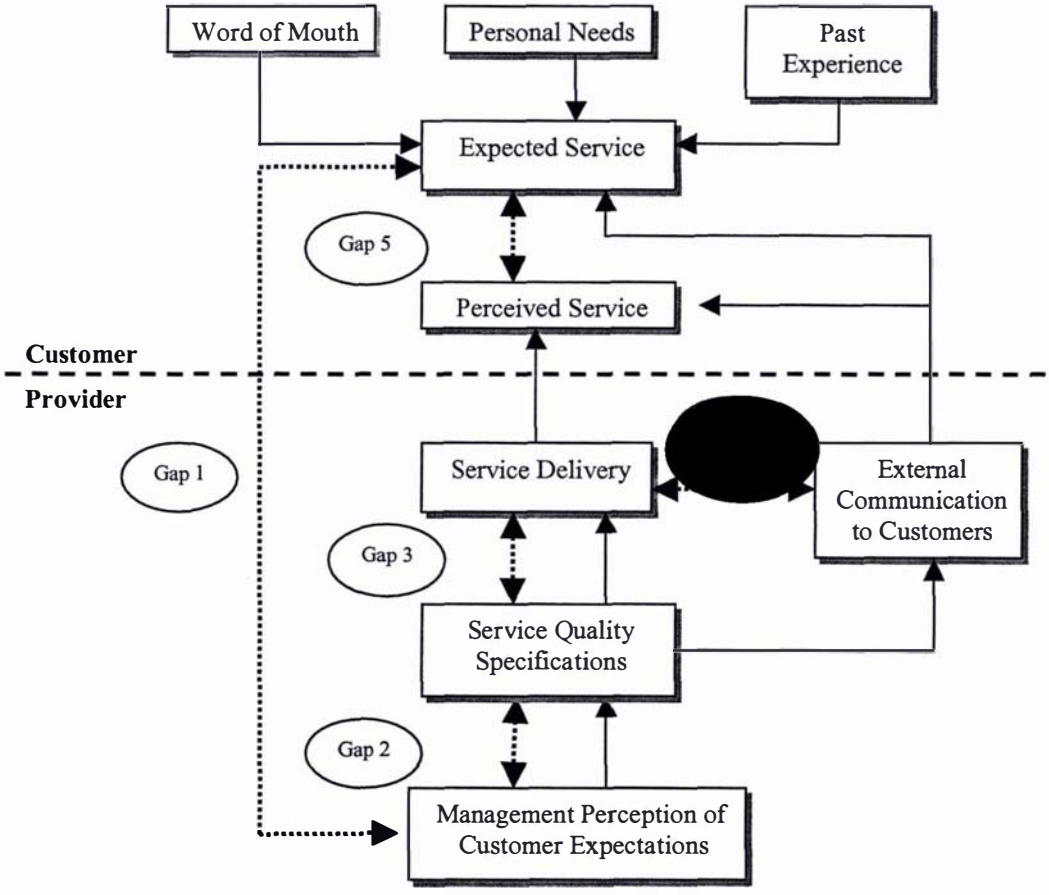

Figure 2.1 The Gap Model of Service Quality (From Zeithaml *et al.*, 1990, p. 46)

Gap 1: Customer expectations versus management perception of those expectations.
This gap exists when the organisation's management does not know their customers' wants.
Gap 2: Management perception versus service quality specification.
This occurs when the management knows what its customers expect, but is unable to develop systems or standards for the delivery of service.
Gap 3: Service quality specifications versus service delivery.
This happens when management understands what needs to be delivered and appropriate specifications have been developed, but employees are unable to deliver the appropriate level of service which causes the performance gap.
Gap 4: Service delivery versus external communication.
This gap occurs when the organisation promises something about a service but what it actually delivers is different.
Gap 5: Customer expected service versus perceived service.
This is the service quality gap which is determined by the results of other four gaps. It represents the difference between expected quality and perceived quality.

The SERVQUAL gap model can be used to determine where, and to what extent, positively or negatively, the service differs from customers' expectations (Tan, 1997). It indicates the complexity and interdisciplinary nature of service quality management which demands an interlinking approach to data analysis (Collier, 1994). Research shows that SERVQUAL is a measurement of the attitude towards and the experience of the service by comparing the customer's expectation prior to receiving the service with the customer's actual experience of the service.

There has been expansion in the application of the SERVQUAL instrument over recent years. For example, Tan and Pawitra (2001) found the benefits of SERVQUAL when integrating it with other quality improvement tools. The benefits identified are:

- It is good at gaining the views of customers regarding service encounters, e.g. customer relative importance, expectations, and satisfaction.
- It is able to alert management to consider the perception of the service of both management and customers.
- Addressing the service gaps can serve as a basis for formulating strategies and tactics in order to ensure the fulfilment of expectations.

- SERVQUAL is able to identify specific areas of excellence and weaknesses.
- It is able to prioritise areas of service weaknesses.
- If applied periodically, SERVQUAL can map the trends in the relative importance of customer, expectations, and perceptions.

2.2.7 The application of SERVQUAL in the service and tourism industry

Service quality can be defined as the difference between customer expectations of service and perceived service. If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs (Parasuraman, Zeithaml, & Berry, 1985). In this proposition, Parasuraman *et al.* argued that with minor modification, SERVQUAL can be adapted to any service organisation. Information on service quality gaps can help managers diagnose where performance improvement can best be targeted. The largest negative gaps combined with assessment of where expectations are highest, facilitates prioritisation of performance improvement. According to Parasuraman *et al.* (1988), SERVQUAL has a variety of potential applications. The functions of SERVQUAL are periodically tracking service quality trends; determining the relative importance of the five dimensions in influencing customers' overall quality perceptions; categorising a company's customers into several perceived-quality segments; and tracking the level of service provided by each unit of multi-unit companies.

Fick and Ritchie (1991) suggest the SERVQUAL model as an instrument for the measurement of perceived service quality within a wide range of service categories. They examined both the impacts of the scale of operations and its management implications in four major sectors of the travel and tourism industry: airline, hotel, restaurant, and ski area services. Saleh and Ryan (1991) investigated the application of SERVQUAL in the hospitality industry. Their study identified the existence of gaps between client and management perceptions of attributes of a hotel, and between client expectation and perception of the service offered. It is argued that the existence of these gaps is a source of dissatisfaction with services offered. They indicated that the successful provision of a service begins with the ability of management to assess the client's expectations correctly. As Gronroos (1982) argued, the quality of service provided is subjected to an evaluation process by which the consumer compares what is

received with expectation. Consequently, service quality is dependent not only on provision but also on the nature of the expectation. The service gaps measured by Saleh and Ryan (1991) are management perception of guest expectations and the actual expectation of guests, and guest expectations and perceptions of the quality of service provided. A five point scale rather than a seven point scale was chosen for a number of reasons. One being that it became possible to compare reliability coefficients with other research using five-point scales.

Augustyn (1997) identified two important gaps in the tourism industry, the quality perception gap and the delivery gap, which can be expanded into the five gaps of the SERVQUAL model. The gap analysis study conducted with travel agencies was used to illustrate an application of the model. Augustyn and Ho (1998) also support the view that the SERVQUAL instrument has the ability to facilitate multi-service segment comparisons to the benefits of organisations in those segments and those responsible for management in the entire tourism system.

A modified SERVQUAL instrument was developed to measure the quality of service provided in New Zealand tourist attractions. For example, modifications were made in the wording of the questionnaire, the service quality dimensions were re-grouped, and the service quality standards and procedure section to identify different types of service quality standards were expanded in each of the dimensions in order to reflect the nature of a particular attraction. The results from the quantitative study of New Zealand museums and historical attractions have helped the tourist organisations in the identification of their training needs, the standards and procedures required for service delivery as well as areas to be improved (Tan, 1997, p. 137).

SERVQUAL was applied in combination with the ISO 9000 quality standards. Ingram and Daskalakis (1999) used the SERVQUAL instrument to hotels in Crete that have adopted the ISO 9000 quality standard. The investigation of those hotels indicated that the ISO standard has not been widely adopted in hotels, because it requires the formation of formal quality procedures for the implementation and control of quality in all aspects of the operation. The findings of the study on hotels suggest that leisure guests in the Cretan hotels view tangibles as the most important satisfaction attributes. However, the management in the study regarded tangibles as the least important quality

dimensions for guests. This difference "raises some issues about how managers should monitor quality and prioritise resources to manage it effectively" (Ingram & Daskalakis, 1999, p. 29).

SERVQUAL was applied to a range of Scottish council services, and the contribution of the service quality measurement was assessed (Wisniewski, 2001). The potential use of SERVQUAL were identified as: understanding current service quality; comparing different customer groups; comparing different parts of the service; understanding the internal customer; and performance over time. Study in the public service environment in the UK also has confirmed the need to tailor the SERVQUAL instrument to the environment in which it is being applied, not only in terms of wording of expectations and perceptions statements, but also in distribution of the statements. This study has indicated that SERVQUAL surveys should be conducted every year to allow yearly comparison and determine how service improvements have affected customers' perceptions and expectations of the service over time and the effectiveness of service development and improvement initiatives in targeted dimensions (Brysland & Curry, 2001). Khan (2003) examined the service quality expectations of the ecotourists by developing an adapted version of the SERVQUAL scale named ECOSERV. Results of the study reveal six service dimensions: eco-tangibles, assurance, reliability, responsiveness, empathy, and tangibles. However, only the expectation items were used in this study due to time and budgetary constrains.

2.2.8 Issues with the application of SERVQUAL

The SERVQUAL scale has been replicated in many different service categories so as to examine the conceptual and methodological problems exist regarding measurement of perceived service quality and its true dimensionality. Carman (1990) points out that the major problems with SERVQUAL concern the collection and use of expectation data. Specific suggestions are made for overcoming these problems. He suggested that expectations should differ between settings from a theoretical standpoint. Thus it is reasonable to expect that perceptions of quality are influenced by expectations. From a practical standpoint, the procedure of collecting expectations is less desirable. This is because the SERVQUAL respondents were asked to complete both the expectations and perceptions form at one administration. All respondent beliefs were entirely ex post.

These expectation responses can be of little value. Another practical consideration has to do with administration. Can a retailer really expect a customer to complete expectations when coming in the door and then complete the perceptions at the end of the service encounter? The author believes it was unable to find a service setting where this was practical.

Considerable numbers of research have supported a more straightforward approach of assessing quality on the basis of simple performance based measures (Cronin & Taylor, 1992). The nature of expectations in disconfirmation models has been subject to a greater level of critical analysis than perceptions. Much research has been reported which seeks to understand the processes by which expectations of service quality are formed. It has been suggested that expectations may not exist or be clear enough in respondents' minds to act as a benchmark against which perceptions are assessed (Anderson, 1992). Zeithaml, Berry, and Parasuraman (1993) responded to this criticism by emphasising that the critical indicator for a firm willing to improve its service is the amplitude (breadth) and the direction of the gap between the expectation and perceptions scores, not the perception itself. Perceptions alone have little practical or diagnostic value. Managers need to know what customers want or expect, in addition to how their organisation performed on these criteria. Tribe and Snaith (1997) also suggest that performance alone can not give a full picture of satisfaction.

The two key issues that have been challenged by researchers with respect to the gap analysis approach to service delivery management is firstly the nature of the expectations recorded, and secondly the utility of measuring expectations at all (Smith, 1995). It has been suggested that expectations are only formed as a result of previous service encounters, that is perceptions feed directly into expectations. Teas (1993) questioned the meaning of an expectation measure and indicated that a substantial portion of the variance in the expectation scale is due to differences in respondents' interpretations of the question being asked rather than to variance in respondents' attitude. A study of the hospitality industry found that the five dimensions of service quality did in fact exist, but they were significantly different from the original five dimensions identified by the SERVQUAL authors (Saleh & Ryan, 1991). There has been debate about whether it is practical to ask consumers about their expectations of service immediately before consumption and their perceptions immediately after. Some

analyses have therefore used combined single scales to measure gaps (Babakus & Boller, 1992).

Cronin and Taylor (1994) have argued that the mere fact of asking a respondent to make his/her perception of performance already leads him or her to mentally compare perception and expectations. In other words, the estimation of perception might already include a perception minus expectation mental process. They suggest that just performance or SERVPERF is the measure that best explains total quality. Yuksel and Rimmington (1998) also argue that performance only is the most reliable and valid measure of satisfaction.

The base for expectations was one of the key distinctions between the conceptualisation of service quality and satisfaction. One other distinction was also maintained, that of the conceptualisation of satisfaction as a transaction-based measure and service quality as a global measure, similar to attitude. A further measurement suggestion (Cronin & Taylor, 1992) is that, in addition to performance-based measurement, performance-importance maps would be of benefit (Smith, 1995). Crompton and Love (1995) concluded that there is no single best way to measure recreational satisfaction, acknowledging that the diagnostic potential of the SERVQUAL and IPA format has emerged as the primary rationale for preferring its use over the simple perception format.

O'Neill, Palmer, and Beggs (1998) state that disconfirmation models have sought to define quality in terms of the difference between the individual's expectations of a service and their perceptions of actual service delivery. However, these models have been challenged on a number of grounds. One set of objections holds that absolute measures of attitudes provide a more appropriate measure of quality than explanations based on disconfirmation models.

Williams (1998) criticised the SERVQUAL model and pointed out that very few researchers have utilised the SERVQUAL instrument from a practitioner's perspective as is the case in his empirical work. The application of the model in a number of diverse states gave insight into a variety of problems such as:

- Sampling frame --- The reliability of the survey sample is questioned if the total population does not respond.

- Customer expectations and excellence --- Two of the research sites investigated had large numbers of first-time visitors in the survey sample. First time visitors would have to rely on past experiences at other facilities, word of mouth and external communication will be the only contact with the actual facility.
- Transaction specific --- A problem highlighted by Zeithaml *et al.* (1993) is that the SERVQUAL instrument at present assesses the overall organisation, and it is not transaction specific. However, research sites investigated by Williams (1998) indicate that customers do not utilise all of the services on offer. It was only by asking supplementary questions that the researcher could ascertain the customers' pattern of usage.
- Non-participation in the service --- Parasuraman *et al.* (1988) state that participation in the service is a requirement for the SERVQUAL model but in this case it would seem the visitors have in effect become partial non-participants.
- Subjective judgement --- The model is based on subjective judgements. The staff, especially operational, seem to judge the services offered quite severely; they are more critical than their customers and mangers. If customer gap scores do not take priority over those of the mangers and operational staff, facilities may incur additional running costs by providing a level of service in excess of their customers' needs.

Despite the criticism among researchers, expectations are considered as important in quality service delivery. Service providers need to discover what customers expect. Expectations are mainly from past experience with similar services, but word-of-mouth and mass media also play roles. If many first-time customers use the service, expectations may not be well-formed. The service provider is well advised to determine just how well formulated and how realistic the expectations of these new customers may be. Although the SERVQUAL instrument has been criticized by some researchers (e.g. Carman, 1990; Cronin & Taylor, 1992; and Teas, 1993), it is still regarded as a leading measure of service quality. According to Brown and Bond (1995), the gap model is one of the best received and most heuristically valuable contributions to the service literature. The model identified four key internal discrepancies relating to managerial perceptions of service quality, and tasks associated with service delivery to customers. The first four gaps are identified as functions of the way in which service is delivered,

whereas Gap 5 pertains to the customer and as such is considered to be the true measure of service quality. The service gap model is utilised to ascertain management attitudes and opinions towards the service quality ethos and its importance in everyday management practice. Fick and Ritchie (1991) appraise the SERVQUAL tool in their research on levels of service quality in the travel and tourism industry.

According to Brysland and Curry (2001), the SERVQUAL methodology evaluates and helps to determine the following:

- Different customer's perceptions and expectations of service quality to highlight current performance levels by customer segmentation.
- Resultant service quality gaps.
- How important each of the service quality dimensions is to the customer, which assists in resource allocation and definition of action-planning priorities.
- An understanding of customer perceptions and expectations over time, allowing further analysis as part of the monitoring process.
- How to manage customer expectations with regards to service planning, design and delivery.
- The impact of service improvement activities carried out as results of customer expectations and priorities.
- Most importantly, the results provide a starting point and assist in the prioritisation of service improvement activities.

Brysland and Curry also suggest that to gain more fully from the benefits of using SERVQUAL, surveys should be conducted every year, for the following reasons:

- To allow yearly comparisons;
- To determine how service improvements have affected customers' perceptions and expectations of the service over time;
- To determine the effectiveness of service development and improvement initiatives.

Replication studies of SERVQUAL have therefore suggested that the instrument itself can require substantial amendment and extensions to include other key elements affecting the consumers' evaluation of the service (Smith, 1995). It takes more than the

simple adaptation of the SERVQUAL items to effectively address service quality in some situations. Managers are advised to carefully consider which issues are important to service quality in their specific environments and to modify the scale as needed (Brown, Churchill, & Peter, 1993). While the literature has identified a number of shortcomings with respect to the use of the SERVQUAL instrument, it is nevertheless felt that the strengths of this measurement more than outweigh its deficiencies (O'Neill & Palmer, 2001).

2.3 Quality Management Approaches

Quality management is about competitive capacity, reputation and profitability (Hines, 2004). There are many different strategies in quality management. Most of the focus of the quality evolution was focus upon improving internal processes, organisational systems, methods and tools. Peters (1999) suggests that quality management is based on some key principles:

- Understanding what people want from a service or product, and delivering it to match those needs (fitness to purpose).
- Drawing detailed specifications based on the articulated customer needs, and delivering carefully to them (conformance to specifications).
- Understanding and managing the variables in the manufacturing / service delivery process which can lead to deviation from specification (process control).

According to Lagrosen and Lagrosen (2003), the two levels of quality management are: 1). The core values which are the basis of quality management. They include:

- Customer orientation. The goal should be to satisfy the needs and wants of the customers.
- Leadership commitment. Leaders need to focus on the processes rather than the outcomes. This requires a profound insight into the production processes of the company (Deming, 1986).
- Participation of everyone. All employees should be empowered to participate in the development of quality.
- Continuous improvement. Companies should constantly renew and improve all processes. In service, it is important to have a sustainable development of

quality and avoid focusing on short term benefits (Gummesson, 1993).

- Management by facts. Decisions should be made based on reliable and well-documented facts. For services, customer satisfaction might be the primary measure (Gronroos, 1990). It is however, valuable particularly for services, to use a broad array of measures including qualitative methods in order to have a more complete understanding of the customers' situation (Lagrosen, 2001).
- Process orientation. A process is the transformation of a set of inputs into outputs that satisfy customer needs and expectations (Oakland, 2000). In services, process orientation is a means of improving the horizontal interaction in the organisation (Gummesson, 1993).

2). Comprehensive models and systems.

The awards models had an important impact on the quality practices of many organisations, e.g. the Baldridge National Quality Awards. The other groups of models contain international standards such as the ISO 9000 system (Gummesson, 1993). This is the most concrete layer and which includes an array of practical tools of different complexity such as QFD.

An integral part of any organisation's attempt to achieve competitive differentiation is a commitment to a process of sustained quality improvement. This implies that the company needs to continuously monitor its performance so that organisational efforts can be better directed to consistently satisfying customers (Lee *et al.*, 2000). It therefore requires the support of a systematic approach to quality measurement. The following diagram displays a selection of the fundamental quality management tools and techniques that can be applied in the service and tourism industry in New Zealand (see Figure 2.2). The review of these quality management approaches attempt to set up a connection between different quality measurement and improvement tools.

2.3.1 Total Quality Management (TQM)

Total Quality Management (TQM) is a proven tool for achieving business excellence in all organisations. Ever since the term TQM was coined in the 1950s, it has been commonly used as a system of managing for total quality. TQM is a total, company-wide effort through full involvement of the entire workforce and with a focus on

continuous improvement that organisations use to achieve customer satisfaction (Evans & Lindsay, 1999, p. 118). TQM implies that an organisation's culture is defined by and supports constant attainment of customer satisfaction through an integrated system of tools, techniques and training (Gundersen, Heide, & Olsson, 1996).

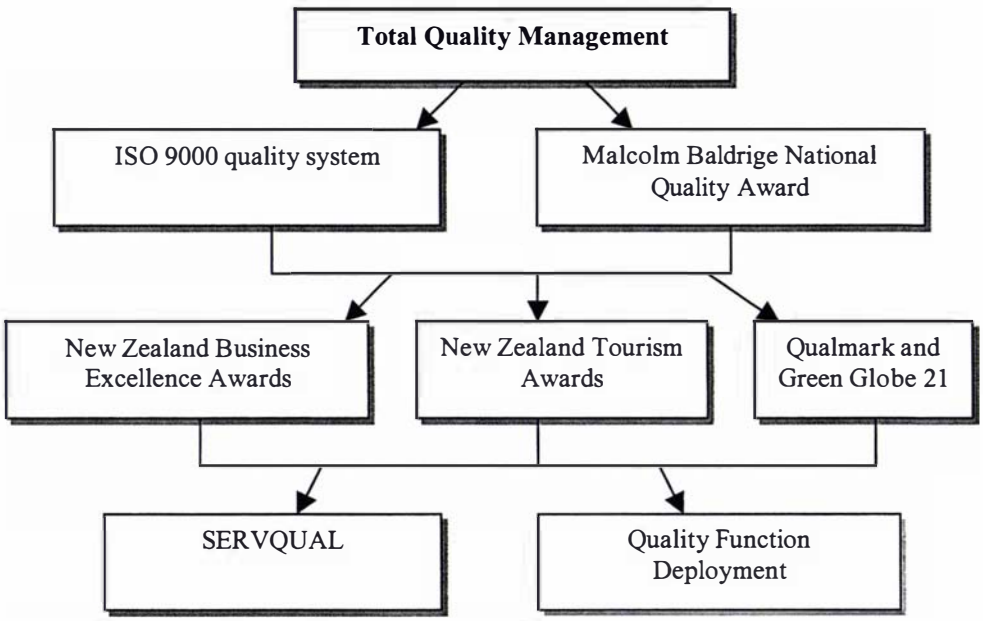

Figure 2.2 A framework of quality management tools

TQM as a management tool to improve quality on a continuous basis has become a topic that is often seen in the literature. It is the integration of all functions within an organisation in order to achieve continuous improvement of the quality of goods and services. TQM emphasised three principles which are customer satisfaction, employee involvement and continuous improvement. In addition, TQM involves process design, supplier relationship, benchmarking, and statistical tools as well as product and service design (Beheshti & Lollar, 2003). In their research, Beheshti and Lollar used the survey instrument to evaluate the impacts of TQM on small and medium-sized enterprises in the United States. The results indicate that companies that invest in quality programmes in general, and total quality management in particular, experience significant returns and improvements in performance. TQM firms achieved higher improvement in product and service quality, increased market share, improved efficiency and productivity, greater customer services, and better employee relations.

TQM is both a philosophy and a set of guiding principles that represent the foundation of a continuously improving organisation (Dale & Bunney, 1999; Rampersad, 2001). Oakland (2000) argues that TQM is an approach to improving the competitiveness, effectiveness and flexibility of a whole organisation and emphasises that the method and techniques used in TQM can be equally useful in the manufacturing, public service, health care, education and hospitality industries. TQM integrates fundamental management techniques, existing improvement efforts, and technical tools under a disciplined approach (Besterfield *et al.,* 2003). TQM involves dedicating all activities of an organisation towards delivering a quality product or service.

The three basic principles for implementing TQM are customer focus, process improvement and total involvement (Tenner & DeToro, 1992). These principles represent how organisations should be managed for performance excellence. Focus on the customer enables the organisation to recognise changing market conditions and give effect to appropriate change. Companies must focus on all product and service attributes that contribute to perceived value to the customer and lead to customer satisfaction. According to Evans and Lindsay, a "customer-driven" company shows constant sensitivity to emerging customer and market requirements and measures the factors that drive customer satisfaction (1999, p. 120). This concept requires a thorough collection and analysis of customer requirements. Efficient and effective processes require integrated tasks from product/service design to post-sale customer service. There must be a continual striving to improve all business and production processes. TQM is an organisation-wide challenge that is everyone's responsibility (Bestfield *et al.*, 2003, p. 2). Employees who are trained in TQM and other appropriate improvement programmes can make substantial quality contributions.

Dale and Bunney (1999) summarise the key elements of TQM. The basic components of TQM are commitment and leadership of management; planning and organisation for the effective use of quality systems, procedures and tools and techniques in the context of the overall strategy; using quality management tools and techniques to facilitate improvement and integrating them into the routine operations of the business; education and training to ensure employees' awareness of the quality management concepts; employee involvement and teamwork; measurement and feedback against performance criteria including customer perception of service and product improvement. These

quality elements require the development and implementation of a quality management system in order to achieve the objectives of a quality improvement programme. Research in the application of TQM programme in US service operations indicates that management support and teamwork are critical to long-term quality improvement (Longenecker & Scazzero, 2000).

2.3.2 ISO 9000 Quality Systems

The International Standard Organisation (ISO) was formed by the United Nations in 1947 to develop approved international standards for a wide range of products, services and management systems. Its first international quality standard ISO 9000:1987, which contained no requirement for organisations to judge their quality according to its acceptability to the customer nor any requirement for them to improve their quality, was updated to become ISO 9000:1994. In December 2000, the three 1994 standards, ISO 9001, 9002, and 9003 were reduced to one standard, ISO 9001:2000 for certification purposes (Hill, Self, & Roche, 2002). As stated by the ISO 9000:2000 Information & Resource Centre (2002), this single certifiable standard now applies to all organisations regardless of size, industry, product or service. It is more flexible than its predecessors, and has an emphasis on customer satisfaction, continual improvement and efficiency. The ISO 9000:2000 explains the overall approach to developing a quality management system. ISO 9001:2000 specifies the requirements for a quality management system that can be used for certification purposes. ISO 9004:2000 complements ISO 9001:2000 and it is based on the same four major sections of management responsibility; resource management; product realisation and measurement; analysis and improvement (Hill *et al.*, 2002).

The primary reason for implementing a quality system that conforms to an ISO standard is that customers or marketing strategies are demanding compliance to a quality system. For example, in order to maintain a market share, many organisations realise that they must register with the ISO 9000 standard. There are also internal benefits such as developing and implementing a well-documented quality system, which are far more important than the external pressures (Besterfield *et al.*, 2003, p. 254). The ISO 9001:2000 quality management system is claimed to be applicable to any organisation, large or small, whatever its product or service, in any sector of activity, and whether a

business enterprise, a public administration, or a government department. The specification of quality criteria in ISO 9001:2000 refers to all those features of a product or service that are required by the customer. Quality management in ISO 9001:2000 means what the organisation does to ensure that its products/services conform to the customer's requirements (Dick, Gallimore, & Brown, 2002).

The new ISO 9000 standard highlights the importance of monitoring information on customer satisfaction as a measure of system performance, and the significance of people involvement and the continuous improvement in the service process. The standard describes the importance of both internal and customer-based measurement of quality, and emphasised that both are needed if service performance analysis if marketing, design and production/service delivery processes are to be effective (ISO, 2003).

Quazi, Hong, and Meng (2002) examine the relationship between ISO 9000 certification and quality management practices and quality results of small and medium-sized service enterprises in Singapore. The results reveal that the use of ISO 9000 certification does not affect quality management practices. Further analysis shows that transitional characteristics, such as size and industry, have relationships with certain constructs of quality management practices. ISO 9000 registration itself may be more likely to have a positive effect of ISO 9000 on quality management practices of firms in certain industries. The effect of ISO 9000 on quality management practice is also more likely to be positive for larger firms rather than the SMEs. Criticism of ISO 9000 generally relates to the high level of paperwork and documentation, a rigid system that does not support creativity or empowerment, a standard that aims for consistency but not continuous improvement (Barnes, 1998; Larson, 1999). Similarly, Wiele and Brown (1998) in their study in Australia found that most small and medium-sized enterprises seemingly felt forced by their customers to go for ISO 9000 certification and did not move further down the quality path.

2.3.3 Difference between ISO 9000 and SERVQUAL

Dick, Gallimore, and Brown (2002) reflect on the different implications of the ISO 9001:2000 quality standards compared with the SERVQUAL model that dominates the

service literature. The SERVQUAL questionnaire measures the gaps between customers' expectations and their views of the actual quality experienced. SERVQUAL thus allows insights into customers' expectation and the gap in actual quality performance to be known. However, at best it provides only generic information on this quality gap. On the other hand, an ISO quality management system requires that customers' expectations are documented as specifications, methods of measurement are defined, and the service process is monitored and controlled to ensure that service conform to these specifications. ISO quality management system standards thus start with the need to define what customers' expectations are before moving on to the practicalities of how they may be measured and controlled, so that actual quality meets specified customers' expectations. However, there will be occasions when customers' actual expectations vary from what service providers believe are the customers' specifications, leading to conforming quality being unsatisfactory from the customer's viewpoint. Measuring customer satisfaction with the quality of the service result is essential and is a central principle in the ISO 9001:2000 standard. Customer-based measurement allows the gap between the provider's view of the specification and the customer's to be analysed and differs from the 'expectation versus actual quality' gap that is measured with the SERVQUAL questionnaire.

In general, the ISO 9001:2000 standards are about systems to achieve good quality while SERVQUAL is limited to only customer-based measurements of quality. The ISO 9001:2000 standards therefore tend to have a strong internal quality emphasis as well as a customer-based one. On the other hand, SERVQUAL is customer oriented and does not consider internal processes at all. The focus of SERVQUAL is on measuring quality shortfalls, not on the practicalities of how process quality may be measured and controlled so that actual quality meets specified customer expectations. Thus, a firm with a quality system certified to ISO 9000 standard could use SERVQUAL as a measurement instrument for customer quality, but it would measure internal quality against specific quality attributes that reflect either the firm's understanding of a particular customer specification or more generic criteria that specify good practice.

An early quality management practice survey in the New Zealand tourism industry shows that most of the tourist attractions were not accredited to ISO 9000. Except for the 2% of the organisations surveyed which were accredited to ISO 9000, the remaining

84% of those who were not accredited would not consider ISO accreditation, due to high accreditation costs and the complicated requirements of the system. It was found that company size appeared to be one of the main influencing factors for the ISO 9000 accreditation. Some respondents in that research suggested that the ISO 9000 standard might not be appropriate for small businesses (Tan, 1997, p. 88). This finding further indicates the importance of the development of an appropriate quality management system for the small tourism attraction operators to systematically collect, analyse and prioritise the various types of customer feedback and to guide their continuous improvement process even though they may not aspire to the full ISO 9000 accreditation. If they are successful and grow substantially then it may be appropriate for them to evolve towards ISO 9000 accreditation.

2.3.4 Malcolm Baldrige National Quality Award

The Malcolm Baldrige National Quality Award (MBNQA) was established in 1987 in the USA for non-profit companies. The main purposes of this award are to promote awareness of quality and its impact on competitiveness; understanding of the requirements for excellence in quality; and the sharing of information on successful strategies and benefits derived (Heaphy & Gruska, 1993). More importantly, the award's criteria for performance excellence establish a framework for integrating total quality principles and practices in any organisation. The principal focus of the award is on promoting high-performance management practices that lead to enhanced customer satisfaction and improved business result (Evans & Lindsay, 1999, p. 132). The National Institute of Standards and Technology (NIST) administers the award programme.

The MBNQA criteria have been used by large numbers of varied organisations for self-assessment and training and as a tool to develop performance management and related business processes. For many companies, it is claimed that using the criteria results in better employee relations, higher productivity, greater customer satisfaction, increased market share, and improved profitability. Many large U.S. firms have used the criteria of the Malcolm Baldrige National Quality Award for self-improvement, and the evidence suggests a long-term link between use of the Baldrige criteria and improved business performance (NIST, 2002). There are numerous countries and regions of the

world that have established similar awards systems such as the European Quality Award, the Canadian Awards for Business Excellence, Australian Quality Awards and New Zealand Business Excellence Award, and which employ assessment criteria and process modelled on that developed for the Baldrige Award.

According to the NIST, the purpose, content, and focus of the Baldrige Award and ISO 9000 are different. The Baldrige Award programme promotes quality awareness, recognises quality achievements of U.S. companies, and provides a vehicle for sharing successful strategies. The Baldrige Award criteria focus on results and continuous improvement. They provide a framework for designing, implementing, and assessing a process for managing all business operations. On the other hand, ISO 9000 consists of a series of four international standards. Companies can use the standards to help determine what is needed to maintain an efficient quality conformance system. ISO 9000 registration determines whether or not a company complies with its own predefined quality system. It is a subset focusing on specific requirements, which covers less than 10 percent of the Baldrige Award criteria. An examination of the coverage of both approaches shows that Baldrige is far more comprehensive (Rao *et al.*, 1996), however, both are relevant to the TQM principles.

Dale and Bunney (1999) note the pitfalls of ISO 9000 registration and argue that registration to the ISO 9000 series will improve an organisation's systems, procedures and processes, but on its own will not deliver continuous company-wide improvement. This implies that registration to the ISO 9000 series of standards is not the only way to achieve quality assurance and customer satisfaction. In general, however, the Baldrige Awards and the ISO 9000 standards would seem to be too complex for the small tourism operators. The ISO 9000 and the Malcolm Baldrige National Quality Award systems are concerned with assessment of quality management within an organisation. The Award system and the ISO 9000 standards both provide a consistent and reliable means of evaluating the quality performance of all types of business organisations from the public sector through to service organisations and manufacturing. It can be seen that the ISO 9000 and quality award models are an integral part of TQM.

2.3.5 New Zealand Business Excellence Awards

The New Zealand Business Excellence Awards (NZBEA) was developed by the New Zealand Business Excellence Foundation in 2000, from the former National Quality Awards that started in 1992. It is currently the only quality programme in New Zealand that provides results and feedback to applicants based on the internationally recognised Malcolm Baldrige National Awards performance excellence criteria. Each year the Foundation updates a New Zealand-specific version of the business excellence framework as a benchmark against international best practice (New Zealand Business Excellence Foundation, 2003). Organisations employing the framework of NZBEA claim improved employee relations, increased productivity, experienced greater customer satisfaction and loyalty, and increased market share and profitability. The Awards criteria also focus on the following areas:

- Strategic objectives, performance measures to enable assessment of the results – the key performance indicators that track conformity to quality specifications.
- The design of a measurement framework as well as how the company carries out their performance appraisal and what they do with the results of the analysis.
- How the organisation learns about customer and market requirements, preferences and expectations – based on its understanding of the outputs that it creates and the outcomes that they generate for their customer segments.
- The organisation's system for design, management and improvement of processes relating to product and service design and delivery.
- Actual performance in key business areas which can provide comparative information from recent years to enable assessment of trends (New Zealand Business Excellence Foundation, 2003).

Despite the universal acceptance and credibility of the quality awards models, as is the case with ISO 9000 series, there are negative views on the effectiveness of self-assessment techniques to stay true to the measures and consistently deliver to the defined standards year after year. For example, the European Foundation of Quality Management (EFQM) Model for Business Excellence is considered as only a standard to measure and assess progress and should not be used as the primary driver to change and develop the organisation. One risk is that there may develop a focus on selected criteria in order to increase the overall points score. These may not be the most important ones to which a business needs to give attention to if it is to develop its

quality improvement process in the most effective and efficient manner for its specific market situation (Dale & Bunney, 1999). The concern in this instance is that the operator will focus more on what is required to win industry recognition in contrast to what is required to win and hold business custom. The MBNQA model may become increasingly recognised by business as a general management model useful as a starting point from which individual units then need to be developed further to fit their own situations.

2.4 The Measurement of Service Quality and Customer Satisfaction

2.4.1 The relationship between service quality and customer satisfaction

Since the 1960s, service in the global marketplace has received considerable attention and its importance has been increasingly recognised. Quality has become a key component in the competitive differentiation of business in every sector of the economy – manufacturing, agriculture and services alike. Quality service delivery targeted at customer satisfaction is increasingly seen as being an integral part of total quality management (Khan, 2003). Research on service quality has focused attention on customer-based definitions of quality. For example, service quality is defined as a measure of how well the service level delivered matches customer expectations (Lenehan & Harrington, 1998). Delivering quality service means conforming to customer expectations on a consistent basis. Quality of service is often measured by a comparison of customers' expectations before experiencing the service and their assessment of the actual service delivery system performance (Collier, 1994).

The traditional approach to assessment of service performance has been to conduct customer satisfaction surveys. These are sometimes used in response to a crisis, a service system failure or an emergency and generally ignore customers' expectations (Singh & Deshmuskh, 1999). Chakrapani (1998) also found a widespread criticism of customer satisfaction measurement, as it does not relate to crucial business variables such as repeat purchase, customer retention, and profitability. The measurement of customer satisfaction should be considered as a part of the measurement of service quality. A customer could be satisfied at some particular point in time when making a transaction with an organisation, but his or her overall judgement of service quality may

not be positive. Satisfaction influences and is influenced by service quality over time, although they are two distinct concepts (Patrick, 1996). It is essential that an organisation has the will to actually make improvement changes before conducting a customer satisfaction exercise. Therefore, customer satisfaction is about monitoring the quality of delivery of the product and service (Hill *et al.*, 2002).

Customer satisfaction is one of the major purposes of a quality management system. For example, customer satisfaction accounts for thirty percent of the total points of the Malcolm Baldrige National Quality Award and it was emphasised in the ISO 9001:2000 customer-focused philosophy which makes meeting customer requirements the starting point of the quality management system. According to Zeithaml *et al.* (1990), effective investment in high service quality levels results in long-term benefits in customer loyalty, and has proven to be more cost-effective, profitable and attracts a bigger market share.

2.4.2 The issues of service quality measurements and customer satisfaction

According to Laws (1998), customers' experiences with any purchase give rise to outcomes for them, varying from satisfaction and dissatisfaction, based on any divergence from the standards of service which clients had anticipated. This expectation is the individual benchmark against which each tourist measure the quality of his/her service experience, expressed as varying degrees of satisfaction. A key objective for research into managing service for quality is therefore to understand the satisfaction which clients anticipate when purchasing a service. The consumer satisfaction literature defines satisfaction as a judgement, attitude or psychological state arising from consumers' disconfirmation of expectations (Oliver, 1996). Satisfaction is a subjective process, where judgements are made based on comparison standards. The satisfaction literature is primarily concerned with transaction-specific encounters. Research shows that predictive expectations tend to result in lower values and that this in turn, results in higher satisfaction levels. Conversely, ideal expectations tend to generate higher values which result in lower satisfaction. Oliver (1996) argues that high expectations tend to frustrate satisfaction. The service quality tradition is concerned with a broader understanding of expectations where respondents are asked what they should expect of an excellent service provider (the ideal expectations).

A review of the existing literature identifies an apparent consensus regarding a fundamental distinction between service quality and consumer satisfaction. Service quality is a long-term attitude, whereas consumer satisfaction is a transitory judgement made on the basis of a specific service encounter (Cronin & Taylor, 1992; Oliver 1993; Patterson & Johnson, 1993). Cronin and Taylor (1994) suggest to restrict the domain of service quality to long term attitudes and that of consumer satisfaction to transaction-specific judgements. Service quality perceptions reflect a consumer's evaluative perceptions of a service encounter at a specific point in time. In contrast, consumer satisfaction judgements are experiential in nature, involving both an end state and a process and reflecting both emotional and cognitive elements (Oliver 1993). Satisfaction judgements are believed to degenerate into overall service quality judgements over time (Cronin & Taylor, 1992; Oliver 1993).

Given the extent to which the SERVQUAL instrument has been used and adapted, ideal expectations have become the dominant standard in the service quality. Contemporary literature suggests that service quality affects service satisfaction at the encounter specific level. According to Higgs, Polonsky, and Hollick (2004), subsequently discrete encounters may be aggregated into overall perceptions of quality. Quality is super-ordinate to satisfaction over a long-term relationship (Oliver, 1996). Parasuraman *et al.* (1988) point out that expectation in the service quality tradition refer to what customers feel the service provider should offer. They conceptualise expectations as 'desires or wants of consumers'. In another words, expectations are what consumers feel the service provider 'should offer rather than what they would offer'. Cronin and Taylor (1992) believe that in the absence of prior experience, consumers' expectations alone define perceived service quality. Boulding *et al.* (1993) emphasise the importance of the unique effect that expectations can have on consumers' perception of service quality.

Tribe and Snaith (1997) develop a research instrument - HOLSAT which was designed to measure holiday satisfaction. The exploratory study was conducted in Cuba. Their research utilised and modified previous work in the area and developed a research instrument which approaches satisfaction attitudes using expectations/performance analysis. They argued that tourist satisfaction with a destination is the degree to which a tourist's assessment of the attributes of a destination exceeds his/her expectations for those attitudes. Expectations were not defined in terms of importance or as excellence

but rather related to what people were anticipating for the attributes for this particular holiday experience.

According to Yi and Lee (2001), service quality and customer satisfaction are different concepts and are often confused. Parasuraman *et al.* (1988) define service quality as customers' overall judgement or attitude concerning high quality service. Their model treated service quality not as an absolute, but a relative concept determined by the gap between consumers' expectations and their perceptions. Accordingly, measuring service quality is a matter of evaluating customer's views of the service provided. Mano and Oliver (1993) argue that customer satisfaction is connected with emotional factors such as "interests", "joy", "pleasant surprise", and "pleasantness". Kang and James (2004) concluded that service quality leads to customer satisfaction.

In the tourism and recreation field, distinctions have been made between quality of performance and satisfaction or quality of experience. Crompton and Love (1995) refer to quality of performance as an attribute of a service which is primarily controlled by a supplier. It is the output of a tourism provider. Evaluation of the quality of performance is based on tourists' perception of performance of the provider. In contrast, satisfaction refers to an emotional state of mind after exposure to the performance/opportunity. It recognised that satisfaction may be influenced by the socio-psychological state a tourist brings to a site e.g. mood or needs which are beyond the providers' control as well as by the programme or site attributes that suppliers can control. Thus performance quality is conceptualised as a measure of a provider's output, while level of satisfaction is concerned with measuring a tourist's outcome. All else being equal, however, higher quality performance in facility provision, programming and service are likely to result in a higher level of visitor satisfaction.

The service quality literature has maintained that the distinction between perceived service quality and satisfaction is that they use different standards of comparison. As Spreng and Mackoy (1996) argued, the standard of comparison in forming satisfaction is predictive expectations, or what the consumer believes will happen, while perceived service quality is the result of a comparison of performance and what the consumer feels a firm should provide. Oliver (1993) similarly believes that one can be satisfied with low quality if the performance is better than one's prediction of the performance.

2.4.3 Importance of customer expectation and continuous improvement

Oh and Park (1997) point out a critical issue related to frequent confusion among researchers between the concepts of importance and expectations. Consumer satisfaction is a function of both expectations related to certain important attributes and judgements of attribute performance. As in the case of importance, however, the concept of expectations has been heavily criticised for its ambiguous, multidimensional definitions in previous studies (Teas, 1993). Some evidence exists to support the conceptual difference between the two concepts. In his review of service quality research, Ryan (1999) distinguishes importance from expectation such that the former is a desired outcome and the latter a tolerated outcome in consumer perceptions of service quality.

According to Ojasalo (2001), managing expectations is important since service quality and satisfaction result from how well the actual service is performed (the service process and outcome) matches the expectations. Thus, expectations and their management are of great significance to perceived service quality and satisfaction. Research conducted by Higgs *et al.* (2004) note that perceptions alone may be a good indicator of absolute values of perceived quality, but that they are less useful in determining the underlying architecture of service quality. They also argued that forecast expectations recalled after consumption are not the same as those captured prior to consumption. Recalled expectations captured in the post-encounter phase are not reliable. The nature of the service experience has the capacity to influence not only the size of expectations, but also the categories used by consumers to organise their thinking about what to expect. The data shows that first time visitors have slightly lower expectations, possibly explained by a degree of uncertainty, which in turn gives rise to a tendency to underestimate expectations. Expectations are not constant, rather it is a dynamic construct, constantly shifting over time as consumers take in new information inputs.

Both customer satisfaction and service quality research have identified various kinds of expectations in the service context. Satisfaction theories also use the terms "comparison standard" and "expectation standard" instead of expectation (Zeithaml *et al.,* 1993, p. 9). The function of comparison standards in satisfaction-generating disconfirmation equals the function of expectations in the formation of perceived service quality. Achieving

competitive advantage through quality requires an understanding of the quality requirements from the customers' perspectives (Hansen & Bush, 1999). Each customer sees quality as the fulfilment of expectations regardless of the tangible elements present. However, service quality relates to a customer's subjective interpretation of his/her experience, different criteria are used by different customer groups to evaluate service, and these vary depending on the situation and circumstances. It is service providers who have to perceive and interpret the wishes of the different customers and adapt their behaviours accordingly (Eccles & Durand, 1997).

The influences on the level of customers' expectations often go beyond the control of the service provider, including the extent of personal needs, word of mouth, and customers' past experiences and, finally influences of external communication. Eccles and Durand (1997) emphasise the benefits of the SERVQUAL scale and suggest that the impact of management action on service quality can be assessed and monitored by using this tool and conclusions can be drawn about the focus of the organisation i.e. how well it is doing against those factors which are regarded as being most important by the customers. Furthermore, by understanding shifts in customer expectations by service dimension may yield important information influencing the design and specification of this and other related services provided by the organisation. Finally, identifying the gaps in meeting customer expectations, by their category of service dimension, will support better prioritisation by the organisation in developing further service improvement.

According to Hubbert, Sehorn, and Brown (1995), measuring performance expectations in a service context has been problematic. Expectations and perceived performance are often measured at the same point in time, following product consumption. The expectation data was based on recall and was therefore bound by all the limitations inherent in this type of measure. The information was further confounded because it is likely that expectations assessed after product exposure have been swayed by the perceived level of product performance (Carman, 1990). Wisniewski (2001) applies SERVQUAL to continuous improvement in the UK public sector and argues that without adequate information on both the quality of service expected and perceptions of service received, then feedback from customer surveys can be highly misleading from both a policy and an operational perspective.

In order to investigate the differences between respondents' pre- and post-expectations with a service, Higgs *et al.* (2004) allow for two operational definitions of expectations in their research design: forecast expectations and ideal expectations. A total of 550 respondent visitors were interviewed during a major art exhibition, using two questionnaires delivered to two sub-samples of respondents. The primary questionnaire was designed to capture recalled expectations after visitation while the parallel questionnaire captured forecast expectations prior to visitation and perceptions in the post-experience phase. The findings suggested that forecast expectations were different to ideal expectations in both qualitative and quantitative ways and that the differences had important implications for perceptions of service quality. These differences can be explained by the way that expectations were formed and by the way that expectations are shaped by the actual visitation experience. For market researchers, the question of when and how to measure expectations has important implications for research designs.

Expectations are pre-trial beliefs about a product or service and its performance at some future time (Boulding *et al.*, 1993; Spreng *et al.*, 1996). Forecast performance standards are also known as expected expectations and predictive expectations. These refer to a prediction of what the consumer believes will occur in the next service encounter. Ideal expectations refer to a standard that represents the highest level of performance attainable by a service provider. Expectations are important concepts because they form the frame of reference for satisfaction judgements. Satisfaction is viewed as a relative concept, judged in relation to some type of comparison standard (Oliver, 1996). However, according to Ekinci and Wiley (1998), the concept of an ideal point is problematic. Boulding *et al.* (1993) demonstrate that customers update their expectation and perception during the service encounter. Therefore, consumer's present expectations affect the perception of service quality and the service quality judgement. Similarly, Johnston (1987) states that customers' expectations are dynamic and that they can be reshaped during the service encounter. Thus these expectations may also continue to change even after the service encounter due to the communication effect, such as marketing communication or communication between the customers. Therefore, in their opinion, it is useless to measure expectation before and during the service encounter.

The practice of continuous improvement embraces the fundamental idea that whatever success in satisfying customers that an organization may have had in the past, it must do

better in the future. This is based on the proposition that the needs and wants of a firm's customers are in a constant state of flux, and that ongoing success requires a proactive commitment to implementing frequent improvements. Competition and continuously escalating standards of customer satisfaction have proven to be endless drivers for seeking to increase organisational performance (Reid & Cormier, 2003).

Research conducted in the Australian tourism industry shows that an integral part of any organisation's attempt to deliver on higher quality of service is a commitment to a process of continuous improvement. In turn, this requires the support of a systematic approach to quality management. Interest in the measurement of service quality is high, and measuring the quality of service experience is now an important managerial responsibility. The challenge is to identify and implement the most appropriate measurement tools for their operation. A consumer's evaluation of the service provided is fundamental to both the level of satisfaction and dissatisfaction with the overall service experience. It was also found that the level of importance assigned by customers to the various quality attributes will allow the tour operators to meet customer requirements more effectively by reassessing their drive for quality and targeting service improvement efforts where needed at the attraction (O'Neil & Charters, 2000). O'Neill and Palmer (2005) compare and critically examine two quality evaluation techniques and suggest the importance of developing a multitude of measurement techniques aimed at assessing the quality of the on-line service experience. They suggest that inherent in approaches to continual quality improvement is the need to continually monitor organisational performance so that energies can be better directed at consistently satisfying and keeping up with the customer needs.

To implement the principles of TQM and maximise the effectiveness of quality management tools and meet individual customer requirements, a quality management system needs to be appropriate to the product or service being offered. Although a number of objections have been raised concerning SERVQUAL as a measurement tool, there have been few suggestions of alternatives and in general the use of the basic principles of SERVQUAL as a measurement tool for customer satisfaction seems to be a reasonable choice provided care is taken in noting some of the above objections. It appears that the objections are more about the rigour of the process rather than its applicability. The results may not be absolute measures of customer expectation and

satisfaction but the observed negative gaps do seem to indicate areas where improvement should be strived for and zero or positive gaps indicate areas where the customers expectations were achieved. For this reason, the present research focuses on the application of SERVQUAL as a quality measurement process and on the value of linking the results of customer satisfaction surveys to the implementation of a Quality Function Deployment matrix in order to identify the prioritised improvement areas for New Zealand tourist attractions. Therefore, a review of the research into QFD and its application was undertaken.

2.5 Quality Function Deployment (QFD) and Its Application

2.5.1 QFD concepts

Quality Function Deployment (QFD) has been investigated and researched for a number of years as one of the most powerful customer-focused application tools for TQM implementation. Some of the definitions that have been widely used in the literature are listed below and collectively they emphasise a number of common attributes.

Above all, QFD is a customer driven system of quality analysis that engages the whole of an organisation in the implementation of its methodologies. "QFD is a system for designing a product or a service based on customer wants, involving all members of the supplying organisation. It is a conceptual map for inter-functional planning and communication" (Lynch & Cross, 1991). It puts a strong emphasis on generating service information outputs and directly linking them to both its operational as well as its business strategies in ways that can be used to improve its overall strategic planning outcomes. Through this linkage it brings functional management efficiencies to the fore and ensures that the full range of an organisations processes and systems integrate themselves around customer needs and requirements. As "a set of planning and communication routines, QFD focuses and coordinates skills within an organisation, first to design, then to manufacture and market goods that customers want to purchase and will continue to purchase. The foundation of QFD is the belief that products should be designed to reflect customers' desires and tastes, therefore marketing people, design engineers, manufacturing staff must work closely together from the time a product is

conceived" (Hauser & Clausing, 1988). It should be noted that the focus of QFD in this definition is on the manufacture and marketing of products rather than services.

QFD provides the means whereby consumer behaviour information can be translated into organisational actions. This is a crucial part of the TQM system which ensures that customer data base information is collected and deployed in an efficient and effective manner. One of the concerns associated with industry based benchmarking (New Zealand Tourism Quality Awards) and branding (Qualmark) is that there is a risk that the form is not matched by the substance of long term company commitment. "QFD is a process that provides structure to the development cycle where the primary focus is based on customer demands and involves all members of the organisation" (Bossert, 1991). It may be considered as elaborate chart to translate perceptions of quality into product characteristics and product characteristics into design and delivery requirements. In this way 'the voice of the customer' is deployed throughout the company" (Garvin, 1988).

QFD also has the advantage of offering a robust model that helps to simplify, through visualisation, the complexity that is inherent in developing and implementing a TQM culture. This allows management and employees to build a system through information sharing as well as teamwork. "QFD is a planning tool used to fulfil customer expectations, which focuses on converting specific customer expectations or requirements into directions and actions" (Besterfield *et al.*,1995). "QFD is a systematic matrix-based, visual approach for designing quality products and services. It is based on the TQM philosophy that high-quality products and services distinguish themselves by adhering to quality standards in all activities throughout their life cycle" (Ramaswamy, 1996), and "a quality improvement methodology based on obtaining customers' input by involving them directly"(Ermer, 1995). These definitions indicate that QFD takes a design and process-focus which turns the customer requirements and product and service design into a manageable system that involves everyone in an organisation.

2.5.2 Historical development of QFD

The QFD concept was introduced in Japan in 1966 and first used in 1972 by Kobe Shipyard of Mitsubishi Heavy Industries Ltd. The technique was first used in the United

States by Ford and Xerox in 1986 (Rao *et al.*, 1996). Other companies such as General Motors, Digital Equipment Corporation, Procter & Gamble and Hewlett-Packard have applied QFD to improve communication, product development, and measurement process and systems. In recent years, QFD has been recommended increasingly as a fundamental planning tool for the total quality management programmes. QFD has also been applied in non-manufacturing environments such as construction companies, hotels and airlines (Zairi & Youssef, 1995).

2.5.3 The House of Quality

The primary planning tool used in QFD is the House of Quality, the matrix of which is the most recognised form of QFD. It is used by organisations to translate a set of customer requirements into the appropriate number of prioritised technical (operational) targets to be met by a new product or service design. The basic structure of a House of Quality matrix is shown in Figure 2.3.

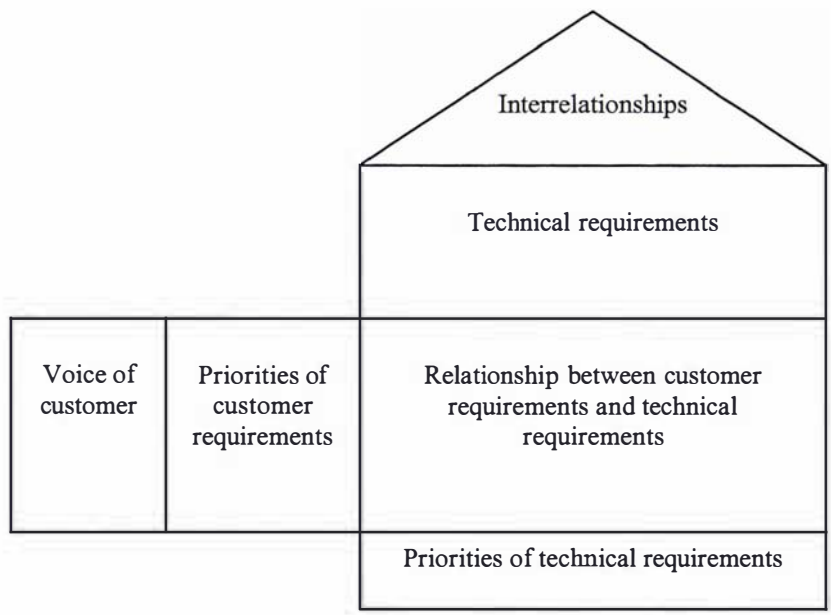

Figure 2.3 The House of Quality

The House of Quality provides the organisation with an important tool to understand customer needs and give top management strategic directions for the achievement of customer satisfaction improvement. It is the first step in the QFD process (Evans & Lindsay, 1999, p. 413). In a full QFD implementation, there are several layered Houses

of Quality. The first House of Quality provides a framework that guides the organisation through the QFD process. It identifies the customer requirements, the technical requirements, the relationship between them, and the criteria for deciding which of the technical requirements will provide the greatest customer satisfaction. If the organisation needs to, it can carry this process further by using multiple houses of quality. For example, three other "houses of quality" are used to deploy the voice of customer to component parts characteristics, process planning, and production planning in the manufacturing industry. The second house is similar to the first house but applies to subsystems and components. The technical requirements from the first house are related to detailed requirements of subsystems and components. The vast majority of applications of QFD, however, concentrate on the first house of quality.

2.5.4 The application of QFD in the service industry

The literature provides a multitude of case studies presenting the application of QFD particularly in its original form to manufactured products. Traditional QFD is a structured methodology that uses four House of Quality matrices to translate customer requirements into specific quality design and manufacturing products for total customer satisfaction. Ermer and Kniper (1998) translated the principles of traditional product design by QFD into a service design QFD methodology by a three-matrix approach (Ermer & Kniper, 1998, p. 1). The service QFD technique enables the organisation to focus proactively on customer requirements early on in the service design stage. It also enables continuous improvement in service design and implementation and leads to meeting customer needs on a consistent and quality driven basis.

QFD is considered to be a valuable service quality technology based on the characteristics of the process around which the quality elements are formed and shaped. According to Stuart and Tax (1996), QFD creates a common quality focus across all the function/operational areas of a company. It encourages discussions among marketing, human resources management, operations and information technology decision makers to understand the implications of their decisions on all service attributes. QFD is driven by the customer requirements, which determines the service features and the necessary delivery processes. Such an approach is consistent with traditional expectation and gaps models for the measurement of customer expectations of service quality.

Research has investigated the application of QFD to different sectors of the service industry. For example, a modified QFD model was developed for total quality management of healthcare in the light of dramatic changes in the healthcare environment. The use of the QFD tool provides a means for hospitals to understand the 'voice of the customer' both in service planning and in performance measurement. In their pilot field study, Lim and Tang (2000) used the SERVQUAL instrument to identify patient expectations and perceptions of the hospital service quality. It was found that there are similarities between SERVQUAL and QFD. However, the advantages of QFD over SERVQUAL are that "QFD helps organisations improve their weak areas, from design through to operation. It provides a way to improve the weak areas, not just identify them". "QFD is based on a system approach whereas SERVQUAL is not". The system approach helps to understand how customer delight and satisfaction are formed. QFD also provides trade-off information, which assists the organisation to set service quality targets.

The application of QFD to the service quality area has demonstrated that it is a practical process that allows hospitals to become customer and quality-oriented. QFD provides a way to systematically apply the voice of customers to process development while facilitating the initial step towards a TQM orientation (Lim & Tang, 2000). QFD has also been used in the quality-in-law project by lawyers to help them further improve their service processes. The application illustrates how client requirements provide lawyers, law firms, law schools and law students with goals and standards for personal and corporate improvement. The matrix analysis defines the present state of the law practices with regard to its process capabilities and business infrastructure such as organisational structure, human resources, and business policies and practices. The QFD approach can help lawyers make informed decisions on where to focus their improvement efforts (Adiano, 1998). The QFD method has also been practised in educational settings to measure customer satisfaction. Pitman *et al.* (1995) illustrate the preliminary results of the pilot field test in a university. By using the QFD method as a model, the complex process for quality improvement becomes manageable and vital information was obtained ranging from problem development through to issue resolution.

Although most of the QFD applications have focused on the needs of the external customers, QFD has also been applied to service organisations such as universities for designing and satisfying the needs of internal customers. A case study was conducted in a Research Resources Centre in a university setting. Many areas needing improvement were identified and many of the recommended changes were made through the QFD process. In this application, the SERVQUAL framework was used to identify the customer quality criteria. QFD was used to analyse where changes could increase the Research Centre's quality level as perceived by the customers (Natarajan, Martz, & Kurosaka, 1999). This example demonstrated the power of QFD as a systematically structured framework for improving internal service processes and customer perceptions of service quality.

Ghobadian and Terry (1995) analyse the application of QFD in the development of a service package in the Alitalia airlines to effectively meet the key customer requirements. The study also suggested a framework for the specific use of QFD by the service industry. The case study examined how Alitalia used the QFD technique to redesign its "Intercontinental Business Class service" on board its Boeing 747 aircraft. The results of the QFD application show that the new service was meeting customer expectations and the performance in key areas had substantially improved. It was found that the gap between Alitalia's performance and customer expectations of an ideal airline had narrowed and in some areas had completely closed.

The research conducted by Ozgener (2003) focused on QFD as a team process and how it works towards maximising customer satisfaction and better company performance. It was found that without the support of top management, all attempts at QFD implementation could fail. Top management commitment is the key when implementing QFD. Obtaining desired benefits from the QFD process depends on the existence of the following success factors:

- Clarity that QFD is a priority in terms of management
- Clarity of priorities for QFD activities. Management needs to allocate resources for and insist on the execution of market research.
- Understanding of the terms used in QFD.
- Insisting on cross-functional commitment and participation.

- Guarantee that team members learn something new at each step of the process.
- Giving constant feedback that will help team members to make progress towards achieving their goals.

Research conducted in Spain developed a case study which presents an analysis of the considerations used in the introduction of e-banking in the National Bank of Spain using QFD as the link to customer requirements. Results of this research indicate that project managers and quality improvement managers could benefit from the QFD methodology and from the use of tools to link customer requirements to the internal procedures of the firm in order to satisfy and exceed customer satisfaction (Gonzalez *et al*., 2004).

Several studies have investigated the application of QFD in the hotel industry. For example, Stuart and Tax (1996) examine the QFD adaptation process at the strategic planning and the tactical level using the front-desk activities in a hotel to identify potential problems and their causes before they occur. The hotel study illustrates how customer attributes can be related to each individual service encounter and how the planning process can then be used to identify the encounter-specific process technologies required. Other similar applications of QFD were presented by Dube, Johnson, and Renaghan (1999). Results from their empirical application of the QFD technique to luxury business hotels suggested some modifications of QFD. The study focused on the application of QFD to extended service transactions such as airlines, resort hotels, leisure activities, education and healthcare service, as well as a diverse range of professional services. The findings of the hotel study emphasised that services are fundamentally different from physical products because many services are intangible and interpersonal in nature and are co-produced with the customer at the time of consumption. Despite the difference between service and product production, service quality and design can still benefit from the structure and the inside and outside links of QFD, and early applications of the methods to services appear convincing.

Research conducted in Singapore (Pawitra & Tan, 2003) has assessed the usefulness of integrating Kano' model, SERVQUAL and QFD. Results show that the integrated approach also provides a basis for improving the weak attributes, highlighting and prioritising key action plans. None of the methods by themselves can achieve these benefits. The research aimed to help organisations evaluate customer satisfaction, and to

assist in innovative product and service development through the identification of attributes that are attractive to customers. The objectives of the research were to evaluate the satisfaction levels of tourists and to provide a guide to improve the weak attributes. Their research contributed to the literature by integrating Kano's model, SERVQUAL and QFD using a case study from the tourism industry. The significance of the integrated approach shows that by incorporating elements of Keno's model into SERVQUAL, the limitations of SERVQUAL can be overcome. Kano's model assumes that the relationship between attribute performance and customer satisfaction is not necessarily linear. Improvement of weak attributes can be identified according to each Kano's category. Integrating SERVQUAL and Kano's model into QFD can result in ways to close the gap between perceived service and predicted service.

Pan, Chin, and Lau (2000) proposed an integrated QFD and *Hoshin* (the process of strategy/policy deployment) approach to develop viable strategies and attain service quality deployment in a service organisation in Hong Kong. Results of their research found that QFD can be used for strategy development, as it can help organisations better understand the purposes and functions of their service/products, their business operations and quality management practices. Based on the pioneer Quality Service Deployment (QSD) study at a service organisation, it has demonstrated the potential of QFD/*Hoshin* approach in relation to supporting the process of quality strategy development and deployment. The QSD study helped the management formulate quality strategies and drive the implementation of improvement plans. It linked the strategic vision to daily operations, and measured the improvement goals of the service organisation. The study integrated the QFD method and the *Hoshin* method to generalise a feasible approach to service quality deployment (SQD).

2.6 The Issues with Quality Management in SMEs

2.6.1 Characteristics of SMEs

Small and medium sized enterprises (SMEs) play an important role in the economy of New Zealand. SMEs not only contribute to national outputs (GDP) and employment but also affect the competitive ability of the larger organisations with which they interact and relate. Providing quality products and services can give a crucial competitive edge

to the SMEs in the local, as well as the global market place. Most New Zealand enterprises are small businesses both in terms of number and ownership. The latest statistics for 2005 confirm that 96% of enterprises employ 19 or fewer people (SMEs). 87% of enterprises employ five or fewer people (micro businesses). SMEs account for almost half of New Zealand's output (Ministry of Economic Development, 2005).

2.6.2 The issues of quality management practice with SMEs

The continuously growing competition on the market place has forced many SMEs to start focusing on quality improvement and cost reduction in order to stay competitive. A systematic and continuous work with quality improvement and quality methods constitutes central activities that should be implemented in an environment often characterised by limited available resources, high work-load and a work force where few, if any, employees are familiar with quality methods. There has been a growing interest in quality methods and this has led to a gradual change of many companies' view on customer satisfaction and continuous improvement (Ehresman, 1995).

Literature shows that there is little or no evidence to support the quality models suggested for SMEs. According to Husband and Mandal (1999), the issue of whether quality methods can be effectively utilised by SMEs was uncertain. Common quality models such as quality systems and certification have been adopted by some SMEs, but the rate of implementation is low compared with large organisations. This was because of the poor understanding and interpretation of various quality methods, which led to SMEs not being able to justify the use of quality techniques. Small and medium-sized enterprises generally are less comfortable in bringing TQM into their organisations than large companies due to limited managerial knowledge, skill, ability, incentives, resources, and time (Mohd & Elaine, 2000; Wiele & Brown, 1998).

Implementation of any quality management programme and especially total quality management poses a number of challenges for small and medium-sized firms, such as the lack of resources and training (Price & Chen, 1993). Successful implementation of total quality management requires techniques that are tailored to the unique needs of the firm, and is dependent on commitment by top management and cooperation among employees (Beheshti & Lollar, 2003). It is suggested that management must understand

the firm's definition of quality and make every effort to ensure that each employee knows and understands how the organisation defines quality in order to be successful in utilising a quality programme and to achieve its objectives (Tamimi & Sebastianelli, 1996). McAdam and Canning's (2001) research concludes that there is a relationship between the size of a firm and registration. It is identified that the larger firms are more likely to register themselves with the ISO 9000 standards. They examined the impacts ISO 9000 has had in the service sector and found that the companies that have registered have done so mainly for marketing reasons, but have also experienced internal improvement. It was suggested that ISO 9000 should be used in conjunction with more proactive business improvement approaches.

2.6.3 ISO 9000 and small tourism enterprise

Despite the growing popularity and increasing numbers of ISO 9000 certified companies across many public and private sectors in the global economy, the standard has not found many advocates within the tourism sector (Augustyn & Pheby, 2000). There is some reluctance, and sometimes resistance, from the public and private tourism organisations towards ISO 9000. ISO 9000 is not promoted as a tool for improved business performance and there is a general lack of awareness of the standard and its potential benefits within the tourism industry. Consequently there are very few tourism companies ISO 9000 registered.

Advocates of ISO 9000 emphasise that the standard is a vital component in achieving business excellence by both large and small companies, equally within the manufacturing and service sectors (Brumm, 1995; Jackson & Ashton, 1995; McLachlan, 1996; Subba *et al.*, 1997). Due to limited research and superficial knowledge of ISO 9000, the tourism sector has a tendency to reject the standards as not suitable for tourism businesses (Augustyn & Pheby, 2000).

Jackson and Ashton (1995) suggest that the ISO 9000 standard should not be treated as a ready-made quality system. ISO 9000 is only a template that should constitute a basis for the elaboration of a unique quality system to meet the needs of an individual large or small, manufacturing or service organisation. Williams (1997) found significant improvements in management operations and employee improvement in small firms in

the UK. There are, however, some evidence that being ISO 9000 registered does not guarantee improved performance due to high explicit and implicit costs associated with the development. For example, a major survey of Australian small businesses found that the costs of implementing ISO 9000 were greater than the benefits derived for a majority of the firms (Eisen & Mulraney, 1992).

The major reason for poor performance of some ISO 9000 registered companies is the improper motivation for such an accreditation. According to Penson (1997), a static and narrow approach towards implementing the standards, as well as lacking of monitoring and commitment on the part of top management, are the major causes for the poor performance of some ISO 9000 certified organisations. On the basis of an extensive literature review and an analysis of the reasons for poor performance of some ISO 9000 accredited companies, the following critical success factors have been identified by Augustyn and Pheby (2000).

1). Proper driving force towards obtaining the ISO 9000 certification. The ISO 9000 certification should be stimulated internally rather than externally. This will ensure more in-depth implementation of the quality management process and secure future benefits.
2). The quality system must be internal and external customer oriented if it is to meet its expectation. Companies have to possess a sound knowledge of the internal and external customer requirements.
3). Use of the standard in an integrated manner. This implies that the internal environment of the company has to be managed with the focus on leadership, training and teamwork as well as reward and recognition.
4). The attitude towards ISO 9000 is central to success. The people using the standard must have the right motivations for doing so. Future benefits must be communicated to staff, which is particularly important in service organisations.
5). The effective implementation of ISO 9000 needs a company's dynamic approach to quality improvement. This requires looking for opportunities for continuous improvement after certification through monitoring and review.

As McAdam and Canning (2001) noted, the levels of ISO 9000 certification among service firms are rather low, especially for small firms. In the light of limited research

budgets and lack of trained research personnel in many smaller tourism destinations, any methods of evaluation must be timely, cost effective, easily understood by all involved in the policy development process and, at the same time, statistically valid. A need appears to exist for practical tools based on behavioural principles that help managers understand and use consumer evaluations (Duke & Persia, 1996).

Research reveals that SMEs have a problem not only in bridging the gaps between the ISO 9000 series and TQM, but also in understanding that there is more to do after receiving an ISO 9000 series certificate or achieving a quality award. Another problem with the SMEs is that the application of the continuous improvement concept is more difficult because the results might not always be visible and/or will only become evident in the longer term. However, the survival of many SMEs depends on their continuous improvements in the long run (Dale & Bunney, 1999). It was also found that most SMEs are aware of the need for quality improvement but few of them incorporate the need in their strategies and even less develop quality systems to improve their performance and satisfy customers (Augustyn, 1998). This indicates the importance of selecting effective quality improvement tools for the management of small business enterprises such as the tourist attractions in New Zealand.

2.7 The New Zealand Tourism Environment and Quality Management Practices

2.7.1 The New Zealand tourism industry

According to the World Tourism Organisation (WTO) between 1950 and 1999 the number of international visitor arrivals worldwide grew from 25 million to 664 million (an average annual growth rate of 7%). The tourism sector is seen by many countries as a source of economic development, with increasing levels of competition in the global marketplace. New Zealand's tourism industry is a relatively small player within the world's tourism industry. In 1999, New Zealand's share of the global tourism industry was approximately 0.25% to 0.45% of all international visitors (Tourism Strategy Group, 2001).

A key characteristic of the New Zealand tourism industry is its importance to the country's economy. Tourism has a substantial role in job creation and export earnings.

It is a demand-driven, service-oriented industry experiencing rapid growth and innovation (The Ministry of Tourism, 2005a). Tourism activity by both international and domestic travellers generated $17.2 billion in expenditure within New Zealand. International expenditure was $7.4 billion and domestic expenditure $9.8 billion. This level of expenditure equates to a direct and indirect contribution of 9.4% to New Zealand's Gross Domestic Product (GDP). The New Zealand tourism industry is made up of 10 major public-listed companies and between 13,500 and 18,000 small to medium sized enterprises (The Ministry of Tourism, 2005b). In addition to the 103,000 jobs directly supported by tourism, an estimated 69,000 jobs are indirectly attributable to tourism demand making a total of 172,000, or 9.9% of New Zealand's workforce (one job in ten) (Tourism Research Council New Zealand, 2005).

Tourism is also a vehicle for regional and community development. Many tourists look for unique, unspoilt locations, and are attracted to small towns and provincial regions that often most need economic development. Tourist interest in the Maori culture also fosters development of Maori community and businesses. The research on Maori tourism found that Maori participation rates in tourism have increased by 72% in the decade 1991-2001, twice the growth rate of the total tourism workforce. Maori are estimated to employ 18,400 full time equivalent tourism jobs, comprising 11% of total tourism related employment (Tourism Research Council New Zealand, 2004).

2.7.2 Quality management strategies applied in the New Zealand tourism industry

One of the goals established by the Tourism New Zealand Strategy is to provide a world class, sustainable visitor experience. New Zealand aims to offer a high quality visitor experience that can be maintained in the long term. Encouraging the best possible visitors to enjoy the best possible experiences in New Zealand is at the heart of Tourism New Zealand's new Quality Strategy (Tourism New Zealand, 2005c). Visitor satisfaction and service quality are important issues for the tourism industry and for marketing New Zealand overseas. This calls for operators to perform at a level of quality that meets or exceeds the visitor expectations. Quality-accreditation is seen as a sign of a reputable and committed tourism operator that is serious about the international tourism market. The international market has raised their standards. This

indicates that high and consistent quality is no longer an option, but a necessity (Tourism New Zealand, 2005c). Within the New Zealand tourism industry, there are two quality assessment programmes, namely the Qualmark programme and the New Zealand Tourism Quality Awards. Both of these are linked to the more universal quality assessment systems used in all forms of business, specifically the ISO 9000 standards and the Malcolm Baldrige Quality Awards.

The New Zealand Tourism Awards

Officially launched in 1991, the New Zealand Tourism Awards are supported by Air New Zealand and Tourism New Zealand. The award categories are sponsored by Sky City Limited, Telecom New Zealand, Montana Wines and Westpac Trust. The awards are managed by Tourism Industry New Zealand. The New Zealand Tourism Awards recognise and celebrate excellence and encourage ongoing improvements in the tourism industry. It focuses on quality and meeting and exceeding the expectations of customers. The tourism awards judging process is closely linked to the internationally recognised Baldrige Quality criteria for business excellence. Entering the Tourism Awards shows considerable commitment on the part of tourism operators, and the process is considered as a valuable opportunity for businesses to evaluate their business direction, business practice and business results (New Zealand Tourism Awards, 2002). The winners of Tourism Awards are companies that offer a superior quality product and take note of customer needs and expectations. These companies constantly seek innovative ideas in the quest to ensure the needs of their customers are not only met but exceeded (Tourism New Zealand, 2005).

According to the New Zealand Tourism Awards 2003 Information Kit, a scoring system has been used to examine the seven core areas of a tourism business. They are: leadership and vision; business strategy and planning; customer focus and marketing; research information and analysis; human resources management and development; business processes; and business results including financial performance and customer satisfaction. The tourism awards provide self-assessment criteria for performance such as to "ensure the quality of the experience for the customer", but are deliberately not prescriptive and as a result, applicants who have had areas for improvement identified do not receive advice on what to do to achieve the improvement. An important requirement, therefore, is the identification of systems and tools suitable for specific

improvement programmes in the tourism industry to conform to the standards of the Awards and to measure the quality of service on a regular basis to ensure that improvement is achieved and maintained.

Qualmark

Established in 1993, Qualmark is the official quality agency for the New Zealand tourism industry. It is a government funded organisation with major shareholders of Tourism New Zealand (51%) and New Zealand Automobile Association (49%), and supported by leading industry organisations (Tourism New Zealand, 2002). The objective of Qualmark is to define, develop and implement national systems of grading and classification for a range of tourism products, starting with the accommodation sector (Collier, 2002). Introduced in October 2002, the Qualmark endorsement system was designed for non-accommodation tourism businesses such as adventure tourism, visitor transport, attractions, and activities. Instead of using a star grade, tour operators are assessed against their sector's quality standards on a pass or fail basis. If successful, a company is licensed to use tourism's official Qualmark logo as an independent endorsement of the quality and professionalism of the business. All endorsed tourism operators will meet standards for customer service, facilities and equipment, people, environmental and cultural aspects, general safety and welfare, and overall business operations (Qualmark New Zealand Limited, 2002).

According to Tourism New Zealand (2005), the numbers of companies registered with Qualmark is nearly 1500 operators. There is constant feedback for the operators in the international marketplace that quality accreditation is a vital tool when looking for tourism activities that they have not visited in New Zealand as a destination. As forecasted in New Zealand Tourism Strategy 2010, by 2006, 80% of all tourism transactions will be conducted by businesses that are Qualmark accredited or graded, which makes Qualmark the ISO 9000 equivalent quality assurance system for the tourism industry in New Zealand (Collier, 2002). This will be achieved by the development of assessment criteria based on customer satisfaction, onsite assessment visits, consultation and feedback during the assessment, and assessment reports identifying strengths and weaknesses and opportunities (Qualmark New Zealand Limited, 2002). The Qualmark Mark of Quality Award which started in 2003

encourages New Zealand tourism operators to further align themselves with the Qualmark brand values by providing the ultimate customer experience to achieve consistently high level of customer satisfaction (Tourism New Zealand, 2005). This indicates that the achievement of quality awards is the goal of tourism operators, however, strategies and tactics at a day-to-day level are needed in order to consistently exceed visitor expectations and demonstrate real commitments to principles of quality and customer service.

The Green Globe 21

Launched in 2001 in New Zealand, the widely recognised environmental Green Globe brand is used as another quality benchmark standard by New Zealand tour operators. Green Globe 21 is the world-wide benchmarking, certification and improvement system which facilitates sustainable travel and tourism for consumers, companies and communities. In New Zealand there are around 120 tourism operations throughout the country currently involved in the Green Globe programme. These Green Globe certified organisations will use the Green Globe logo as a symbol of their commitment to and achievement of environmentally sustainable practices (Green Globe New Zealand, 2006).

There are three levels of Green Globe:

- Affiliate is a low-cost entry for companies and communities. After that, members are encouraged to move up to the next level.
- Benchmarking allows electronic and web-based environmental and social benchmarking against industry best practice.
- Certification is the final level and involves environmental and social performance against Green Globe Standards as confirmed by an international independent audit on an annual basis (http://www.greenglobe21.com).

The annual renewal and assessment of Green Globe 21 require participants to work towards and see its progress in achieving targets over time and their commitment to a process of continuous improvement. This provides assurance to both the organisation and their customers that the operation is meeting its commitment to the relevant Green Globe 21 standards, meanwhile it also challenge the organisation involved to establish an internal quality improvement system in order to meet the external requirements. The

Green Globe 21 Environmental Award recognises the importance of nature environment and this award is open to any entrant who is benchmarked with Green Globe 21 (Tourism New Zealand, 2005).

Other quality standards offered by the New Zealand tourism industry are:

- Customer Service Training

KiwiHost is New Zealand's largest provider of customer experiences training. Courses run regularly, nationwide and specific needs-analysis can be conducted.

Bizinfo as part of New Zealand Trade and Enterprise has a range of resources designed to help tour operators in their day-to-day operations, these include customer service tools and training opportunities.

- Toi Iho

This Mark was developed by Creative New Zealand to help consumers buy with confidence. This is increasingly important for international visitors. Toi iho is a way of marking Maori art or craft products as authentic and quality pieces.

- Operating Licences

Most commercial businesses in the tourism industry require licenses to operate. For example, if a company plans to offer any air-based product, it will need approval from the Civil Aviation Authority. Certification from the Maritime Safety Authority (MSA) is needed for activities based at sea and on rivers and lakes. A concession from the Department of Conservation is required for companies offering a commercial experience on the Conservation Estate (New Zealand's national parks, forest and maritime parks and conservation and marine reserves) (Tourism New Zealand, 2005c).

2.7.3 Quality management potentials in the New Zealand tourism industry

Tourism New Zealand's market research shows that visitors want to interact with the landscape and host culture. Visitors to New Zealand consume a broad range of activities and high levels of nature/adventure based products. Regardless of where they come from, people travel because it is energising (to feel vital and alive), they like socialising (to feel social and carefree), it improves their status (to feel rewarded and personally satisfied), it is an opportunity to learn (to feel mentally stimulated and knowledgeable),

they need to relax (to feel safe and comfortable) and they want to relate (to feel balanced and bonded) to other cultures. But these motivations come in different quantities for different travellers. For example, a traveller's primary motivation might be socialising – the other motivations are there, but in less quantity. Research indicates that New Zealand appeals to people seeking adventure, connection with nature, relaxation and revitalisation (Tourism New Zealand, 2005a).

International visitors to New Zealand are most interested in the activities that New Zealand is best known for, such as natural wonders, physical outdoor activities and wildlife activities. The cultural products that generate the most interest are learning about the way of life of people from a different culture, experiencing a country's local cuisine, sites that are important to a country's history and historic buildings (Tourism New Zealand, 2005b). International visitors experience /visit considerably more cultural products during their holiday compared with domestic visitors. This is likely to be due to both difference in interest levels and length of stay.

Visitor surveys conducted by Tourism New Zealand also show the perception and appreciation by visitors of what the local culture has to offer. The priorities for improvement are those cultural products that are relatively high drivers of overall holiday satisfaction but relatively low performers. Hence improvements in products such as marae visits, food and wine trails, exhibitions of other New Zealand history, local cuisine, sites that are important to Maori history, dance and performance, historic buildings, and shopping for souvenirs/educational purposes will have particularly positive effects in improving visitors' overall holiday satisfaction. Therefore, the major challenges facing the New Zealand tourism sector which have been identified by the Tourism Strategy 2010 are:

- Understanding better what visitors will be seeking from New Zealand and what motivates them to travel,
- Making the New Zealand tourism product more distinctive and aligned to visitors' needs and wants, and
- Developing the quality of the New Zealand product and becoming internationally known for this.

Recent decades have seen a change in the types of attraction and activity demanded by many tourists. There has been a trend away from 'passive' tourism to 'active' tourism and increasing consumer sophistication has led to a rise in customers' expectations. This in turn has resulted in the need for constant product innovation and enhancement. The current research will focus on three major distinctive types of tourism, which are grouped by similar tourism experience, attraction or activity.

2.8 The Main Themes of the Research

Based on the literature review, the main theme is formed which identifies the relationship between this research programme and different quality management tools as evaluated in the previous literature. Review of service quality measurement literature reveals a number of tools which have been applied in the tourism sector. An examination of customer satisfaction assessment techniques suggest that customer expectations are the important factors influencing the perception of service quality experienced. Research conducted in the service and tourism industry show that an integrated system of quality management strategy is needed for organisations to achieve continuous improvement and service quality improvement should be considered as a sequential process. The connection between the SERVQUAL and QFD is set out in Figure 2.4 as a conceptual framework to justify the research questions. It aims to identify the direction in quality measurement and quality improvement techniques in the tourism industry.

The service delivery gaps on which SERVQUAL is focused arise out of discrepancies between the actual outputs of goods and services created by the business and the perception (anticipated and realised) that the customer has of how well these outputs meet their outcome expectations. To the customer-oriented marketing managers, the outputs and outcomes are better known as the "features" the customer is seeking and the "benefits" they hope to gain from purchase and consumption. This shows that these two techniques form a part of and integrate with the strategic perspective of a business organisation. The relationship diagram structures the links between service quality process and important components within the quality improvement programme. Through the application of SERVQUAL, customer expectations and satisfaction information are collected which will provide input for the implementation of QFD for

the continuous improvement. The results of the quality improvement programme will be tested through regular customer surveys which links to the external quality assurance programme such as Tourism Awards and the Qualmark monitoring system.

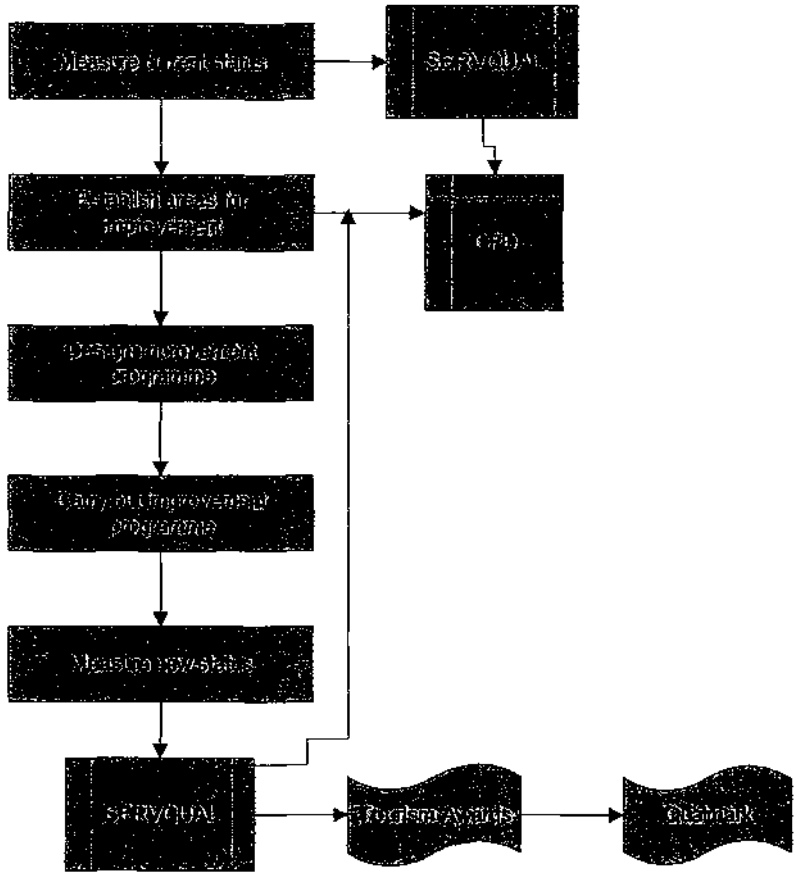

Figure 2.4 The process of quality improvement

2.9 Concluding Remarks

The literature reinforced the findings that a service organisation, such as a tourist operator, should have programmes in place to improve service quality on a continuous basis in order to stay competitive. In New Zealand the tourism industry is made up of a few big organisations and a very large number of small to medium sized enterprises. The literature demonstrates the characteristics of small sized tourism organisations. Common quality models such as a quality accreditation system and ISO 9000 certification have been adopted by some SMEs, but the rate of implementation is low as compared to large organisations. For many of the small tourism operators that provide

the bulk of the tourist attractions in New Zealand, these systems are too complex and daunting to undertake.

In New Zealand, both the Tourism Award and the Qualmark endorsement systems aim at encouraging the participation of tour operators in meeting and exceeding tourist expectations. However, there are no clear guidelines or specific procedures for the businesses to follow on a regular basis in order to meet the quality criteria, as well as maintaining their quality certification and awards. This is because they aim not to be prescriptive and accept that the entrant has the right to choose their approach to quality management to meet their organisation's particular structure and culture. There is a wide choice of approaches some adapted to particular situations, some very complex and others, which have a general appeal. The Green Globe 21 certification and assessment system also requires the tourism organisation involved to set up a systematic quality improvement programme to meet the worldwide benchmark standard. Tourist attraction operators often do not have the management training to select the appropriate quality system, would prefer to have something available, which is relatively simple to use and demonstrated to work in their situation. Therefore, there is a need to develop specific quality management tools and techniques that are appropriate to the tourism industry in New Zealand, with particular emphasis on the smaller organisations, which comprise the major part of the sector numerically. It is also likely that these techniques could be applied to the tourist organisations in many other countries since the structure of the New Zealand tourist industry has much in common with other national industry structures throughout the world.

This chapter has compared service quality measurements such as SERVPERF which are similar to the SERVQUAL technique. Despite the criticisms on the applicability of customer expectations, the importance of using this concept was recognised as the essential elements of customer satisfaction measurement. A review of the literature on these models reveals that the SERVQUAL measurement can be used in the tourism industry, but limitations apply to its widespread application and use. It is suggested that measurement is necessary but is not taken to levels sufficient for making continual quality improvements. Measurement has to be part of a quality programme in which the various quality improvement tools are used on a regular and reliable basis. That is,

SERVQUAL is a useful starting point but not the final answer for assessing and improving service quality.

Another popular quality improvement approach, Quality Function Deployment (QFD) has been reviewed in this chapter. QFD is recognised as a systematically structured framework for improving internal service processes and customer perceptions of service quality. It has several advantages over other quality improvement tools, which include enabling the management of a service to relate the customer's key requirements to a programme of action in a structured way in order to improve the quality of service to the customer. The related literature review on quality improvement tools and techniques has shown that the tourism industry's quality management understanding and commitment to continuous improvement and customer satisfaction is somewhat limited. This indicates the significance of the present research which is identifying the quality management and assessment tools appropriate to those tourist attraction operators that continuously strive to achieve quality service and customer satisfaction. It was hoped that in the longer term, the processes developed in this and preceding research could be developed into a manual supported by computer programmes to make the task of implementing a continuous quality improvement programme simpler for the small service organisation. The methodology used in this study will be discussed in Chapter Three, followed by three case studies which will be illustrated in later chapters.

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CHAPTER 3

METHODOLOGY

3.1 Introduction

Following the research framework outline as presented in Chapter Two, the next stage is to set the overall research approach and strategies in place. This chapter discusses the research methodology used in this project. It outlines the processes involved in the pilot applications of the SERVQUAL and QFD techniques in three small tourist attractions and the implementation of this quality assessment and improvement programme in the principal case study. The first part of the chapter introduces the research question and objectives followed by the methodological framework of sampling strategies, case study and the SERVQUAL survey implementation. The second section explains how the results of the SERVQUAL survey as a measurement of service quality can be linked to the building of the House of Quality in QFD. The third part of the chapter analyses the consistency of the research data to indicate the representative level of the results. Because of internal disparities that were discovered within the results of the pilot SERVQUAL surveys, an analysis of the causes of variation was undertaken as an additional task to provide assurance that the results could be used with confidence in the construction of the QFD House of Quality. Hypothesis testing was carried out in the principal case study to show that there was no strong association between demographic groups and the variations in the survey results. A simplified structure of the House of Quality for tourist operators is demonstrated in the fourth section. This is followed by the evaluation of methodological limitations associated with the application of the research strategy.

3.2 Objectives of the Research

After considering the aforementioned issues regarding quality management assessment practices in the attraction sector of the New Zealand tourism industry in Chapter Two, the following research question for this study was established –

How to discover a tool for the measurement and therefore the improvement of the service quality for small to medium sized tour operators?

The methodology employed in the research process has been designed to meet the following general research objectives which include:

1. To refine and apply specific tools in ways designed to assist the tourist attraction operators to measure quality of service and performance from their customers' point of view
2. To obtain reliable indications of areas where improvements could be made based on customer needs and further link the results to the application of a sequence of quality improvement tools
3. To explore the effectiveness of the quality improvement tools and techniques developed in selected sectors of the tourism industry

The research approach undertaken was to employ a combination of questionnaire survey and small focus group analysis within a set of case studies of New Zealand quality award applicants in the tourist attraction sector to identify and test appropriate quality assessment tools that can be adapted to assist such companies to improve their service delivery performance.

3.3 Research Methodology

This study has adopted a mixed approach employing quantitative and qualitative research methodologies. The SERVQUAL customer surveys were centred on quantitative data collection through the use of structured questionnaires while the staff focus group data collection process as used in building the House of Quality was primarily qualitative in nature. The application of mixed methods allows the simultaneous and integrated collection of qualitative and quantitative data during the fieldwork phase (Miles & Huberman, 1994). To ensure the applicability of the research methodology, the linked SERVQUAL and QFD techniques were pilot tested in three case studies. However, when the consistency of the SERVQUAL results was tested, it was found that there were some internal disparities that suggested in turn that an investigation of the possible demographic causes of the internal SERVQUAL survey variations would help to identify differing requirements of particular market segments. The methodologies adopted in this research are explained in the following sections. A flowchart was configured to show the research process in Figure 3.1.

3.3.1. Case study

A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context (Yin, 1994, p. 13) and is "the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances" (Stake, 1995, p. xi). To determine the applicability of quality improvement tools in different tourist attractions, multiple case studies were used in this research. According to Yin (1994), multiple case studies should be regarded as multiple experiments posing the issue of replicability, informed by preliminary concepts derived from each earlier case work. Case studies of single situations are specific, and contextualised by their setting: situations in their uniqueness as part of their particular context and their interactions. Each of these case studies contributed to a progressive learning and practice curve that assisted in the refinement of the research instruments and the methods of analysis and models employed throughout the research.

Case study methodology was advocated when the research objective is the exploration of relationships and concepts, rather than testing existing hypotheses (Merriam, 1988). It generally tends to be inductive in nature by exploring issues in depth to generate or replicate theory. The aim of using a case study is to understand the particular and unique features of the case but also to draw out analysis that has a wider applicability. The strengths of the case study approach, as Finn *et al.* (2000) suggested, are the capacity to explore social processes as they unfold in organisations and/or behaviours that are little understood. Page and Meyer (2000, p. 22) view a case study as a common form of descriptive research in management. It is an in-depth description of an individual, group, or organisation, either for testing whether this case (or a number of cases) fits a particular theory better than another, or simply, to determine what makes this case superior/inferior/different to other otherwise similar cases.

The cases selected for this research are all tourist attractions sharing similarities in the nature of their products, services and modes of operations. They are SMEs with mixed domestic and international customers, and all broadly located in the 'heritage' area e.g. the Maori culture, natural phenomena and with man-made elements and transformations. They are typical of such types of tourist attractions in Rotorua. The advantages associated with the case studies are that in-depth data is collected on multiple cases. However, there may also be disadvantages such as the findings often being specific to

the case studied and the results of research in that case are not always able to be generalised to other case types and contexts (Jennings, 2001, p. 179).

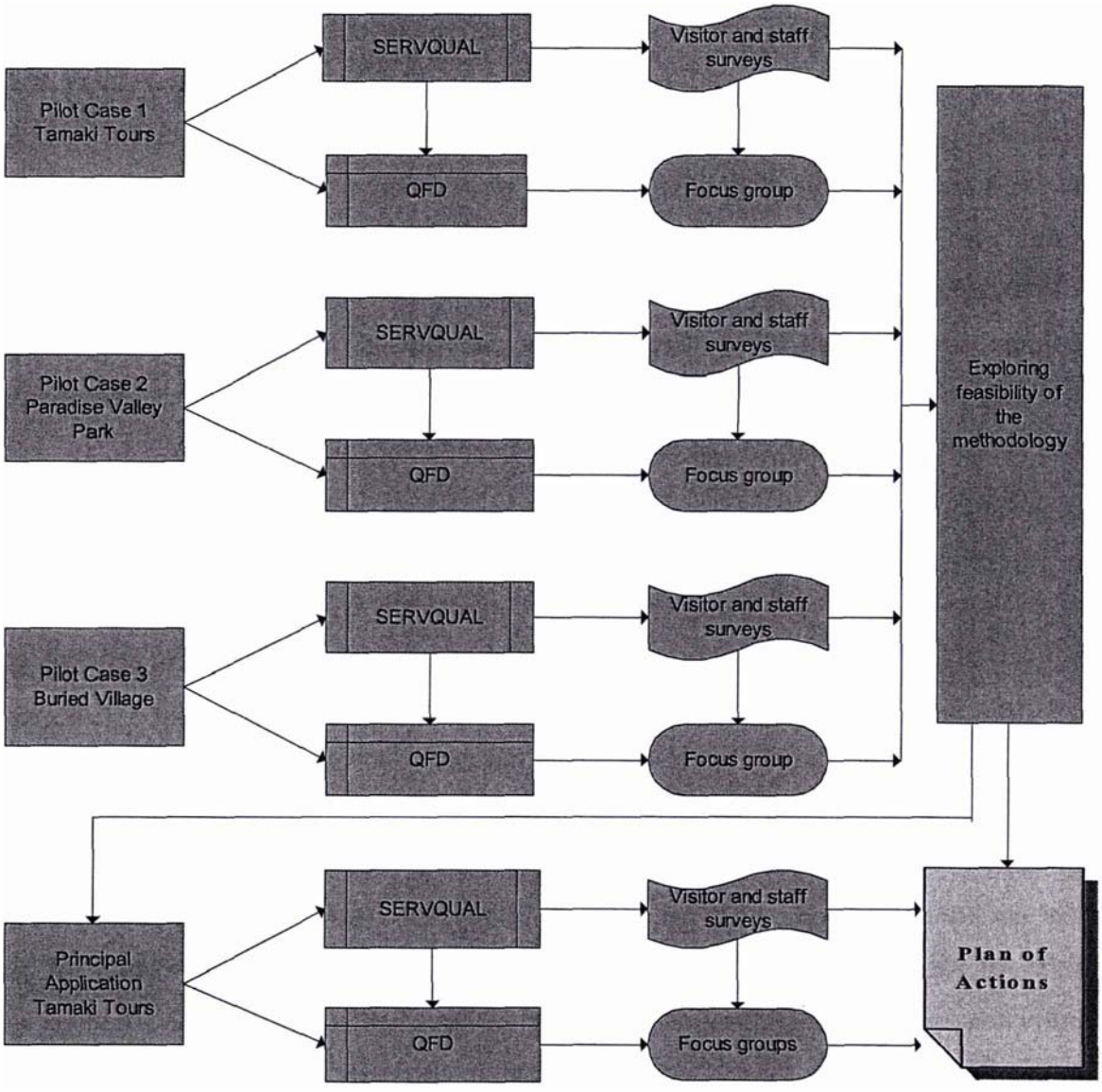

Figure 3.1 A flowchart showing the original research process

3.3.2. The selection of case study participants

Three case studies were selected from the city of Rotorua and its immediate environment. This region is considered as a key and well-established destination, popular with both international and domestic visitors. The Rotorua district is renowned for its tourist attractions including a network of lakes, geothermal activities, Maori cultural attractions and outdoor pursuits. Rotorua has a long historical association with

tourism from the early spa developments that started over a century ago to the contemporary range of attractions (Rotorua District Council, 1994). Due to its well-established reputation, profile and developed infrastructure, Rotorua has experienced continuous growth in tourist arrivals over the past decades. The majority of international visitors to Rotorua are from Australia, Japan, USA, and Western Europe particularly Germany and the United Kingdom and the emerging Asian markets.

The case study companies were selected from the Rotorua District attraction list, which represents the majority of the popular tourist attractions within the immediate tourist region. These organisations are all small to medium sized and have all been New Zealand Tourism Awards winners. They were chosen to help develop answers to the research question and related conditions as set out in the associated research objectives. The selection of these New Zealand Tourism Awards winners and Qualmark registered companies as the target setting was considered as the most appropriate way to gain the supportive response and information required given the project circumstances. This enabled the researcher to select appropriate group of visitor participants to take part in this research project.

The case study methodology adopted a three-step approach. In the first instance, one-to-one semi-structured interviews were conducted with the management teams in each establishment to set up objectives of the project and to develop and fine tune the research instrument – the SERVQUAL questionnaire. The next step involved the application of the SERVQUAL instrument in order to ascertain any actual and perceived gaps between customer expectations and perceptions of the service offered in each attraction. The final step was the trial application of the results of the SERVQUAL questionnaire to the construction of the House of Quality within QFD. The following section provides a contextual background for each case study (see Figure 3.1 and Figure 3.2).

Pilot Case Study 1: Tamaki Tours

Tamaki Maori Village has been a New Zealand Tourism Awards winner and has been a Qualmark certified visitor attraction since July 2002. A survey of management and staff on the "importance of service quality, their perception of visitors' expectations and their knowledge of the availability of quality standards" was conducted in January 1999. 27

out of 34 full-time staff participated in this survey. A visitor survey was carried out in April 1999. Due to flaws in the data collection process, the results of survey were not usable for analysis. Therefore, another visitor and staff survey was conducted in February 2002. Results of these SERVQUAL surveys were analysed in 2003 which have established the foundation for the final implementation of SERVQUAL and QFD methodology at Tamaki Tours in 2005. This experiment in the SERVQUAL instrument has suggested the changes in the research process which is presented in Figure 3.2. Detailed process and results of this case study are discussed in Chapter Four.

Pilot Case Study 2: The Paradise Valley Wildlife Park

Paradise Valley Springs is a wildlife park and a nature-based tourist attraction. The Paradise Valley Park is one of the "five-star" attractions which form a marketing network group of five of Rotorua's top attractions. In 1996, the company won the "Operator of the Year" award from the Inbound Tour Operators' Council of New Zealand. In October 2002, it became a Qualmark endorsed visitor attraction. The case study began with a research proposal which was submitted to the management of the Paradise Valley Park in June 2002. The research methodology and questionnaires were approved by the Massey University Human Ethics Committee (see Appendix D 2). A detailed description of research ethics is presented in 3.3.6. The same instrument and process were also employed for other two pilot cases as well as the principal application. Two management and staff surveys were carried out in August and October 2002, respectively. Altogether 14 out of 20 full-time staff participated in the surveys. Of the two visitor surveys conducted, 110 responses were received out of a sample size of 140 visitors. The results of this case study are presented in Chapter Five.

Pilot Case Study 3: The Buried Village

The Buried Village of Te Wairoa is an historic site, which presents excavations, and displays that tell the story of the volcanic devastation of a village in Rotorua in 1886 by the eruption of the nearby volcano, Mount Tarawera. The attraction won the New Zealand Tourism Award with the theme of Innovation in Culture and Heritage in 2001. The Buried Village became a member of the Rotorua Sustainable Tourism Charter and is at the benchmarking level of Green Globe (http://www.greenglobe21.com). It joined the Qualmark endorsement system in October 2002. A management and staff survey was conducted during the period of September 2002. Altogether eight out of 14 full-

time staff participated in the survey. The two visitor surveys, which were administered over the month of September and December 2002, collected 126 responses out of a sample size of 200 visitors. The data analysis and results of these surveys and pilot QFD application are presented in Chapter Five as one of the complementary case studies.

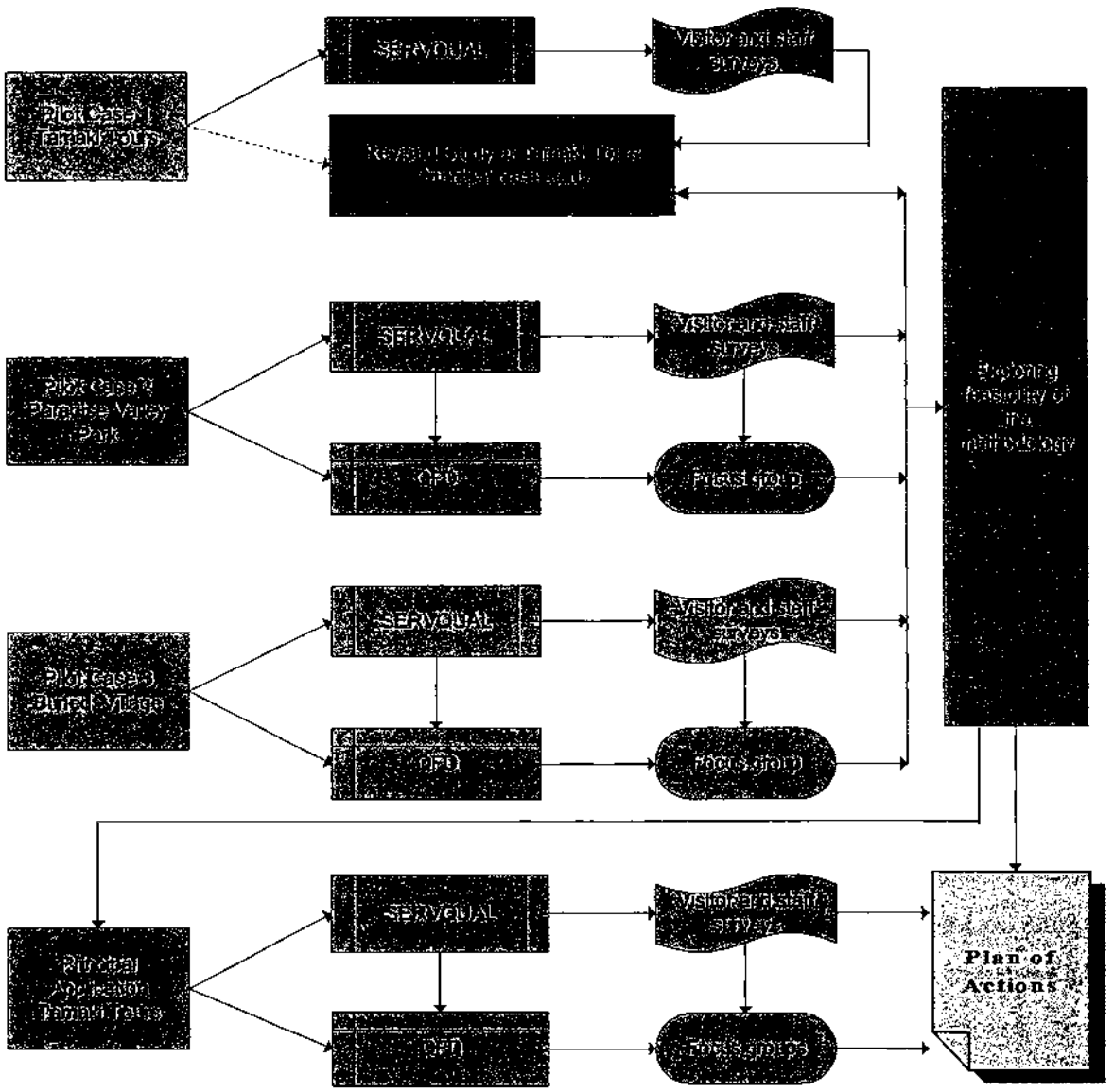

Figure 3.2 The Revised Research Process

3.3.3. SERVQUAL questionnaire surveys

The modified SERVQUAL questionnaires used in this study were generated from a focus group meeting with the management teams of the tourist attractions involved. A modified SERVQUAL questionnaire was designed based on the specific features and

requirements of each of the tourist attractions. The SERVQUAL questionnaire consists of 22 to 23 questions for different cases depending on type of attractions, for example, Tamaki Tours and Paradise Valley Park cases used 23 questions while the Buried Village surveys employed 22 questions. These SERVQUAL questions have covered the five dimensions of service quality (tangibility, reliability, responsiveness, assurance and empathy). Two sets of surveys were conducted in each of the companies involved, with each survey consisting of one company survey for management and staff and one for the visitors. The SERVQUAL questionnaire for the visitors had three sections which included the visitor profile, expectation and perception of quality service and importance ranking of service features, respectively. The staff questionnaire consists of two sections. Part One asks the staff to indicate their assessment of the importance of each of the service features to the visitors and their view of visitors' expectations of the service dimensions. Part Two aims to identify the knowledge of the staff on the company's current service quality performance standards. The visitor surveys were designed to collect information on customer expectations which were later employed as the customer requirement input for the respective House of Quality in QFD implementation in each of the case studies.

3.3.4. Pilot testing and amendment to questionnaires

According to Neuman (2000), all social research requires planning and most researchers undertaking quantitative studies use pilot tests. Pilot testing enables the researcher to determine that the categories provided for questions are valid and reliable measures, the terms are understandable, the question order flows and how long the questionnaire takes, as well as the suitability of the measures for analysis. Pilot studies should be conducted with participants who reflect the characteristics of the sample (Jennings, 2001). Before administrating the survey to the sample population, the modified SERVQUAL questionnaires were tested in January 1999 at Tamaki Tours, one of the three case studies. A selection of 30% of the total sample of 200 visitors was made in an effort to refine the questionnaire and determine the effectiveness of the SERVQUAL tool and its implementation, as well as its analytical capability. The pilot test results show that no major changes were needed in the structure of the questionnaire. However, there were some small instructional and administrative changes that were identified during the pilot testing stage, such as refining the wording of questions and the time needed to complete

the survey. The responses were found to be satisfactory and the revised survey instrument was considered ready to be administrated to the final sample.

The staff questionnaire was also submitted to the management of the company involved for feedback regarding wording, layout, and comprehension of the items. This process helped the researcher to uncover aspects of the questionnaire instrument that needed refinement. For example, feedback was given on the questionnaire regarding the specific features and terms used in that particular setting of the tourist attraction. Adjustments were then made based on the management's recommendations and their comments on the questionnaire.

3.3.5. Population and sampling strategy

According to Mitra and Lankford (1999), it is important to consider the definition of the population that will be represented by sampling through a process of randomisation. This ensures, with a certain degree of probability, that the sample is indeed appropriate and unbiased. The population for this study consists of the visitors to the three tourist attractions and staff members employed within the three companies under study. Sample selection is a very important part of a research and steps were taken to generate a sample that represented the typical visitor population to the three tourist attractions. This is because unless the sample is moderately representative, it is not possible to make predictions about the generation from which the sample is selected (Mitra & Bankford, 1999, p. 168).

Sampling refers to taking a portion of a population or universe as representative of that population or universe (Kerlinger & Lee, 2000). In research, a representative sample means that the sample has approximately the characteristics of the population relevant to the research in question. In the present study, the representative samples are the visitors to the tourist attraction during the data collection period, which will reflect the greater visitor population and their characteristics. The sampling criteria were chosen based on the aim of this study and the sampling technique commonly used in tourism research. The business subjects of this investigation are small to medium sized tourism enterprises. The tourist attractions selected were not only winners of the New Zealand Tourism Awards, but were also typical of cultural/historic, heritage and nature-based

tourist attraction operators. The identification of the case study companies was undertaken using the database of the marketing network of the Rotorua District Tourism Council, which provided the list of the tourist attractions available. This selection will bias the results, but the decision was made because all three of the companies had engaged in and gained experience with the quality assurance journey.

The next stage of sampling focused on the selection of visitor participants to decide the sample size to represent the population of visitors under study. A researcher's decision about the best sample size, as Neuman (2000) pointed out, depends on three principles: (1) the degree of accuracy required, (2) the degree of variability or diversity in the population, and (3) the number of different variables examined simultaneously in data analysis. This indicates that everything else being equal, a large sample is needed if high accuracy is required, if the population has a great deal of variability or many variables are to be analysed at the same time. Smaller samples are sufficient when less accuracy is acceptable, when the population is homogeneous or when only a few variables are examined at a time. A sampling "rule of thumb" which was developed by Neuman (2000, p. 217) was also adopted in the sampling process for the visitor population. For example, for populations under 1000, researchers need to establish a minimum sample of 30% of the available population while for populations over 10000, researchers should sample a minimum of 10% of the population. Therefore, the sample size chosen for each SERVQUAL survey of the pilot case study was a calculated percentage of the average daily visitor numbers to each of the three case study tourist attractions. This sample size determination was also conditional in part on the amount of time available to access the visitor sample as well as conducting the study in each of the tourist attractions.

The sample size in the principal implementation of SERVQUAL survey was 2000 visitors to the tourist attraction based on a projected population size of 12,000 over a period of two months. This sampling strategy was supported by the principle that sample size affects the ability to effect analysis of data on any sub-groups within the total sample. A large sample is needed if sub-groups in the population are to be examined. When determining the sample size needed for a given level of accuracy, a sample confidence interval was calculated as plus or minus two with a confidence level of 95%. According to Venture Data (2005) (an online market research expert), the

confidence interval shows how certain the results can be. It is expressed as a percentage and represents how often the true percentage of the population who would pick an answer lies within the confidence interval. A confidence interval (margin of error) is a range around a specific point. It is used to estimate a population parameter. According to Neuman (1997, p. 211), a range is used because the statistics of random processes do not let the researcher predict an exact point, but the researcher can determine with a high level of confidence e.g. 95% that the true population parameter exists within a certain range. In the strictest sense, this definition is flawed, however, it is a useful construct for the purpose of this research.

3.3.6. Research ethics clearance

According to Saunders *et al.* (2003), ethics in the context of research refers to the appropriateness of the researcher's behaviour in relation to the rights of those who become the subject of the research work, or affected by the results. Ethical concerns must be part of the fundamental design of any research project (Banister *et al.*, 1994). Ethics is an extremely important issue in business research because it affects the rights of individuals and, ultimately, the quality of data obtained from the research process (Davis, 2000, p. 502). This study anticipated ethical issues throughout the period of research design and data collection. The researcher remained sensitive to the impacts of the research on those who provide access and cooperation. To address the main ethical issues in this study, the participants were advised that involvement was voluntary, and all information provided was confidential and they could refuse to answer any of the questions and could leave the study at any time. An Application for Approval of Proposed Teaching/Research Procedures Involving Human Subjects was submitted to the Massey University Human Ethics Committee together with the Information Sheet (see Appendix B 1) and a sample SERVQUAL survey questionnaire during the research design stage. Approval for the study was granted by the Human Ethics Committee with a few minor changes. The research participants were assured that their replies to the survey were to be treated in the strictest confidence.

The managers of all three case study companies were contacted initially for their permission to conduct the research in their establishment. Data collection started after the formal approval was given by the relevant organisations. Following final analysis of

the data, the research findings and conclusions were sent to the company for comment and confirmation. Progressive reports were also provided immediately after the data analysis for each survey as they became available. In the principal case study at Tamaki Tours, a regular reporting system was set up between the operations manager and the researcher to keep track of the progress of this project. The company has subsequently incorporated this experience into a standard operating procedure and is currently using the quality survey documentation and process to carry out the quality improvement programme.

3.3.7. The pilot survey process and implementations

Once the permission of the management from the company under study was given, a focus group was organised to collect views and opinions of the staff regarding the form and content of the questions in the SERVQUAL survey questionnaire. These focus group sessions enabled more detailed gathering of data and thus the interaction between group members has added richness to the research information. The staff focus group began with an introduction to the research project and then the five service dimensions were explained. The staff were asked to add questions on each dimension. These questions were then grouped and prioritized. The information gathered from the focus group was analysed to identify the main components of a quality tourist experience and which were then split into more detailed questions for the SERVQUAL questionnaire.

In 2002, the SERVQUAL surveys were conducted by the researcher at each of the data collection sites. This means that the participants were able to complete the survey with assistance which allowed for clarification of questions and general encouragement to fill in the questionnaire. The researcher invited the visitors to participate and explained the study. This type of survey administration assists with the quality of data collection. By having the researcher available to answer questions, respondents were also given reassurance and assistance that postal surveys cannot provide.

In deciding on what days to survey, considerations were given to the patterns of visitation at a particular tourist attraction across the seasons. For example, similar to other tourism research settings, the numbers of visitors to an attraction was likely to vary with the seasons and with variations within each season or when reflecting the

effect of a significant promotional campaign (Brunt, 1997). In addition, variation in site usage can occur on a daily and weekly basis. For each application of the questionnaires, a number of days were surveyed at each attraction to minimize this effect. In some tourist attractions, there are differences between the number and type of people within and outside the main school holiday period over and above seasonal variation. This is however beyond the control of the researcher.

In terms of the timing of surveys, an awareness of the sorts of variations on different types of day is important. Ideally, the numbers of days selected should reflect these variations. To follow the principles of data collection in tourism research, the numbers of days needed were related to the sample size, length of survey, and characteristics of the site. The pilot surveys were administrated on a randomly selected day of operation for each site due to the time constraints of the researcher. The pilot surveys in the museum and wildlife park adopted the "next-to-pass" technique by which the first person to pass the entry was approached for participation after the completion of the interview. After completion, the next visitor through the entrance was approached and the process repeated until the sample quota was filled (Brunt, 1997). This allowed each visitor an equal chance of being selected in the survey.

3.3.8. The survey in the principal case study

The main visitor surveys conducted in Tamaki Tours took place three days in each week between January and March 2005. The visitors were approached before they entered the attraction and the questionnaires were collected before they left the site. The survey of management and staff was conducted on a voluntary basis at a different time that was convenient for staff members. In the visitor survey, the interviewer asked the respondents to take the second part of survey away and that it was not to be completed until after the visit was concluded. The two parts of the questionnaire were coded to allow matching of participants' responses. The questionnaire surveys were administered every other day of the week. The respondents completed the questions in the presence of the independent interviewer and they could ask questions and comment as they saw fit.

The visitor survey questionnaires were delivered as the visitors entered the tour bus at Tamaki Tours. The expectation section of the questionnaire was completed before the participants had the opportunity of gaining an opinion about the attraction, and the perception section of the questionnaire was completed at the end of the tour to avoid the problems of post experience recording of expectation mentioned in the previous chapter.

3.4 Data Analysis of the Principal and Complementary Studies

The information collected in this research was examined and assessed in order to identify patterns in the data that inform the research question. To achieve this, a variety of techniques were adopted to explore the data. Conclusions were drawn by reasoning and simplifying the complexity in the data. Because each of the tested methods has its strengths and weaknesses, it was essential to choose a method that was compatible with the research goals and context (Gustafsson & Johnson, 2004).

An exploratory data analysis approach was employed in the initial stage of the study to gain insight into the nature and to explore the characteristics of the data collected (Davis, 2000, p. 394). It emphasises the use of diagrams to understand the data by looking at individual variables and their components. For example, simple frequency tables and bar charts were used to visualise the trends and distributions in the data that gave insights into further analysis. Descriptive statistics were used to describe the numerical data. Measures of central tendency and variation of distributions were calculated. As Neuman (2000, p. 320) noted, variability in distribution has important implications. The two commonly used measures of variation such as range (the difference between the lowest and highest values for a variable) and standard deviation (the extent to which the data values for a variable are spread around the mean) were calculated. However, although the analysis of standard deviation can help to assess the usefulness of the mean as a typical value for the distribution, the standard deviation was discounted because the data distribution was very skewed. It was believed that if the data values of standard deviation are close to the mean, then the mean is more typical than if they vary widely (Saunders *et al.*, 2003, p. 355).

According to Neuman (2000), comparison is a central process for all data analysis, qualitative or quantitative. Researchers need to compare features of the evidence they

have gathered internally with related evidence. Thus, similarities and differences across cases can be identified. A comparison of means was conducted for the survey results to establish whether there were statistical differences between the two split-half sample groups in relation to responses of visitor expectations.

To reach conclusions and make estimates about the population under study, inferential statistics were used in the data analysis for the principal case study to test the statistical significance of the sample results. Based on the level of measurement and the number and type of samples in the study, tests of statistical significance such as chi-square were applied to determine whether a relationship between expectation and perception variables is a chance event or condition peculiar to the sample, as opposed to being a probable occurrence in the population as a whole and from which the sample is drawn. (Neuman, 2000, p. 338).

3.4.1. The gap analysis

The results obtained from the visitor and staff surveys were first analysed for each of the case studies using the SERVQUAL gap analysis method. The information was taken from the mean scores of the total usable responses. A number of respondents proactively entered comments on their questionnaires which enriched the interpretation of the findings. Comparisons were made between the results of different surveys to see the trends in visitor expectations and perceptions and to test the validity of the research methodology. To identify the changes in staff views of customer expectations and what visitors expected at different periods of time, and to establish the variability of the results as a function of time, gap analysis between staff understanding of visitor expectations and actual customer expectations was compared between the management and visitor surveys. A comparison of the gaps between the staff view of the importance of service quality and staff understanding of customer expectation was also made based on the results of different staff surveys to recognise the changes in staff views of customer satisfaction and quality service improvement over time. Univariate graphs such as bar charts were used to investigate the distribution of responses for these variables.

3.4.2. Comparison of weighted gap analysis

A weighted gap analysis was conducted to determine the degree of importance of a particular service quality gap as measured by visitors and the staff. This method offers the advantage that a relatively large gap may be identified in an area of low importance. On the other hand, a smaller gap in a service area that was rated as high in visitor importance requires closer attention by management. The weighted quality gaps were the calculation of the difference between expectation and perception scores, multiplied by the average visitor importance score for each SERVQUAL question. The weighted gap analysis method was used in the two complementary case studies (see Chapter Five for details).

3.4.3. Comparison of respondent demographics

One of the important elements of customer surveys is to identify the demographic segmentation for the tourist attraction, which divides the market into groups based on demographic variables such as age, gender, occupation, education and nationality. This is because consumer needs and wants may often vary closely with demographic variables and therefore demographic characteristics must be known in order to assess the size and character of the target markets and to reach them efficiently (Kotler, 1999, p. 243). Demographic information of visitors can also help the tour operators to determine what types of people are travelling to a particular attraction.

Research conducted in tourism suggests that differences in culture and nationality would be expected to have an impact on attitudes and perceptions (Pawitra &Tan, 2003). Sultan and Simpson (2000) also argue that differences may exist in consumer perceptions and expectations, based on nationality and studies done by Choi and Chu (2000) have identified differences in the needs of Western and Asian travellers as far as hotel service attributes are concerned. In this study, comparisons of demographic characteristics were made to see the possible changes for the visitor surveys conducted between different months of the year. Further, cross-tabulation was calculated to test the association between levels of visitor expectations and perceptions by respondents' gender, educational background and ethnic groups to identify the possible external factors influencing the level of customer satisfaction.

3.5 Statistical Testing

The reliability and validity of the measures used in a study partly reflect the level of confidence a researcher can have in the results yielded by the research method adopted. According to Page and Meyer (2000, p. 84), in scientific and academic research, reliability and validity relate to the rigour of the methods used in the present study and determine whether the results can be generalised to the total population. The reliability of SERVQUAL survey results was tested as described in the following sections.

3.5.1. Reliability of SERVQUAL survey results

Reliability refers to the consistency and stability of a score from a measurement scale. For a scale to be valid, it must be reliable (Davis, 2000, p. 182). In the two complementary case studies carried out in Paradise Valley Park and the Buried Village, the internal consistency method of testing is used to assess the homogeneity of a set of items. The specific technique applied was to split the data set in half and then comparing the results of the scores in the first half with those in the second half. A split-half method involves dividing the results of the same measurement into two groups usually by a random process, and determines whether both halves give the same or similar results (Neuman, 1997). For example, the total responses from a survey were divided into two parts. The average expectation, perception and gaps between the two variables were then calculated for each question in each split group. The range of the split data was obtained after calculating the highest and lowest value for each question. The average weighted gaps of visitor expectation and perception for a survey were calculated and then compared with the other half. If the results of the two halves are similar with small differences then the data can reasonably considered as reliable. Given the large sample size in the principal surveys conducted in Tamaki Tours in 2005, inferential statistical analysis was undertaken to examine the hypothesis that there was no difference in the responses between each categories of the subgroups related to responses in customer expectation and perception.

3.5.2. Comparison of gap analysis by demographic groups

To identify possible causes of any apparent inconsistency identified in the split sample analysis, the data for the pilot case studies was analysed using a cross-comparison by demographic groups. The total responses were divided into different categories

according to the demographic groups of each visitor survey. The average expectation and perception scores were then calculated and compared with the other categories. The results also can indicate if there is a relationship between the level of satisfaction and different market segments due to respondents' particular demographic groupings. However, care was needed with the smaller sample size in each demographic group and more variability in the groups was expected.

3.5.3. Chi-square test for the differences among proportions in groups

One of the concerns with using the SERVQUAL information was how consistent the data can be on a long term basis. For this reason a series of "reliability" tests were undertaken to identify the possible causes of variation and to make sure that the appropriate data was generated to feed into a QFD House of Quality framework for the development of an improvement programme. Carrying out this analysis using only one survey demonstrated the technique rather than proving the consistency.

The chi-squared test of a contingency table was used to determine if there is enough evidence to infer that two nominal variables are related and to infer that differences exist among two or more populations of nominal variables such as gender and level of expectation and perception (Keller, 2001, p. 472). According to Finn *et al.* (2000, p. 226), the chi-square test is a much used and highly flexible non-parametric test in which the data can be applied to one-sample, two-sample and multi-sample situations. Data in the chi-square test must be in the form of frequencies. Chi-square analyses are more likely to be found in survey work where measures are compared across demographic variables. This test was conducted by comparing the actual and expected values if the data were unaffected by the variables. The chi-square calculation generates a measure of the variation from the set of "expected values". If the variation is great enough given the number of cases and the number of possibilities implied by the number of cells, then it is unlikely that it is a random outcome. Therefore, it can be concluded that the two variables influence one another in some manner (Yates, 2004, p. 100).

The final survey results in the principal case study were chi-square tested to investigate whether there is a relationship between participants' demographic background and their expectation and perception of the attraction. The null hypothesis was that there was no

significant association between visitor's gender, educational background, ethnic groups, drivers and the size (+ or -) of the gap between expectation and perception. The chi-square test compared the observed with expected frequencies for each question of the SERVQUAL questionnaire. The chi-square value means nothing on its own and can be meaningfully interpreted only in relation to its associated level of statistical significance – the *P*-value. In the SERVQUAL expectation and perception analysis, the probability level was $P < 0.05$.

Whether a chi-square value achieves statistical significance depends not only on its magnitude but also on the number of categories of the two variables being analysed, i.e. the degrees of freedom associated with the contingency table. The number of degrees of freedom (df) is calculated by the formula: Number of degree of freedom = (number of columns – 1) * (number of rows – 1). The chi-square value is therefore affected by the size of the contingency table (Bryman & Bell, 2003, p. 253). For the distribution of the test statistic to be adequately approximated by the chi-squared distribution, the conventional rule known as the "Rule of Five" normally requires that the expected frequency for each cell be at least 5 (Keller, 2001, p. 470). For example, cells with less than 5 frequencies were combined with other expected frequencies to satisfy this condition. This rule is somewhat conservative. Therefore, it was suggested that in dealing with two*C contingency tables, the expected frequencies must be at least 1 (Levine *et al.*, 2001, p. 144). To accomplish this, it was considered necessary to merge two or more of the low frequency categories into one category in the table prior to performing the chi-square test. This collapsing of categories results in expected frequencies sufficiently large to conduct the test accurately. The chi-square test is an example of a simple non-parametric technique when data are at nominal and ordinal levels and the data distributions were skewed (Adams & Schvaneveldt, 1991, p. 355).

3.6 The Linkage of SERVQUAL Results to the Simplified Model of House of Quality

The initial research work had shown that SERVQUAL could be adapted and simplified for the measurement of customer satisfaction in small service firms in the tourism industry. The logical next step was to provide a process or tool to focus on the areas where customer satisfaction could be improved and develop a plan of action. QFD was

considered as the appropriate tool. In its pure form, QFD was considered as too complex to be applied to small firms, therefore a simplified version needed to be developed and linked to the SERVQUAL data.

As described in Chapter Two, QFD is a systematic matrix-based visual tool for designing quality products and services. However, the aim of this project was to employ a simplified House of Quality that would provide management with the critical areas of the operation that need modification in order to improve customer satisfaction. From the results of the QFD process, a management operation plan could be developed.

The primary planning chart in traditional QFD is the House of Quality that translates the voice of customers into design requirements to meet specific target values and prioritises the actions needed to meet these requirements (Besterfield *et al.*, 2003, p. 322). Traditionally, the House of Quality provides marketing with an important tool to understand customer needs and gives top management strategic direction. However, it is only the first step in the QFD process. The voice of customers must be carried throughout the process. This is achieved in the more complex implementations of QFD by using three other 'houses of quality' to deploy the customer requirements to component parts characteristics, process planning, and production planning. The concept of QFD works in each of these stages to link the process back to the voice of customers. The second house is similar to the first house but applies to subsystems and components. The technical requirements from the first house are related to detailed requirements of subsystems and components (Evans & Lindsay, 1999, p. 414). The four houses of quality are displayed as in Figure 3.3.

The QFD matrix (House of Quality) is the basis for all future matrices needed for the QFD method. Although each house of quality contains a large amount of information, it is still necessary to refine the technical requirements further until an actional level of detail is achieved. The process is completed by creating a new chart in which the technical requirements of previous chart become the customer requirements of the new chart (Bestfield *et al.*, 2003, p. 342). In this research, only the first stage of QFD was adopted which used customer expectations obtained from SERVQUAL surveys to drive improvement areas in the tourism industry because in small businesses the complexity

of the service delivery system does not normally require significant subsystems or components that in themselves require the matrix analysis.

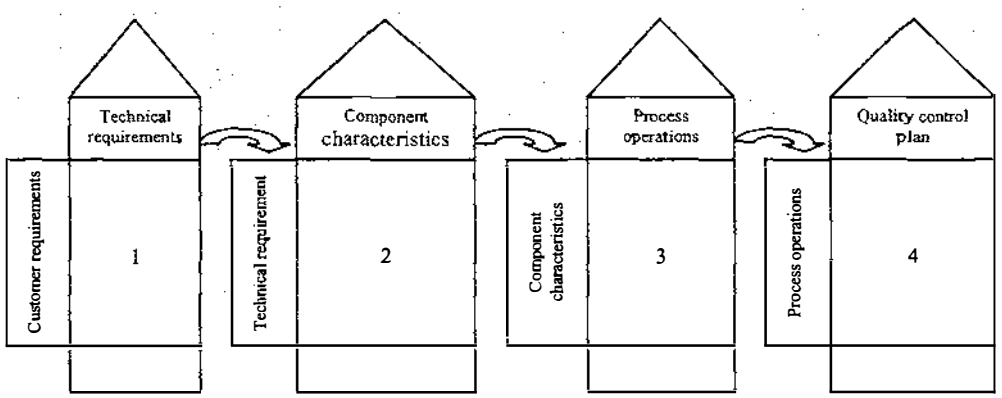

Figure 3.3 The Four Houses of Quality

Source: Evans & Lindsay (1999, p. 414)

While SERVQUAL measures both customer expectations and perceptions, QFD translates these results and measurements into corresponding tasks for quality improvement by putting the customer desires into operational terms and the strategic planning process of the business. The two techniques can be integrated and linked to provide better analysis of the current level of customer satisfaction or dissatisfaction and to enhance a company's quality improvement programme. The effective linkage of SERVQUAL and QFD is reflected in the following sections.

3.6.1. The identification of customer requirements

The three fundamental objectives of QFD are identifying the customer, identifying what the customer wants, and how to fulfil those wants. The first task for a QFD implementation is to identify customer needs, which are descriptions preferably in the customer's own words of the benefits they want the product or service to provide. It should be remembered that QFD was developed for complex product manufacture where customer needs are difficult to determine in that, until a product is produced the potential customer may not be able to visualize exactly what the product will do and hence what their "needs" are. Traditionally, customer requirements in QFD are obtained through marketing and market research activities (Oakland, 2003). This research used the expectation items of service quality dimensions as the input for the House of Quality.

The SERVQUAL survey questions cover the five dimensions of the tourist attraction, therefore, the expectations of visitors were used as the primary customer requirements in QFD. The items on the SERVQUAL questionnaires were structured and the expectations were converted to customer requirements and listed in Room 1 of the House of Quality (see Figure 3.5).

3.6.2. The identification of customers' relative importance ranking of service features

Customer requirements in the House of Quality are weighted for importance. Conventional QFD involves using a questionnaire and evaluating the responses or simply the QFD team or sometimes focus groups rank each customer requirement by assigning a rating. According to Bestfield *et al.* (2003), assigning ratings to customer requirements was found difficult because each member of the QFD team might believe different requirements should be ranked higher. The importance ratings represent the degree of importance of each customer need in terms of each other. The importance of weighting communicated by the customers was part of the 'voice of customers' which is central to the QFD model.

In this research, the customer-weighted importance was obtained using the results of customer expectations in line with the SERVQUAL survey items. The visitors were asked to indicate how relatively important each facility and service is as compared with the others in terms of its contribution to their satisfaction with their experience of the tourist attraction. These importance values were used to transform the SERVQUAL results to fit into the House of Quality. The steps involved in the linking of the two quality improvement methods are:

(1). Customer expectation items in SERVQUAL are converted into the customer requirements in QFD.

(2). Customer importance rating scores of service features identified in SERVQUAL are used in QFD as the importance ranking of customer needs. Thus the results of SERVQUAL surveys can be input into the QFD structure and used for the identification of key areas of quality improvement for the company. The process of the SERVQUAL and QFD methodology employed in this research and the linkage between them is shown in Figure 3.4. It describes the simplified structure for both the SERVQUAL and House of Quality models. The information obtained from the SERVQUAL surveys of

the two selected gaps was transformed into the six selected rooms in the House of Quality through staff focus group discussions.

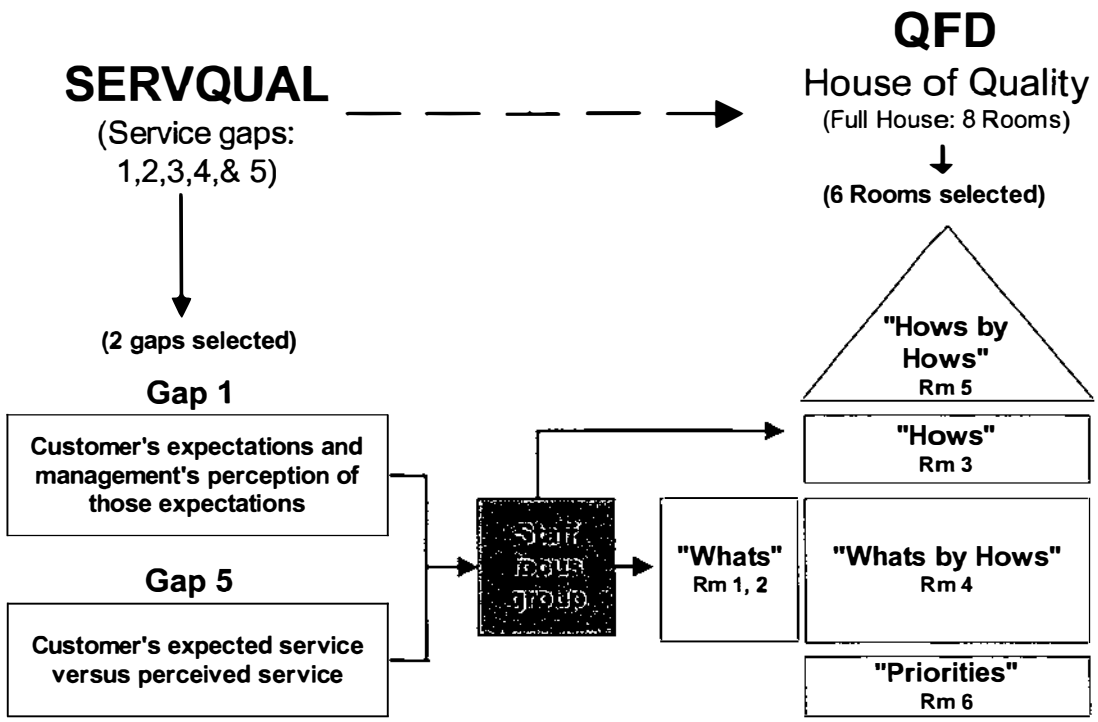

Figure 3.4 The linkage between modified SERVQUAL and QFD

3.6.3. The preparation of a simplified House of Quality

The QFD application process in the three case studies began by establishing a QFD project team which completed the tasks with the management and staff representing the major functional areas of the tourist attraction. The QFD team was trained on the basic structure of the House of Quality and procedures involved in the completion of a QFD matrix. The QFD software produced by the Ohio's International Techne Group Inc. was used to help the team analyse the data to understand the information contained in the House of Quality. The software automated the collection and prioritisation of the QFD data and generated the QFD matrix. Monthly meetings of the QFD team ensured that all team members were able to participate in the design, implementation and interpretation of the House of Quality.

The House of Quality matrix was simplified for easy implementation by small tourist operators in this study. For example, competitive information was not included in this

research because of the difficulties involved in getting the competitors' information and as many of the tourist attractions studied relied on uniqueness rather than direct competition. Therefore, a modified House of Quality for tourist attraction operators is composed of the following rooms as displayed in Figure 3.5.

Based on the preliminary SERVQUAL survey results, management and staff representatives from each case study company compared the positive and negative gaps of their performance and identified what the customers' real needs were. The results were used to construct a House of Quality for each company through the following process:

Step 1: List a set of customer requirements (WHATs) by using the modified SERVQUAL survey questions.

The SERVQUAL five dimensions are considered as representative of the general service areas covering customer requirements at the tourist attractions. For example, customers expect "sufficient information about an attraction", "prompt service", "easy access for special needs", and "clean and convenient toilets" etc. These expectations are the basic requirements to fulfil their quality tourist experience. These items of customer requirements were assigned to the rows in Room 1 of the House of Quality matrix.

Customers want all their requirements fulfilled in the tourist experience. However, some requirements are more important than others are. Prioritising helps the QFD team balance the cost of satisfying a need with the benefit to the customers (Hauser, 1993). This means if fulfilling two needs is equally costly, then the need that is more important to customers should have higher priority. In this study, the priorities of quality improvement activities were determined through analysing the SERVQUAL visitor survey results.

Step 2: List the importance rating of customer requirements

The ranking of customer needs was obtained by asking each SERVQUAL survey participant to identify the relative importance of the expectation items on the questionnaire using a rating scale of 1 to 5, with 1 representing little importance and 5 the most importance. The QFD team compared the visitor importance ratings from different surveys and the average scores were used as the Importance rating of customer

requirements in the House of Quality matrix. These rating scores were displayed in a column in Room 2. Hence, the results of SERVQUAL surveys have been linked to the application of QFD as part of a tour operator's quality improvement system.

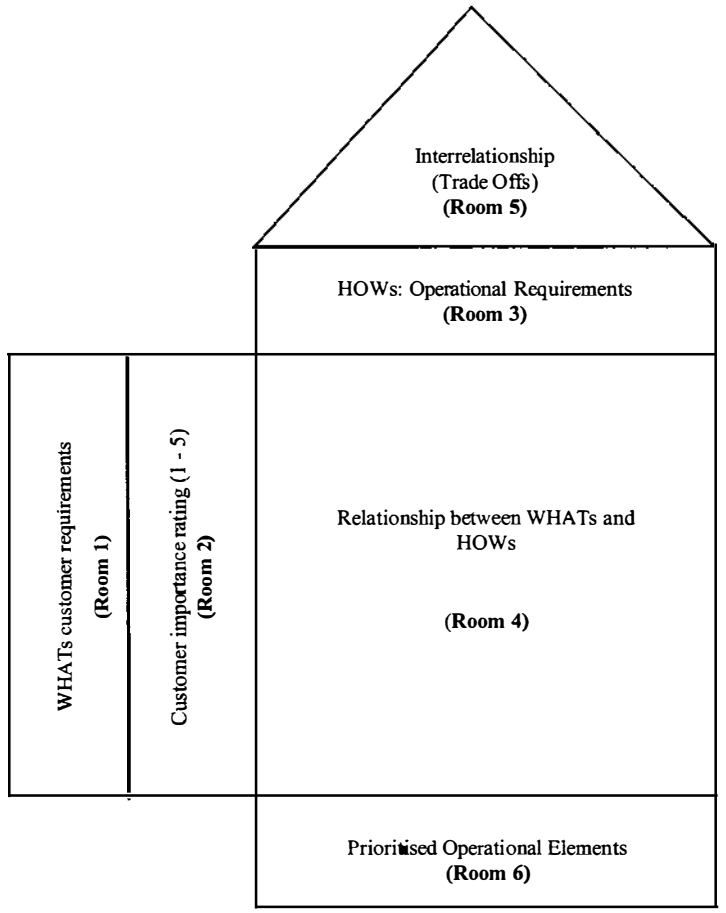

Figure 3.5 Elements in the modified House of Quality

Step 3: List the operational requirements (HOWs)

The HOWs are a set of product specifications and quality features that satisfy the WHATs. In traditional QFD applications, the technical requirements are a set of product attributes and features that fulfil the customer requirements (WHATs). In the service industry, the technical requirements are the operational elements. The operational requirements (the means of satisfying the customer needs) were written in the language of the business. The HOWs in this study were obtained through the management and staff focus group discussions in which the QFD team analysed what operational criteria can be manipulated to satisfy customer requirements. The operational/technical elements can also be considered as performance indicators. These items of HOWs were assigned to the columns in Room 3 of the House of Quality matrix. The HOWs included

in the tourist attraction cases are the general operational areas and strategies to satisfy the visitor requirements. For example, for the cultural attraction, the operational requirements might be "the Maori village activity", "souvenir collection", "location and symbol of signs", "costumes and props" and "staff skills" etc. All customer requirements should be related to at least one operational requirement, sometimes three or four HOWs are needed to fulfil one customer requirement.

Step 4: Establish relationships between the WHATs and HOWs

The relationship matrix in the House of Quality is where the QFD team determines the relationship between customer needs and the company's ability to meet those needs and also finds out what the strength of the relationship between the WHATs and the HOWs might be. The QFD team matched the customer requirements and operational requirements in Room 4 of the House of Quality. Each customer requirement item was assessed against each operational requirement to see which two were related to satisfy one customer needs item. There can be a strong, moderate, weak or no relationship between the WHATs and HOWs. For example, there was a strong relationship between the customer requirement of "good presentation of food" and the operational requirement of "buffet set up". There was no relationship between the customer need such as "authentic and entertaining experience" and the operational element of "booking system". However, there was a moderate relationship between a customer need of "sufficient information about the attraction" and the operational feature of "marketing brochures" and "office environment and decoration". Three symbols were used to show the relationship between WHAT and HOW entries. A solid circle (●) implies a strong relationship with a weighted value of 9, an open circle (○) stands for a moderate relationship with a value of 3, and a triangle (Δ) means a weak relationship with a value of 1. The cell is left blank if no relationship exists (Besterfield *et al.,* 2003, p. 329). These weights were also used in determining trade-offs situations (Room 5) for conflicting service characteristics and operational features and to calculate an absolute weight at the bottom of the House of Quality matrix (Room 6).

Step 5: Define tradeoffs between operational requirements (the Roof of the House of Quality)

The interrelationships between the HOWs were displayed in a triangular table attached to the operational requirements. It was defined by pair-wise combinations for each

operational requirement. It was created in a cell location in Room 5 by inserting a symbol which described the strength of the positive (+) or negative (-) interrelationship. The purpose of developing the correlation of the HOWs was to determine what impact the implementation of each of the HOWs would have on each of the other HOWs. This is important to properly set improvement targets for product and service features. If the implementation of one HOW would negatively affect the ability to implement another HOW, then there will be a "trade-off" decision to be made, given the financial and marketing situations of the company. For instance, in the heritage tourist attraction case, the implementation of "maintenance of walkway and playground" will support the improvement of "village activities", therefore, there was a positive interrelationship between the two operational elements. However, the interrelationship between the structure of "village activity" and "length of tour" was found in conflict. This is because the improved "village activity" would ultimately influence the "length of tour" changes. A trade-off has to be made here to prevent the result of conflicting customer requirements, increased costs, and poorer quality (Besterfield *et al.*, 2003).

Step 6: Prioritise the operational requirements for improvement purpose

The final step of building a House of Quality is the identification of the priority of quality improvement actions with the input of customers and the company. The prioritised operational requirements make up the rows corresponding to each operational requirement in Room 3 of the House of Quality matrix. The QFD team calculates the Importance of HOWs by multiplying the Importance rating of the WHATs by the relationship values and then summing down each column. The result is the translation of priorities of the WHATs into priorities of the HOWs. The calculation of absolute values helps to identify which of the prioritised areas of improvement should be the main action items for service quality improvement. For instance, the most important operational requirement for the heritage attraction was "training of staff", which has the absolute value of 81. The least importance operational requirement was "safety and accessibility of the waterfall", which has the lowest absolute value of 9. By completing the House of Quality matrix, the QFD team was able to make a final list of operational features and services that need to be improved with resources available.

3.7 The Implementation of Quality Management Action Plans in Tamaki Tours

Based on the conclusions made from the pilot case studies, one of the three companies – Tamaki Tours was selected as the participant for the overall QFD application to test the research methodology. The design of the House of Quality started after the two-month visitor surveys were completed in 2005. The results of SERVQUAL surveys were statistically tested and used as the input into the building of the House of Quality. After the completion of the House of Quality through the staff focus group meeting sessions, the results were reported to the Tamaki Tours management. Based on the SERVQUAL survey results and the House of Quality outcomes, an action plan for quality improvement was developed. The programme of action that emerged from this was focused on the following operational strategies:

1). Building new toilets

2). Setting up a staff training programme

3). Designing a marketing brochure and updating the webpage

4). Renovation of village settings including the seating and lighting of the concert hall

5). Refinement of the tour hour in the village

6). Implementing a new visitor survey to be carried out in six-monthly intervals to ensure the effectiveness of the quality improvement programme.

After the QFD application process, the operations manager was interviewed to review the results of the quality improvement programme. The feedback on the QFD implementation was summarised as a good practice in general with the following benefits identified.

1). QFD has promoted better understanding of customer demands. It allows organisation and prioritizing of customer requirements.

2). QFD fostered teamwork which breaks down barriers between departments. The outcome of the QFD programme indicates that the functional department manager should empower the staff member assigned to the QFD team to represent their department's interests. Empowerment and self-direction lead to greater motivation and ownership.

3). QFD has enhanced communication within the organisation and shown top

management commitment in providing human and financial resources. The general manager and top management team participated in the QFD team meetings and support was given to those members who needed time off from their routine work.

3.8 Limitations of the Research Strategy

In designing the study, efforts were made to minimise its limitations. However, as it was the first time that research was conducted into the combination of two quality management instruments, there were issues in the area of research process and implementation. The following subsections describe the issues with the application of the two major quality improvement programmes throughout the research process in general.

3.8.1. Limitations with the pilot applications of SERVQUAL in tourist attractions

The limitations with the SERVQUAL surveys in this research related to primarily two issues. First, the sample data in two complementary case studies was collected over a relatively short period of time due to time constraints and the accessibility to the attractions. The sampling strategy and sample size selected in the pilot surveys also restricted the types of data analysis techniques which were applied. Thus, the sample may not be representative of the whole population of those visiting similar tourist attractions in New Zealand over the year. However, lessons were learned from the trials of the methodology. The two surveys were conducted at similar seasons and there could be a bias to the particular visitor group attending the attractions at this particular time of the year.

The data collection process in the Tamaki Tours pilot case study was lacking of quality assurance. The visitor expectation and perception questions were completed after the tour. Because of this deficiency identified, the responses were not valid for analysis. Therefore, the research design and timeline of data collection for Tamaki Tours were revised as shown in Figure 3.2. Based on the experiences and lessons learned from the pilot study and the two complementary studies, the final implementation of SERVQUAL in Tamaki Tours in 2005 targeted a large sample and the surveys covered a longer period of two months. Random sampling was used to obtain sufficient

responses to represent the population from which the sample was taken. For example, in the principal case study conducted at Tamaki Tours, the overall daily visitor bookings for a night show was checked according to the customers" country of origin before 30% of the participants were selected and arranged to sit on the two buses to be surveyed.

Secondly, the study has evaluated only two of the SERVQUAL gaps due to limited information available from the case companies and the purpose of the study. The first gap measured the difference between the importance the management and staff of the company placed on the service dimensions and the importance given by the visitors. The second gap measured the difference between visitors' expectation of service quality provided by the company and their perception of the service they actually received. The gaps that were excluded were Gap 2 - Management's Perception versus Service Quality Specifications Gap, Gap 3 - Service Quality Specifications versus Service Quality Delivery, and Gap 4 - Service Delivery versus External Communication. The decision to use two gaps in the SERVQUAL survey was mainly based on the nature of this project, which focused on the collection of customer expectations to be used in the House of Quality instead of looking at other service quality gaps as suggested by the original SERVQUAL instrument.

3.8.2. Limitations of the application of QFD

The House of Quality in the QFD application was found to be rather complicated for the staff team due to a lack of prior training in the methodology. Some of the calculations in the House of Quality matrix were subjective depending on the personal understanding of the QFD team members. It was recommended at the end of programme that the SERVQUAL and QFD methods will be further explained in the staff training meetings in Tamaki Tours to ensure that staff in the whole organisation are familiar with the quality measurement and improvement tool.

This research used one House of Quality matrix only to identify operational requirements as compared with customer expectations. No comparison was made with competitors. The competitor benchmarking sections were omitted in this research due to the nature of the research that was designed only for small tourist attractions to make adjustments to the customer requirements without taking into account their relative

position with regard to their competitors. It was found difficult to ask the visitors to compare their experience in similar attractions they had been to in Rotorua. According to Ferrell and Ferrell (1994), if a business is in a market with keen competition, or if the business has already begun modification based on customer feedback, early inclusion of the competitive position will be more important in the QFD application. This is because realistic assessment of both the competition and the company's own capacity is important in the long term. However, the situation is somewhat different in the tourist attractions in New Zealand in that each tends to be unique, particularly within one tourist area such as Rotorua. Thus, the general aim is to provide a range of experiences for the tourist with the differentiation being through different features of each attraction. The customers then choose which attraction best suits their interests. The popularity of a particular tour is often based on reports of the quality of the experience rather than because one attraction is better than another in providing the same type of experience.

In this research, the average scores of the customer assessment of importance values were used as the input for the customer requirements ranking together with the staff focus group decisions. Therefore, the Relationship weight scores can be subjective as each different round of discussion led to varying results. Consequently, the House of Quality matrix could create different prioritised improvement areas for each application. Another challenge for the building of House of Quality is that it is time-consuming to complete the Relationship matrix and the items in the Tradeoffs room. The whole quality improvement programme takes time and planning among management and staff members which could be a challenge for busy tour operators. This is also commonly recognised by other QFD practitioners in the literature.

3.9 Chapter Summary

This chapter has described and illustrated the methodological framework and major processes through which the research was implemented using integrated SERVQUAL and QFD quality management techniques. Strategies of population and sample selection were discussed in accordance with the support of relevant literature. The standard model of the SERVQUAL instrument is modified for each particular case study setting. Data collection and data analysis techniques adopted were discussed to explain the reasons for different approaches undertaken for the pilot and the final survey results for the

principal case study, respectively. The analyses carried out have shown that the research processes are generalisable to similar types of tourist attractions. Points of difference between traditional concepts of QFD and this study are also noted in the following chapters, which demonstrate the particular methodologies utilised in this research in three New Zealand tourist attractions.

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CHAPTER 4

THE APPLICATION OF QUALITY IMPROVEMENT PROGRAMME IN TAMAKI TOURS – THE PRINCIPAL CASE STUDY

4.1 Introduction

The principal case study undertaken in this project was a cultural tourist attraction - Tamaki Tours. It is located 15 minutes drive south of Rotorua. The results of international visitor surveys in New Zealand show that the most frequently mentioned activity that respondents were interested to experience was a visit to a Maori dance or concert performance. Most of these experiences gained were in Rotorua, which is notable for its association with Maori history (McIntosh, 2003). Maori culture was perceived as one of the unique aspects of New Zealand's tourist attractions (Ryan, 2002). Rotorua was chosen for the cultural tourism case study because the city has a long history of Maori settlement and its active Maori culture has attracted visitors from all over the world to enjoy a range of cultural exhibitions and performances. Maori have had a long period of exposure, both as a cultural product, as well as a key provider group delivering their own indigenous perspective on themselves and on their environment.

Cultural tourism potentially includes all movements of people that may stimulate as well as satisfy the human need for cultural diversity, which tends to raise the cultural level of the individual, giving rise to new knowledge, experience and encounters (Collier, 2003, p 194). The common theme of cultural tourism among the different definitions is the emphasis on learning about, experiencing or understanding cultural activities, and resources. The keywords are learning, experiencing and understanding (Douglas, Douglas, & Derrett, 2001). These dimensions of cultural tourism require that tourism operators focus on the content of their products and services as well as the processes through which they are delivered. Learning implies a body of defined knowledge and a means through which the host and the guest may interact – the visitor as student and the guide as teacher. Experiencing refers to the degree and direction of interaction between the participants - ranging from passive to highly interactive and

experiential. Visitors' level of understanding will be developed through an effective and appropriate learning experience.

This chapter first provides background details of the tour attraction which constitutes the case study. It then illustrates the process of using SERVQUAL as an initial tool for measuring the visitors' expectations and perceptions of service quality provided by Tamaki Tours. Based on the pilot application of SERVQUAL and QFD methodology demonstrated in the three companies, an extended implementation of the quality improvement programme was carried out in Tamaki Tours in 2005. The company was selected as the principal case study because of staff size and the willingness of the management to continue to participate in the project as well as their relatively long-term association with the study. A substantial SERVQUAL survey was undertaken in Tamaki Tours between January and March 2005 in order to ensure the information collected was representative of the population from which the sample was taken. The purpose of this chapter is to identify the trends and patterns in the visitor responses regarding their expectation and perception of the tour experience. The results of the visitor surveys are linked and contrasted with a staff survey conducted in March 2005 in order to determine the presence of any service quality gaps. The information obtained was used in the next step in the development of a quality improvement programme, a House of Quality that was implemented within the key operational departments of Tamaki Tours as part of the final phase of the research programme. The formulation and implementation of the House of Quality were achieved using staff focus groups. The process was so organised as to introduce the concept of total quality management strategies to the service culture of the company and to assist management to construct a strategic plan and realisable operational objectives.

This chapter presents the process and results of the full implementation of the SERVQUAL surveys and the House of Quality in QFD. Inferential statistical analysis was employed to test the reliability of the data in terms of customer expectation and perception by demographic variables. Hypothesis testing shows that customer expectation and perception for some service features provided by Tamaki Tours may be in part related to external factors such as gender, ethnic groups and educational levels of the respondents.

4.2 The Company Profile

Tamaki Tours is a family owned and operated business. The directors of the company are two brothers and their wives. The company offers:

- A Tamaki *hangi* and concert that takes place outside the hotel and city environment;
- A *journey back in time* to a host of activities that are performed within the recreated pre-European *Maori village* of Te Tawa Ngahere Pa;
- A visit to a tribal arts and crafts marketplace;
- An overnight *Marae* stay; and
- Cultural education workshops for small groups (in *hangi* preparation, wood carving, performing arts, weaponry and warfare, Maori weaving and Maori foods and medicines).

Tamaki Tours started operation in 1989, with one second-hand bus taking tourists to Rotorua attractions. The company has grown to a business with a $5 million annual turnover, and its own Marae (The Stafford Group, 2001). In 2000, Tamaki Tours employed over 100 people including part time staff, operated nine coaches, and entertained over 140,000 customers at its evening hangi and concerts. The principal product of the personalised tours now features Maori staff in a recreated pre-European Maori village presenting a Maori cultural experience, including a *hangi* feast and concerts (Cameron & Massey, 2002). The new developments include a Tamaki Maori Village and Tribal Marketplace in Christchurch and a health and spa centre, health café and restaurant at the site of the Rotorua Orchid Garden. The SERVQUAL surveys in this study were conducted in the company's main tourist sites in Rotorua.

Since commencing operations, Tamaki Tours has received numerous awards including those listed in Table 4.1 (McIntosh, Smith, & Ingram, 1999). A study into the strategies that have been instrumental to the success of Tamaki Tours in 1998 highlighted the company's emphasis on visitor satisfaction with their experiences. These strategies include providing an authentic, emotional and spiritual experience, whilst being aware of and keeping in mind the needs and wants of visitors from a range of backgrounds (The Stafford Group, 2001, p. 117). Tamaki Tours takes pride in its reputation for credibility and professionalism. Credibility in this instance refers to the legitimacy of

the cultural experience and professionalism to the standards with which it is delivered. One of its business strategies involves maintaining self-enforced standards of excellence, which are reinforced by developing internal quality assessment as well as meeting the requirements of external assessment methods such as the New Zealand Tourism Awards and the Qualmark licensing system. The company was selected as an example from among New Zealand cultural attractions for its implementation of quality measurement and improvement tools by using a combination of the quality assessment methodologies as described in Chapter Three.

Table 4.1 Some awards granted to Tamaki Tours

1992	The Best Rotorua Tourist Industry Business Awards
1996	New Zealand Tourism Best Heritage and Cultural Awards
1997	New Zealand Quality Awards
1998	The British Airways Awards (New Zealand Representative)
1998	Pacific Asia Tourism Awards (New Zealand Representative)
1998	The New Zealand Tourism Award - Best Cultural Experience
1998	The New Zealand Tourism Award - 1998 Supreme Award
1998	The New Zealand Tourism Awards - Maori Tourism Award
1999	The New Zealand Tourism Awards - Maori Tourism Award
1999	The New Zealand Tourism Awards - Distinction for Contribution to New Zealand Tourism

4.3 SERVQUAL Surveys Conducted in Tamaki Tours

The initial contact with Tamaki Tours started in October 1998 when the research proposal was presented to the management team. An official letter of approval was given by the CEO of Tamaki Tours to get the tourist attraction involved in the research as a case study. A modified SERVQUAL questionnaire was generated from a focus group meeting with the management team of Tamaki Tours in November 1998. The aim of the survey was to measure the visitors' expectations and perceptions of service quality provided by the Tamaki Maori Village. The questionnaire consists of 23 questions, which covers the five dimensions of the service quality (see Table 4.2).

Table 4.2 Visitor survey questions relating to Tamaki Tours

Service Dimensions	Service Quality Variable Features, Displays and Services
Tangible	1. The physical appearance of the city booking office
	2. The physical appearance of the Maori village
	3. The physical appearance of the wharekai (the food house)
	4. The information provided about the facility e.g. brochures, advertisements and programme information
Staff (Reliability)	5. The friendliness and courtesy of the staff and their politeness to visitors
	6. The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions
	7. The staff gives prompt service
	8. Staff inspires trust in visitors
Peripheral Service (Responsiveness)	9. Visitors feel comfortable during their visit, e.g. enough seats, heating, lighting, space between the seats
	10. The pricing and range of refreshment in the bar are reasonable
	11. The quality in presentation of the food provided by the wharekai (the food house) is high
	12. The pricing and range of products in the tribal market place are reasonable
	13. Toilets are provided and are clean
Access (Assurance)	14. There is easy access for visitors with wheelchairs, prams and young children
	15. Signs inside and outside the village are adequate
	16. The booking system is prompt
	17. Tour hours are convenient
	18. The waiting time between the activities is reasonable
Core Service (Empathy)	19. The introduction to the Maori culture on the bus is enlightening
	20. The whole experience is enlightening, entertaining and educational
	21. The cultural performance is authentic, informative and understandable
	22. The whole tour is value for money
	23. The content and length of the activities are appropriate

The survey questionnaire for the visitors has two columns which show the visitors' response to expectation of service quality before their visit, and their perception of the service quality after the visit (see Appendix A 1 Tamaki Tours Visitor Questionnaire).

4.3.1 The pilot survey

The pilot survey of management and staff was carried out in January 1999. The first survey of visitors to Tamaki Tours was conducted in April 1999. It was administered on the three tour buses departing to the Tamaki Maori Village. In total 146 customer surveys were collected by the bus drivers. It was considered that the bus was the most appropriate place to conduct the survey as the visitors were approached at the same time without interrupting their tour experience. Due to lack of control of the data collection process, some of the expectation and perception information was completed after the tour experience. This caused a deficiency in the validity of the data. Therefore, the returned survey questionnaires were not used for data analysis. It was decided that a repeat visitor survey should be conducted later with a refined survey design and sampling strategy to ensure the quality of data collection.

The staff survey consists of two sections. In the first part of the questionnaire, staff were asked to indicate their perception of the importance level of features and service to the visitors and their view on the standard of service that was expected by the visitors. The second part of the staff survey aimed at finding out the staff's knowledge of the current status of quality performance standards available in Tamaki Tours (see Appendix A 2 Tamaki Tours Staff Questionnaire).

4.3.2 The principal survey

A formal approval for the final implementation of the quality programme was obtained from the management of Tamaki Tours in early December 2004. Because of the issues in data collection identified in the pilot studies as described in Chapter Three, a further experiment was developed in which a large sample was targeted for the SERVQUAL surveys. As Adams and Schvaneveldt (1991) noted, if the goal is to subdivide the sample into multiple categories in order to relate these to some dependent variables, then sample size must be considerably larger than when dealing with only one or two relationships (p. 183). The visitor survey data was collected by an independent interviewer who was trained and worked with the bus drivers over the two-month survey period. The interviewer was based in Rotorua and had existing primary research experience. To ensure the consistency of the data collection process, the interviewer kept a daily log of survey work that was scrutinised and recorded at the completion of each daily survey cycle. A record was also kept of the progress of each tour group that

was being surveyed in order to monitor any external or logistical conditions that may be considered to unduly influence the sampling and questionnaire administration process. The sample population of visitors was selected based on a proportion of the average number of visitors per night to the Maori Village. A full list of bookings together with visitor nationalities was made available by Tamaki Tours to facilitate the sampling process. The visitors were given full information about the purpose of the research before the SERVQUAL questionnaires were distributed. The visitor expectation component of the surveys was conducted before the tour started and the perception component was undertaken after completing the tour to ensure the accuracy of the respondents' opinions.

The visitor surveys commenced on the 15th of January and finished on the 10th of March 2005. The data was collected during the summer time as this fits the peak to shoulder season for tourists to visit the Maori village. A sample of 2000 visitors to the Maori village were considered to be sufficient based on the company's estimate that around 12,000 visitors would visit the attraction during that period of time as noted in Chapter Three. Every other day in the week, two out of five busloads of visitors were randomly selected each night to participate in the survey. Probability sampling methods were used to give visitors on the two buses an equal chance to participate in the survey. A balance between the profiles of the visitors for the various days of week was established in order to improve the representativeness of the sample. A total of 1832 questionnaires were collected of which 1787 were usable for data analysis. Participants were generally keen to have their opinions solicited for the survey questions.

A staff survey was conducted at the end of March 2005. 30 out of 43 full-time staff participated in the survey, giving a response rate of 70%. Due to time constraints and with management approval, part-time and casual staff were not included in the survey. This also ensured that the staff contribution came from those with the most depth and breadth of experience in working with the company's clientele. The information collected was initially analysed using the SERVQUAL gap model to determine the level of service quality as perceived by the customers and the extent to which the staff understand the expectation of their customers.

4.4 The SERVQUAL Survey Results

The results obtained from both the visitor and staff surveys are discussed in the following subsections using descriptive statistics to show the characteristics of the research sample. A measure of central tendency such as mean scores for each question identified the most common features of the responses. Frequency distribution of customer expectations and perceptions for each SERVQUAL question was analysed before testing the statistical significance of the results.

4.4.1 Visitor profile

Demographic profiles of the visitors were collected to indicate the major market segments that participated in the surveys over the two months. The information was used further in the comparison and analysis of customer expectations and perceptions in relation to respondents' gender, educational level, and country of origin in the hypothesis testing of the statistical significance in the sample results. As shown in Figure 4.1 and Figure 4.2, the majority of visitors surveyed over this season were first time visitors (97%). There were a small number of repeat customers (3%). More than one third of respondents came with their families (39%) or as part of an organised group (31%). Some of them came with friends (23%). Only a small number of respondents came by themselves (7%).

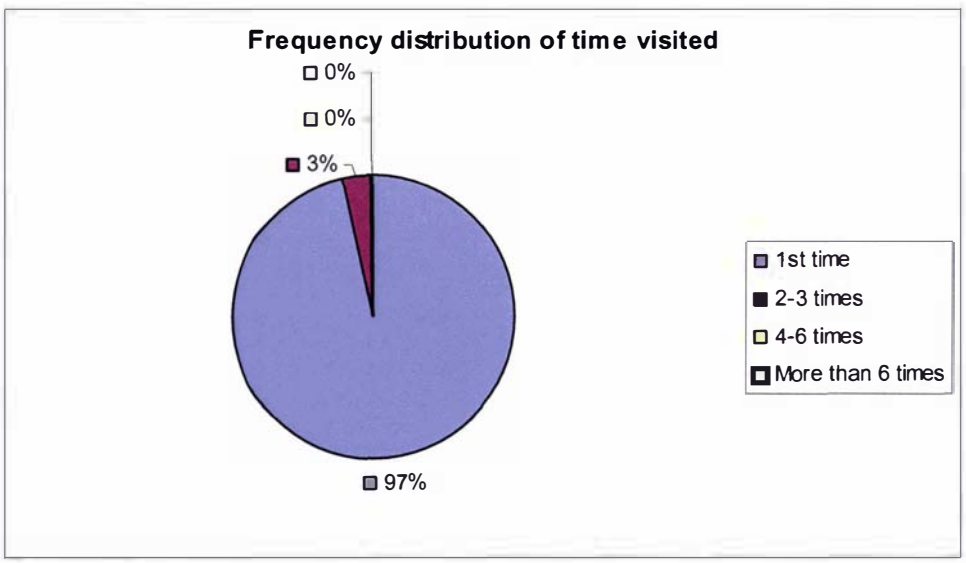

Figure 4.1 Time Visited

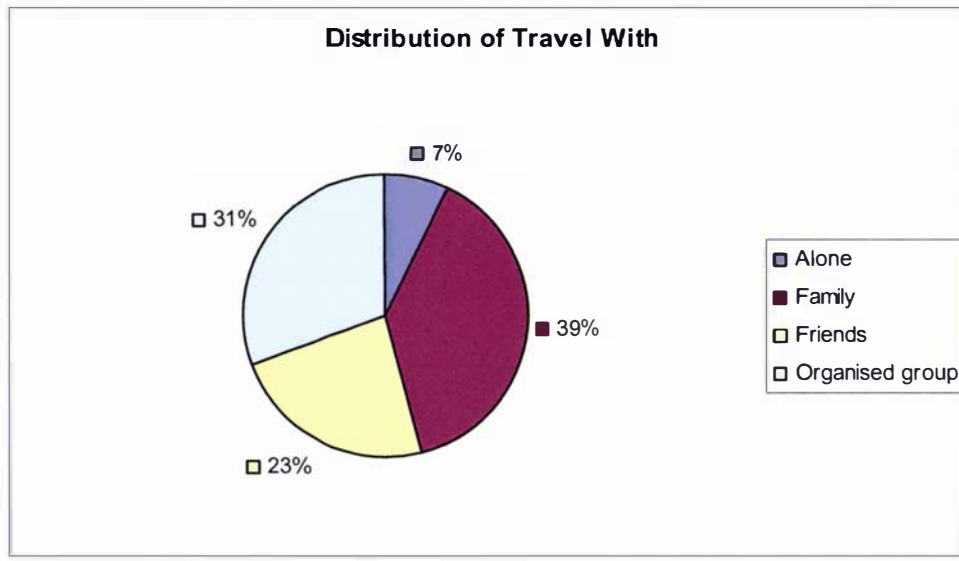

Figure 4.2 Travel with

The main reason for visiting Tamaki Tours was to learn something e.g. the Maori culture (45%). Sightseeing and seeing a particular activity were considered as the second major reason for choosing the Tamaki Village experience. A small number of participants (6%) came to the attraction for something to do, such as accompanying friends or trying the Maori food etc. (see Figure 4.3).

The results show a wide range of distribution in age groups; however, the largest group was visitors who are between 20 to 24 and the over 60 year groups followed by the age group of 25 to 29. As shown in Figure 4.4, less than one-third (28%) of the respondents were professionals. The second largest group was retired people (20%) followed by students (17%). The other occupational classifications such as management, service and sales accounted for less than 10% of the total visitors surveyed. There was also a small number of participants (1%) who are grouped as others, such as a homemaker.

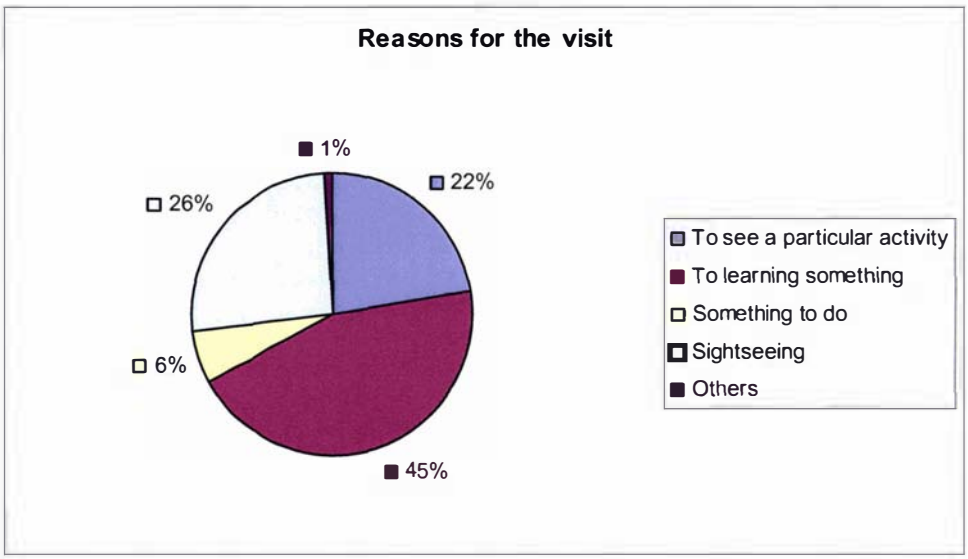

Figure 4.3. Reasons for the visit

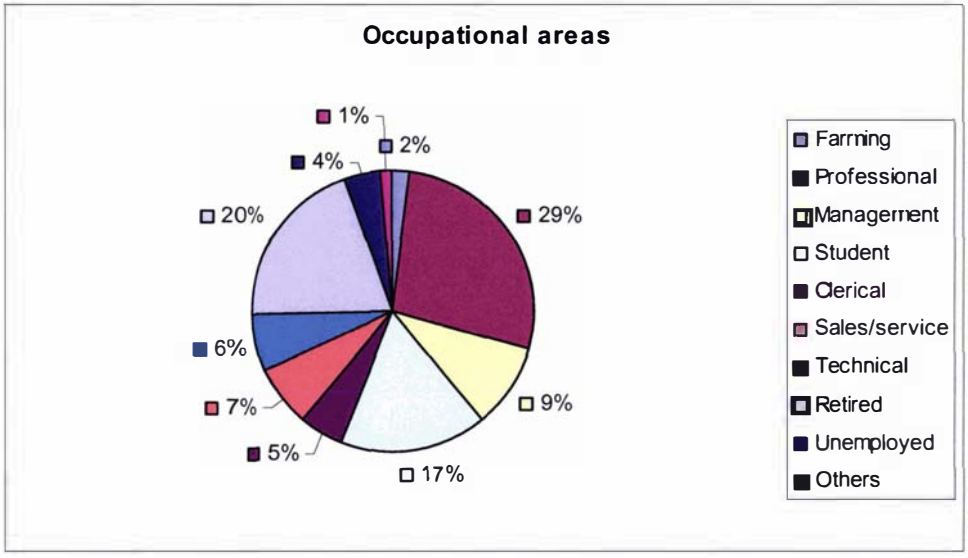

Figure 4.4 Occupational categories

The majority of the respondents had a high educational attainment. For example, more than half of the participants had a tertiary educational qualification (61%), with 25% having secondary school and 13% with polytechnic qualifications. Only a small number of respondents (0.8%) had received a primary level of education only and others (0.2%) had some other forms of education such as training certificates (see Figure 4.5).

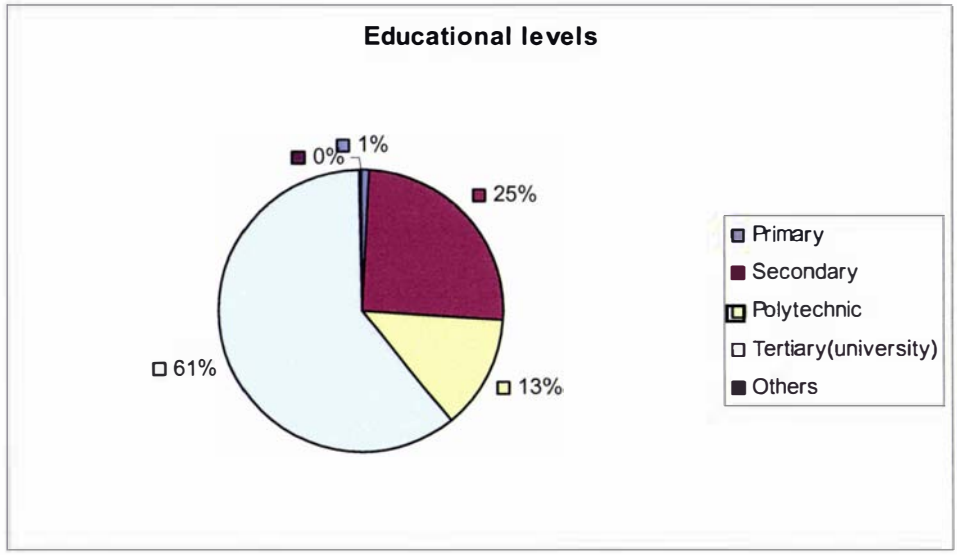

Figure 4.5 Educational levels

The participants came from 42 different countries. More than one third of the visitors surveyed came from the UK (36%), followed by Australia (12%), USA (11%), New Zealand (10%), and Canada (6%). Most of the remaining visitors surveyed came from a mix of European countries. A large number of visitors (75%) came from countries with English as the first language. The majority of the respondents (91%) came to Rotorua for holidays. Some of them came to visit friends and relatives (4%). Only a small number of respondents came to the city for business (3%) and for other reasons (2%) such as locals accompanying friends and relatives.

As shown in Figure 4.6, more than one third of the respondents came to know about Tamaki Tours via organised tours such as Kiwi Experience, Magic Bus and other accommodation providers. Word of month was the main source of information for this tourist attraction. Only a small number of respondents found Tamaki Tours via the web site and road signs. In terms of gender distribution of this survey, it is interesting to find that the number of female respondents (57%) was slightly larger than that of males (43%). This is possibly attributable to the fact that when couples were handed a questionnaire, some male customers would pass it on to their female partner to answer.

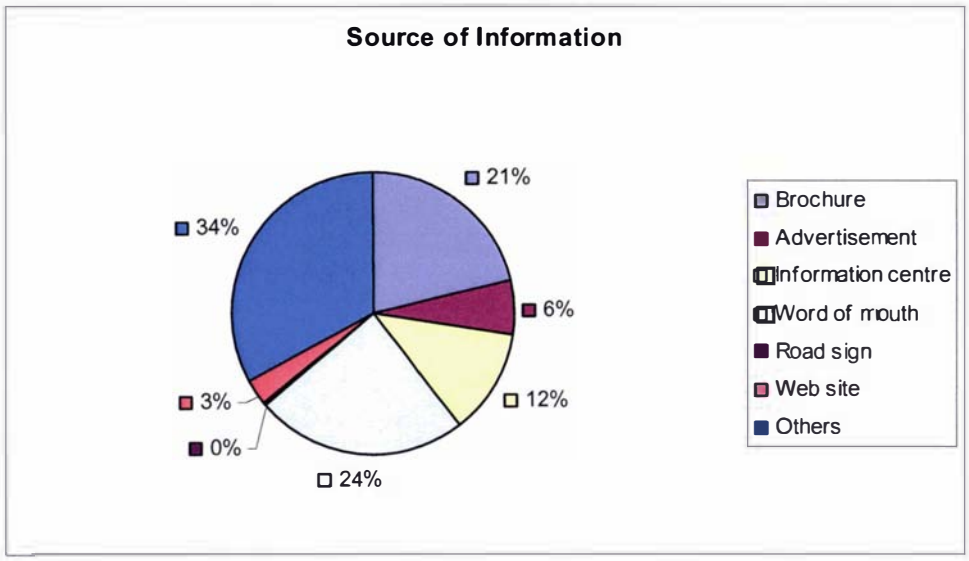

Figure 4.6 Source of Information

4.4.2 Customer expectation and perception gaps

A gap analysis was conducted to compare the difference between visitors' expectations and their perceptions of the services and facilities provided by Tamaki Tours. The first step for the gap analysis was to estimate a mean score for each of the 23 SERVQUAL questions. This included visitor expectation and perception as well as the management and staff estimation of importance and customer expectation of service provided. Subsequently, the difference between the mean scores was calculated to give the appropriate gap by subtracting the score of perception from that of expectation. The average scores of expectation and perception were compared to see the gaps between the level of customer expectation and their satisfaction for the visitors surveyed (see Figure 4.7).

As shown in Appendix D 2, the average scores of perception and expectation gaps were positive except for "toilets are provided and are clean" (Q13). It means that on an average basis, customers were satisfied in almost all the service areas provided by Tamaki Tours. Customer were delighted in the "the physical appearance of the Maori village", "the physical appearance of the city booking office", "the staff gives prompt service", "the friendliness and courtesy of the staff and their responses to visitors", "the introduction to the Maori culture on the bus" and "the quality in the presentation of the food house".

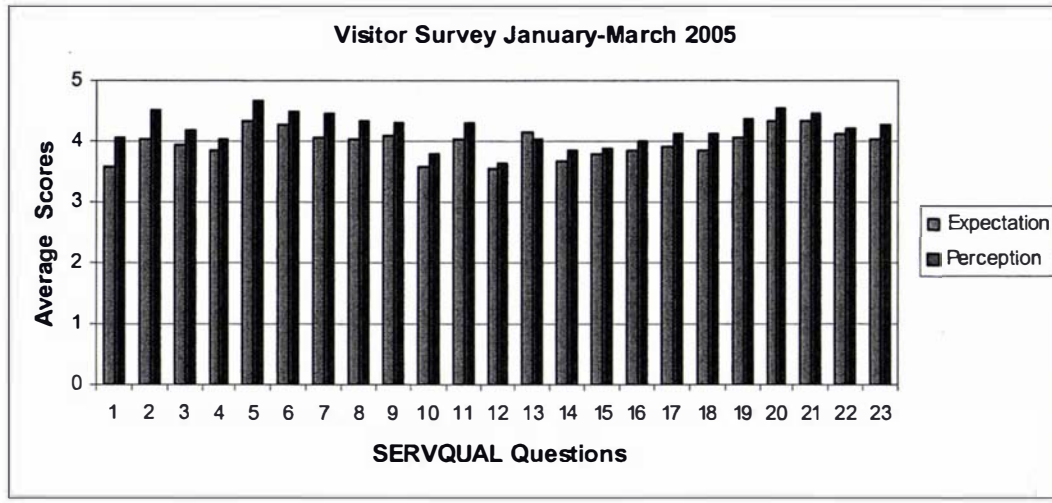

Figure 4.7 Comparison of Customer Expectation and Perception

The areas with small positive gaps were:
"The signs inside and outside the village are adequate" (Q15).
"The pricing and range of product in the tribal market are reasonable" (Q12).
"The whole experience is value for money" (Q22) and
"The cultural performance is authentic, informative and educational" (Q21).

The results show that on average, customers surveyed had a very high expectation in the areas regarding staff reliability, the toilets, the whole experience and the cultural performance in the Maori concert. The service features with negative gaps or smaller positive gaps have indicated the areas for improvement for the organisation to satisfy and delight their future customers (Liu, Smith, & Barnes, 2002).

Some general comments were provided by those respondents who had indicated good impressions about their experience. Some of the comments are "the young Maori people were delightful, helpful and polite. They are very comfortable in their roles and showed pride in their heritage"; "the staff had put insight into their culture"; and "the bus drivers were super". Customers who showed high expectation but low perception about the attraction stated that "there were not enough toilets in the booking office and the Maori village for the large number of people"; "the cleanliness of the toilets in the village were below standard"; "poor lighting in the concert hall"; "the sign for toilets in the booking office is hard to find/had to ask the receptionist"; "the explanation about the Maori culture could not reach the end of the room"; "need better sound system in the concert";

"no time to spend in the shops"; "too long between being picked up from the hotel and the start of the village tour"; and "the cultural performance could be more educational". These open-ended comments have expressed customers' real needs which are further used as the important input of customer requirements in the QFD implementation.

4.4.3 Customers' understanding of the relative importance of service quality

One of the research objectives is to identify customers' judgement on the relative importance of services to their overall experience. The purpose of this part of survey was to prioritise customer requirements based on the five dimensions of the SERVQUAL questions. These ranked customer needs were used to help the company to understand the real requirements and determine the priorities in quality improvement to meet the customers' expectation. The average visitor importance scores in Figure 4.8 showed that customers considered the following facilities and services are the most important to their tour experiences such as:

- The cultural performance (Q21)
- The whole tour experience (Q20)
- The whole tour is value for money (Q22)
- The staff are friendly (Q5)
- The staff has knowledge (Q6)
- Toilets and its cleanliness (Q13)
- Visitors feel comfortable during their visit (Q9)
- The content and length of the activities (Q23)
- The presentation of food house is authentic (Q11).

The service areas that were perceived as relatively low in importance were "the physical appearance of the city booking office" (Q1) with the remaining service areas being considered as important to the visitors' overall experience in the Maori Village. The visitor importance information was further used as the input for the customer importance rating in the House of Quality which is discussed in Section 4.6.

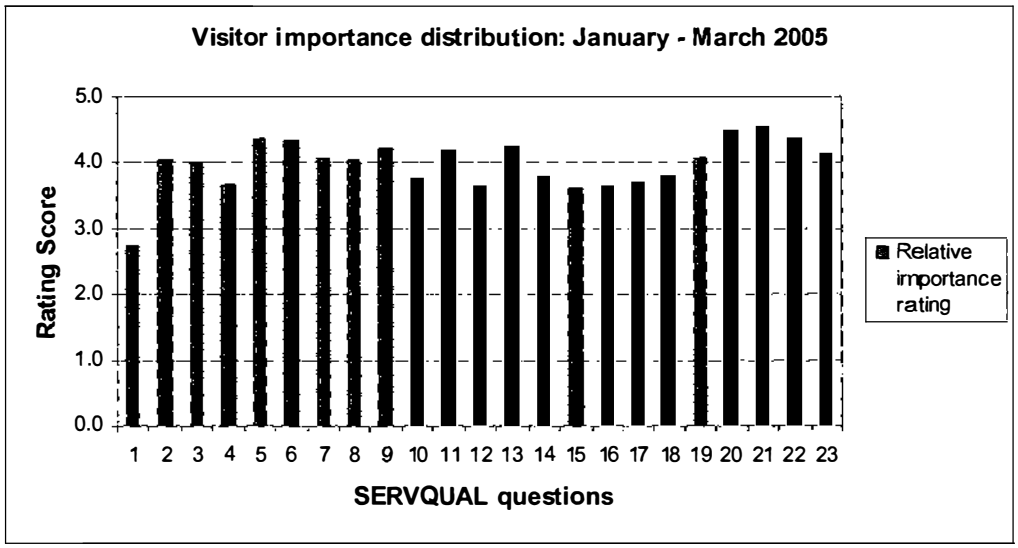

Figure 4.8 Visitor importance rating of service quality

The overall results of customer importance rating of service features show that the visitors considered the provision of core service and staff performance were the most important to their satisfaction with the whole tour experience. They imply that the most important parts of the tour experience were an authentic, informative and understandable cultural performance together with well-trained staff who can deliver a delightful experience. Some of the peripheral services such as "comfortable during visit", "the quality and presentation of the food provided", and "the toilets" as well as the tangible part of the Maori village are also rated as very important. A majority of the service features were ranked as important to the tourists such as the service dimensions of access and responsiveness. The lowest level of customer importance rating was found in the physical appearance of the city booking office. This variable was considered as only "some importance" to the visitors' cultural experience as it was secondary to the main purpose of the visit.

4.4.4 Comparative analysis of expectation of service quality

The gap scores of expectation of service quality were calculated using the average of the measured visitor expectation values deducted from the staff's perception of visitors' expectation. The purpose of this comparison was to recognise the differences between staff views of customer expectation and the visitors' real expectation. Results as demonstrated in Figure 4.9 show that the overall gap scores are positive. This means that the staff's estimation of visitor expectation closely matches but generally a little

greater than what their customers had expected. This further suggests that the staff surveyed have a clear understanding of how the customers actually picture their own needs.

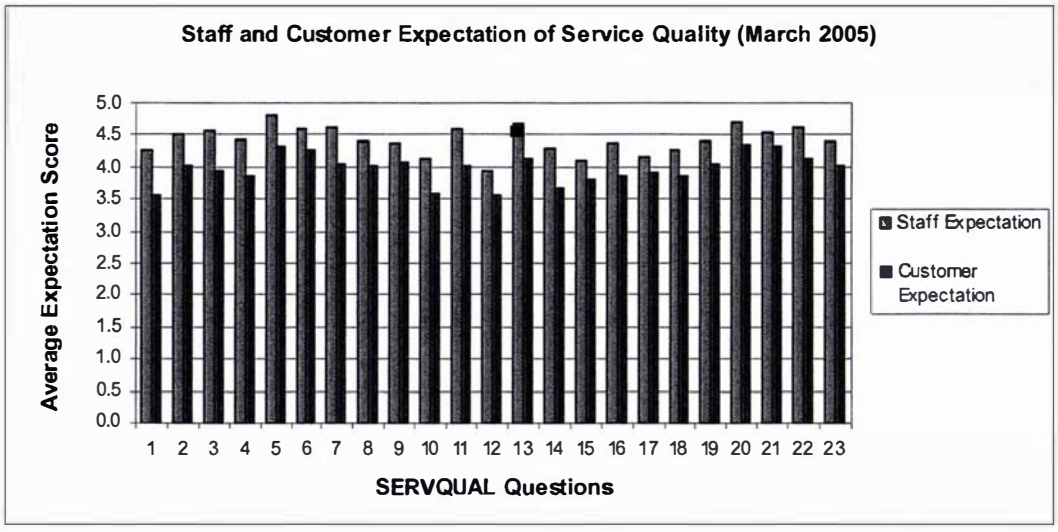

Figure 4.9 Difference between staff view of visitor expectation and measured customer expectation

4.4.5 Gap analysis of staff views of importance of service quality and visitors' expectations

The results in the staff survey show a generally high level of understanding of the importance of service quality. Management and staff surveyed ranked 12 out of 23 service areas as "extremely important" and the remaining areas as "very important". However, the comparison of staff importance of service quality values and their view on the level of visitor expectations have shown a number of negative gaps. As indicated in Figure 4.10, the service areas with negative gaps are:

- The pricing and range of products in the tribal market (Q12)
- The information provided about the facility (Q4)
- The pricing and range of refreshments in the bar (Q10)
- Staff inspires trust in visitors (Q8)
- The waiting time between activities (Q18)
- The introduction to the Maori culture on the bus (Q19).

The difference between staff importance and their perception of visitor expectation of the service quality indicates that staff did not rank certain service elements as important to the visitors as their estimation of the customers own ranking might have been

expected to be. For example, staff surveyed might think that customers had high expectations on the pricing and range of products in the tribal market, but to the customers, this service item was not as important to them as some of the other features.

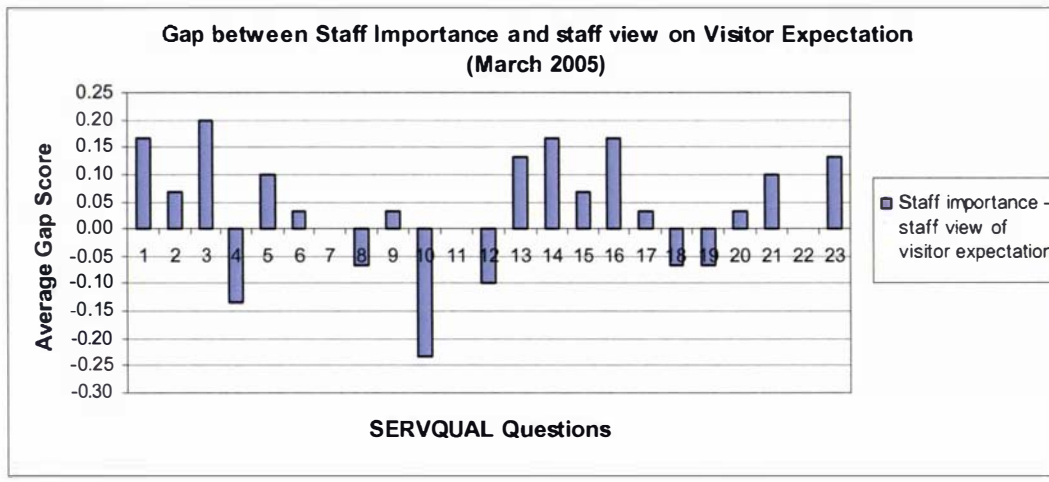

Figure 4.10 Difference between staff importance of service quality and their view of visitor expectations

4.4.6 Staff knowledge on service quality standards

As part of the staff survey, the participants were required to indicate their understanding of the availability of service quality standards and procedures currently existing or otherwise in the company. The information was grouped and presented as a percentage of the total respondents for the five dimensions of service quality. Five options were given to indicate the current status of the quality performance standards available. For example, 1 stands for "Don't know", 2 "No Standards Exist", 3 "Have Informal Standards", 4 "Have Formal Standards Not Documented" and 5 "Have Documented Standards". As shown in Figure 4.11, more than half of the respondents think the company has documented standards in terms of operational procedures, a quality assurance programme, and the overall content of programme and services, while more than one third of the staff surveyed considered there are documented standards in staff training and service specifications. Overall, there appeared a wide spread of answers with regard to the availability of quality standards. This result shows that the knowledge of quality standards was not shared equally among the staff in different departments. As Kotler, Bowen, and Makens (1999) suggested, companies need to set service standards and goals and then communicate them to employees, which is the most important way to improve service quality. This is an area where improvements could be attempted.

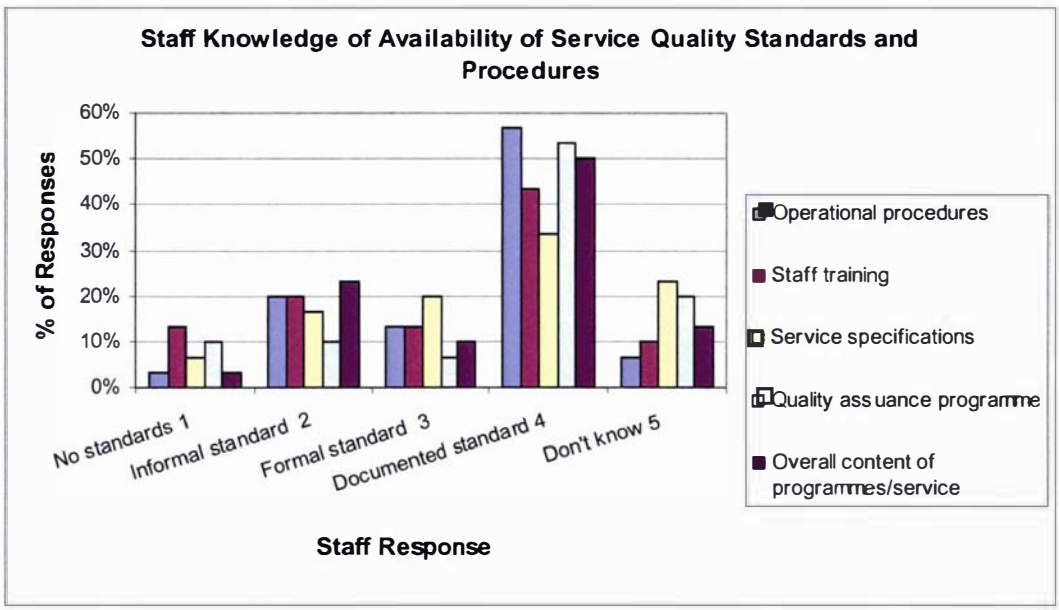

Figure 4.11 Staff understanding of quality standards

In summary, the visitor surveys using the SERVQUAL questionnaires conducted over the two months in Tamaki Maori Village indicated a positive performance in the provision of facilities and services. The visitors surveyed were satisfied on average with the quality of service in all the areas covering the five dimensions of the service being offered with the exception of the toilets. The results of customer expectation and perception have shown that the level of customer satisfaction was high and their judgement on the relative importance of facilities and services being offered were identified.

Visitor comments along with the questionnaire responses have indicated areas as being in need of improvement including the number and cleanliness of the toilets, the length of tour, the waiting time between activities, the sound system in the concert hall, the organisation of the programme and the physical capacity of the Maori village. This information will be used as the "voice of customers" in the design of the House of Quality which in turn will establish a programme to give priority to actions which can be taken to improve the customer assessment of the quality of their experience at Tamaki Tours.

The information will be used in more advanced analysis of customer expectation and perceptions in relation to the participant's gender, country of origin and their educational levels to see which possible factors that influence the levels of customer satisfaction.

The two-month visitor survey has indicated that the Tamaki village experience still maintains a high level of customer satisfaction, but it has also shown areas where improvement could be made. It was suggested that the SERVQUAL instrument is not the only way of assessing the underlying causes of gaps and that other quantitative and qualitative research can supplement the instrument. Practitioners should consider administrating a range of instruments to measure service quality rather than just one (Williams, 1998). One of the objectives of the research programme is to test the merit of the QFD programme to identify and prioritise the actions that need to be taken to improve service quality. This is especially so in those situations where there are conflicting demands on staff time, costs of improvements and detailed technical requirements associated with the changes. Assuming that the improvement programme arising from the QFD process is implemented, then a further survey in the future should be undertaken to determine that the level of customer satisfaction in the current negative gap areas has been improved.

4.5 Statistical Analysis of SERVQUAL Survey Results

The gap analysis of visitor expectation and perception which was based on the average result of the overall responses has shown a balance point for a set of data. The average results of expectation and perception indicate an approximate acceptable value for each of the SERVQUAL questions. However, the mean values might be affected by unusually large or small scores within a category of responses. When some of the values are extremely large or small compared to the majority of the responses, the mean might not be an appropriate average to represent the data (Lind *et al.*, 2005, p. 60). The frequency distribution of expectation and perception scores in Appendix D 6 show that more than half of the respondents have selected their expectation and perception as "high" and "very high". Only a small number of respondents chose their expectation and perception as "very low" and "low" except for Question E10 and E12 and Question P12 which represent around 10% of the total sample. It can be assumed that the extreme scores could be associated with other factors that influence the shape of the skew in the distribution of results. This is similar to many other cases relating to attitudinal

measurement in tourism where the distribution of customer expectation and perception is not a normal distribution (Ryan, 1995, p. 14). Therefore, parametric tests cannot be used for data analysis.

To decide whether differences in results are big enough to indicate that a relationship really exists and further to identify whether sample results are representative in the general population, inferential statistics were applied to test whether the descriptive results are likely due to random factors or to a real relationship. Section 4.5.1 to Section 4.5.4 illustrate the results of hypothesis testing of statistical significance of the association between respondents' demographic information and the level of expectation and perception of the areas of visitor experience. The chi-square test of association (cross-tab test) was used based on the assumption that the sample of values are random with dependent variable (level of expectation and perception) being ordinal and the independent variables (demographics) being discrete (Page & Meyer, 2000, p. 173). As Neuman (2000, p. 340) suggested, the chi-square test is a widely used and a powerful way of examining variables measured at the ordinal level.

4.5.1 Chi-square test for visitor expectations in relation to gender

The results as shown in Table 4.3 indicate that male respondents have slightly higher expectation levels than female respondents do on average with the exception of Question 20. The research hypothesis is that a respondent's level of expectation of a tourist experience is related to his or her gender type. Thus, the null hypothesis is that these two variables are independent of each other, i.e. the gender of respondents will not affect their expectation of the standards of facilities and services offered in a tourist attraction.

A two-row and four-column contingency table as shown in Appendix D 7 was designed for each expectation question on the SERVQUAL questionnaire. The two rows represent the gender categories and the four columns represent the level of expectation categories. For a chi-square test to give accurate results when dealing with 2*C contingency tables, all expected frequencies must be at least 1 (Levine *et al.*, 2001, p. 441). As a convention, the two low-frequency categories – "very low" and "low" levels of expectation were merged to one category (low) in the contingency table prior to

performing the test. Such collapsing of categories resulted in expected frequencies sufficiently large to conduct the chi-square test accurately.

Table 4.3 Average Expectation Scores by Gender

Expectation	Male	Female	Difference
1	3.572	3.556	0.016
2	4.085	3.978	0.108
3	3.974	3.935	0.039
4	3.912	3.820	0.092
5	4.340	4.318	0.022
6	4.276	4.257	0.019
7	4.076	4.024	0.052
8	4.077	3.991	0.086
9	4.121	4.062	0.058
10	3.588	3.572	0.016
11	4.050	4.002	0.048
12	3.567	3.554	0.013
13	4.194	4.096	0.099
14	3.727	3.646	0.081
15	3.887	3.735	0.153
16	3.900	3.831	0.069
17	3.933	3.882	0.051
18	3.875	3.850	0.026
19	4.126	3.986	0.140
20	4.344	4.344	-0.001
21	4.350	4.320	0.030
22	4.127	4.113	0.014
23	4.063	4.015	0.048

At a statistical significance level of $p < 0.05$ and degree of freedom of 3, the chi-square test statistic for each expectation item was generated. As compared to the standard critical value on the chi-square significance look-up table (see Appendix D 11), the difference in result was considered as significant at the designed significance level ($p < 0.05$), if the chi-square value is greater than that indicated in the table (Yates, 2004). Therefore, visitor expectations that are associated with gender type are demonstrated in the following SERVQUAL questions.

1). The physical appearance of the city booking office

2). The physical appearance of the Maori village

3). The information provided about the facility e.g. brochures, advertisements and programme information

4). Staff inspires trust in visitors

5). Toilets are provided and are clean

6). Signs inside and outside the village are adequate

7). The introduction to the Maori culture on the bus is enlightening

The remaining 16 expectations that show a p-value greater than 0.05 and a smaller chi-square test statistic were concluded as being statistically insignificant. The null hypothesis that there was no association between level of expectation and gender was not rejected for these items (see Appendix D 7 for an example). This means that the differences between the level of expectations for these features and services were probably due to random factors only.

4.5.2 Chi-square test for visitor expectations in relation to educational level

To explore the possible association between level of expectations and visitors' demographic background, an alternative hypothesis was set up that a respondent's level of expectation of their experience is related to his or her educational level. Hence, the null hypothesis was that these two variables are independent of each other. Although on average as presented in Table 4.4, those who have secondary educational attainment have shown a slightly higher expectation on the majority of the service dimensions compared to those with tertiary educational achievement, the levels of expectations were not evenly distributed across the groups.

Appendix D 9 shows the observed frequencies and expected frequencies for each level of expectations. The chi-square test results indicate that the following expectations were statistically significant with a degree of freedom of 6 and a level of significance of 0.05. Therefore, the null hypothesis was rejected for such expectation items as:

1). The physical appearance of the city booking office

2). The physical appearance of the Maori village

3). The information provided about the facility e.g. brochures, advertisements and programme information

4). There is easy access for visitors with wheelchairs, prams and young children

5). Signs inside and outside the village are adequate

6). The introduction to the Maori culture on the bus is enlightening

This result indicates that the differences in expectations for the listed dimensions were affected by the respondents' level of education instead of random factors. However, the

majority of the expectation items were statistically insignificant i.e. the differences in expectations for those services were due to chance.

Table 4.4 Average visitor expectation by education

Expectation	Secondary	Polytechnic	University
1	3.681	3.506	3.524
2	4.085	4.013	3.999
3	4.013	3.962	3.922
4	3.900	3.885	3.836
5	4.340	4.264	4.335
6	4.272	4.217	4.272
7	4.126	4.004	4.021
8	4.096	3.940	4.018
9	4.177	3.970	4.074
10	3.685	3.609	3.526
11	4.045	3.945	4.030
12	3.698	3.549	3.502
13	4.228	4.043	4.119
14	3.789	3.630	3.644
15	3.915	3.736	3.763
16	3.951	3.817	3.831
17	3.964	3.838	3.892
18	3.957	3.809	3.830
19	4.119	4.055	4.012
20	4.377	4.251	4.350
21	4.374	4.281	4.326
22	4.228	4.077	4.081
23	4.106	3.949	4.023

4.5.3 Chi-square test for visitor expectations in relation to ethnic groups

The overall visitors' expectation responses were divided into seven major ethnic groups according to the respondents' countries of origin. In order to satisfy the assumption for the chi-square test, the two low levels of expectation category ranking were combined as one. A 7*4 contingency table was established for each of the SERVQUAL questions. The observed and expected frequencies for each question were displayed as an example in Appendix D 8. Based on the significance level of 0.05 and the chi-square critical value table, the following expectation questions were considered as statistically significant. Therefore, the null hypothesis for 18 SERVQUAL expectation questions was rejected. This means that the expectation differences in the sample were related to the ethnic groups for the majority of the survey questions. These responses were influenced by the visitors' country of origin. The expectation items with p-value greater

than 0.05 and smaller chi-square statistic values were not rejected. This result suggests that the different patterns of expectation frequencies were due to random factors instead of respondents' ethnic background. No matter where the customers came from, their level of expectation for these service areas would remain similar. The expectations with statistical insignificance as shown in Appendix D 8 are:

1). The physical appearance of the Maori village

2). The friendliness and courtesy of the staff and their politeness to visitors

3). The introduction to the Maori culture on the bus is enlightening

4). The whole experience is enlightening, entertaining and educational

5). The content and length of the activities are appropriate

These expectation items are the key operational areas of the cultural tourist attraction. It is reasonable to conclude that despite other factors, the overall sample group had a very similar level of expectations for these five service areas that are not associated with their country of origin.

4.5.4 Chi-square test for visitor perceptions in relation to drivers

The perception of the visitors' experience was assumed to be related to the driver/tour guides. Apart from the booking staff, the drivers were the first encounter by the customers with the Maori village visit. They accompany the tour group for the whole village experience. The introduction about the tour and the greetings given by the bus driver would leave an important impression and affect customers' level of perceptions of their overall experience. The average scores of perception as displayed in Table 4.5 show that the respondents' perception level was between "high" and "very high" across the drivers. It seems that the respondents' perception of the village experience between and across different drivers were consistent and appeared to be independent of the drivers. However, to be confident that we can infer this for the overall population requires a hypothesis test of the statistical significance of these results.

A 7*4 contingency table was established for the seven bus drivers to show the level of customer perception frequencies under each driver group. The low frequencies of responses for the "very low" and "low" perception categories were combined as the "low" category. With a degree of freedom of 18 and level of significance of 0.05, the chi-square statistic for each of the 23 questions were calculated. The null hypothesis that there is no relationship between bus driver and the level of perception was rejected

for three questions that have a bigger chi-square value and smaller probability. This means that the relationship between bus driver and the respondents' perception of the service was significantly related. i.e. sitting on a different bus and guided by a different driver, the visitors' perception about the tour experience can be different. The SERVQUAL questions with statistical significance are:

1). The physical appearance of the Maori village

2). The staff has the knowledge to respond to visitors' requests

3). The waiting time between the activities is reasonable

Table 4.5 Average visitor perception by bus drivers

Question	Driver 1	Driver 2	Driver 3	Driver 4	Driver 5	Driver 6	Driver 7
1	4.048	4.112	3.976	4.000	4.118	4.018	4.049
2	4.476	4.588	4.429	4.520	4.568	4.478	4.568
9	4.414	4.342	4.282	4.320	4.381	4.265	4.231
10	3.824	3.743	3.735	3.795	3.819	3.764	3.747
11	4.429	4.353	4.159	4.305	4.323	4.323	4.295
12	3.590	3.695	3.553	3.665	3.707	3.562	3.682
13	4.071	4.005	4.065	4.030	4.151	4.024	3.909

The chi-square test results as shown in Appendix D 10 indicate that the remaining 20 perception questions were not statistically significant i.e. how the respondents see the tour experience was not influenced by the different bus drivers and their performance. The differences shown for the level of perceptions in these 20 questions were due to chance. The level of confidence of 5% was used. This means that with 23 questions, one question would be expected to be significant by chance. Two to three significant results are not particularly surprising. As mentioned earlier, the company should flag this and monitor that area of service carefully.

In summary, the chi-square test conducted has shown the probability of the association between two variables. Based on the comparison of the observed values in the contingency tables with what might be expected if the two distributions were entirely independent, the likelihood of the data occurring by chance was assessed. A probability

of 0.05 means that there is only 5% chance of the data in the table occurring by chance alone (statistically significant). Therefore, a probability of 0.05 or smaller means that we can be at least 95% certain that the relationship between two or more variables could not occur by chance factor alone (Saunders *et al.*, 2003, p. 358). The results of chi-square tests conducted for the relationship between respondents' expectation level and the major demographics have implied that only if a test produces a p-value of less than 5%, will the association or difference observed in the sample be sufficiently significant for the results to be generalised to the entire population (Page & Meyer, 2000, p. 173). The results of statistical testing also provide an indication of reliability of the data which are used as the input in the QFD programme. Furthermore, by analysing expectations and perceptions about service quality with respect to different customer segments, organisations can develop and formulate marketing strategies to meet the needs of each specific market segment more effectively.

4.6 The Application of QFD in Tamaki Tours

As discussed in Chapter Three, the key objective of this study is to demonstrate the link between the SERVQUAL results and QFD to prioritise areas for improvement. The management of Tamaki Tours had demonstrated support for this new approach by participating in regular meetings of the staff focus group. The implementation of QFD for this case study focused specifically on the planning matrix part of the House of Quality. The process of building the simplified House of Quality is illustrated in the following sections. The House of Quality matrix was constructed by using the QFD Decision-Capture software (The International TechneGroup Incorporated, 2003).

The implementation of QFD in Tamaki Tours started with interviewing the management team in May 2005. The objectives of the quality improvement project were discussed and a timeline was scheduled for staff participation in the focus groups. Based on the lessons drawn from the pilot studies, a larger number of staff were included in the QFD team for the principal case. The activities and tasks undertaken in the staff focus groups are discussed below.

4.6.1 The focus groups

The initial QFD focus group started in June 2005. The focus group members comprised staff from five functional departments such as Food and Beverage, Driver/Guide, Front Office, Marketing, Retail and the office manager. There were four sessions in total with 6 to 7 participants in each session. The focus group session started with a presentation of the aims of the group discussion and the focused questions were introduced. After the introduction, the team continued with a description of how the participants would create a visual chart of customer expectations and operational requirements. The participants were placed around a table facing a large whiteboard. They were instructed to represent their department in terms of the operational requirements.

The staff group first reviewed the results of SERVQUAL surveys conducted over the period of January and March 2005. After the focus group participants had contributed, the group selected one of the five service dimensions to be discussed first. The focus of the discussion was the areas with low customer satisfaction and high expectations such as staff training, the toilets, the whole village experience, and the cultural performance in the Maori Village e.g. the concert. In the second focus group, the staff were asked to fill in the forms on "What do customers want?" and "How to satisfy customer expectations?". The information collected was organised and the results for the WHATs and HOWs were summarised and analysed from each focus group and aligned with the House of Quality chart. The WHATs and HOWs were presented in tables (see Table 4.6 and Table 4.7).

The customer importance ratings in Table 4.6 were obtained based on the SERVQUAL survey results and the areas that showed lower levels of customer satisfaction and needed for immediate improvement. The HOW or process side of the House of Quality is centred on creating the outputs required to meet customer expectations or outcomes. In the case of the Maori Village experience, the core product consists of both a "built" environment as well as a carefully "constructed" and "staged" experience. The cultural product has been developed from the ground up and the overriding goal has been to achieve acceptance by both Maori and visitor alike so that the result is both culturally legitimate and a model of best practice.

Table 4.6 Customer Requirements

No	Customer requirements	Customer Importance Ranking
1	Natural-looking and authentic village	5
2	Easy and quick payment procedure	4
3	Knowledgeable and informative staff	5
4	Sufficient information for the programme with clear sequence	4
5	Plenty of seating in the concert	3
6	Clear signage in the village	4
7	Quality of food and drinks	4
8	Interesting and educational performance	5
9	Price is value for money	4
10	Friendly and efficient services	4
11	Authentically cooked food and presented in a pleasant way	4
12	Easy access to village activities	3
13	Clean toilets	5
14	Know where they are and feel comfortable during the tour	4
15	Enough time to look around in the village	3
16	Appropriate waiting time between activities	4

Table 4.7 Operational Requirements

No	Operational Requirements
1	Structure and display of the head office
2	Construction of the village with native materials
3	Preparation of commentary
4	Queue management during payment process
5	Staff training
6	Guiding services and transport to accommodations
7	Regulation and standard of health
8	Quality and range of equipment
9	Control of village capacity
10	Planning and production of *hangi*
11	Regular servicing in the toilets
12	Facilities in the coach, seating and stage
13	Interaction and consistency of performance
14	Allocation of village activities
15	Updated information on the marketing brochures and website
16	Promotion of retail shops
17	Pricing policy

4.6.2 The results of House of Quality

The third QFD focus group meeting in the principal implementation began with the design of a House of Quality matrix. As shown in Figure 4.12, the relationships between each customer requirement and the operational requirements were determined after

careful discussions among the focus group members. For example, there was a strong relationship between the customer requirement for "plenty of seating in the concert" and the operational requirements of the "facilities in the coach, seating and stage" and "quality and range of equipment", but a moderate relationship with "control of village capacity". The customers required "easy and quick payment procedure" which is strongly related to the operational requirements of "queue management during payment process" and "control of village capacity" and moderately related to "staff training" in terms of customer service. Customers need to "know where they are and feel comfortable during the tour" which is strongly related to the "guide service and transport to accommodations", but moderately related to the other operational requirements such as "allocation of village activities" and "facilities in the coach, seating and stage".

The "roof" of the House of Quality indicates the interrelationships between some of the operational requirements. The focus group agreed that the "promotion of the retail shops" would support the improvement of "allocation of village activities" and "pricing policy" for the whole village experience. There is a positive relation between "preparation of commentary" and "interaction and consistency of performance" of tour guides and concert performers, and "staff training". The only negative relationship existing between the operational requirements are "quality and range of equipment" and "pricing policy" for the tour package. The updating of village equipment was considered to be a financial challenge in the short term. Therefore, a compromise has to be made in terms of what equipment should be purchased based on the current budget levels.

After calculating the values in each cell of the relationship and interrelationship rooms, the absolute value for each of operational requirements was generated on the bottom of the House of Quality (see Figure 4.12). The results show the prioritised areas of quality improvement according to the summary of the absolute value of importance. The operational elements that are in need of improvement are discussed and analysed below:

1). Guide services and transport to accommodations (108)

In Tamaki Tours, bus drivers are also the tour guides. They accompany the customers for three hours, from picking up in the tourist accommodations, providing introductions

and entertainment on the bus, guiding activities in the village through to returning the customers back to their pick-up point at the end of the show. Tour guides are the front line staff who provide the "moment of truth" for tourists, and can make or break their satisfaction with their tour experience. The production of a quality service for tourists is essential to the success of the tourism industry and to the reputation and image of the destination. A tourist not only views the local sights from a coach, but also interprets the sights through the guide's commentary. Ryan and Dewar (1995) claimed that tour guides' communication with tour groups can increase both group morale and social interaction. It has been suggested that tour guides are responsible for tourist satisfaction with the service provided by destinations (Zhang & Chow, 2004). In the QFD focus group, the staff identified the issues with the guiding service during the village tour. For example, some customers were wandering around the village without following the other tourists, others would not know what was next after being to the Maori concert. Clear and constant directions given by the drivers are considered critical for the satisfactory experience of the tourists and the smooth running of the village activities.

2). Staff training (96)

Implementing procedures for the induction and training of all new employees and training and appraisal programmes for all staff were recognised as being paramount by the focus group. Staff training and multi-skilling are required in this Maori tourist attraction. Multi-skilled staff can be shifted to meet capacity changes. Everyone employed in Tamaki Tours is seen as a representative of the living Maori culture. The training and development initiatives on the skills needed for quality customer service are seen as leading to an increase in staff morale, which has an incremental effect on customer satisfaction. Staff training in Tamaki Tours has been recognised as an ongoing programme and it was related to all the departments.

3). Control of village capacity (93)

Due to the increasing popularity of the Maori tourist attraction, the company received large numbers of bookings especially during the summer season. It has become a common issue that the village has become overcrowded at times and gone beyond the physical carrying capacity of such a tourist attraction. As Ryan (2003, p. 145) argued, there is little to be gained from increasing visitor numbers if the result of such numbers is an increasing hostility towards the tourists, and a downgrading of the very factors that

attracted the tourists in the first place. Tourists need space to appreciate the attraction and enjoy the activities. The planning and monitoring of tourist flow in the Maori village are therefore vitally important steps to the long-term development of the attraction.

4). Planning and production of the *hangi* (76)

One traditional form of Maori cooking, *hangi,* is a feast cooked in an earth oven. It takes three hours to prepare for service. The planning and production of the Maori *hangi* is a fundamental part of the "behind the scene" service to ensure that the food provided is authentic and meets the customer's requirements. The ongoing demonstration of *hangi* cooking outside the buffet restaurant is an add-on to the whole dining and cultural experience. Therefore, the schedule of *hangi* cooking and other village activities also need to be planned to enhance the tourists' experience, especially as visitor numbers increase and double shifting comes into play. This occurs where there are two end-on-end cycles of visitors follow through the village, which puts logistical pressures on staff to keep quality service levels high.

5). Quality and range of equipment (72)

A visitor attraction offers both real products and service component to deliver a mixture of tangible and intangible experiences. The physical framework and associated technology and equipment remain vital to the creation and delivery of these experiences (Swarbrooke, 2002). For this reason, the quality and range of equipment available for the customers, especially those with special needs are important factors influencing their accessibility to the tour and their judgement of the service offered.

6). Queue management during payment process (60)

There have been issues with the payment procedure in the head office at Tamaki Tours. Sometimes around 30 to 40 minutes passed before customers could get payment completed for the tickets booked. Waiting in the queue could change a customer's perception about the whole tour experience. The QFD focus group discussed the reasons for the long waits and options were identified to speed up the payment procedure and to encourage the customer to enjoy the other facilities, such as the souvenir shop and the café.

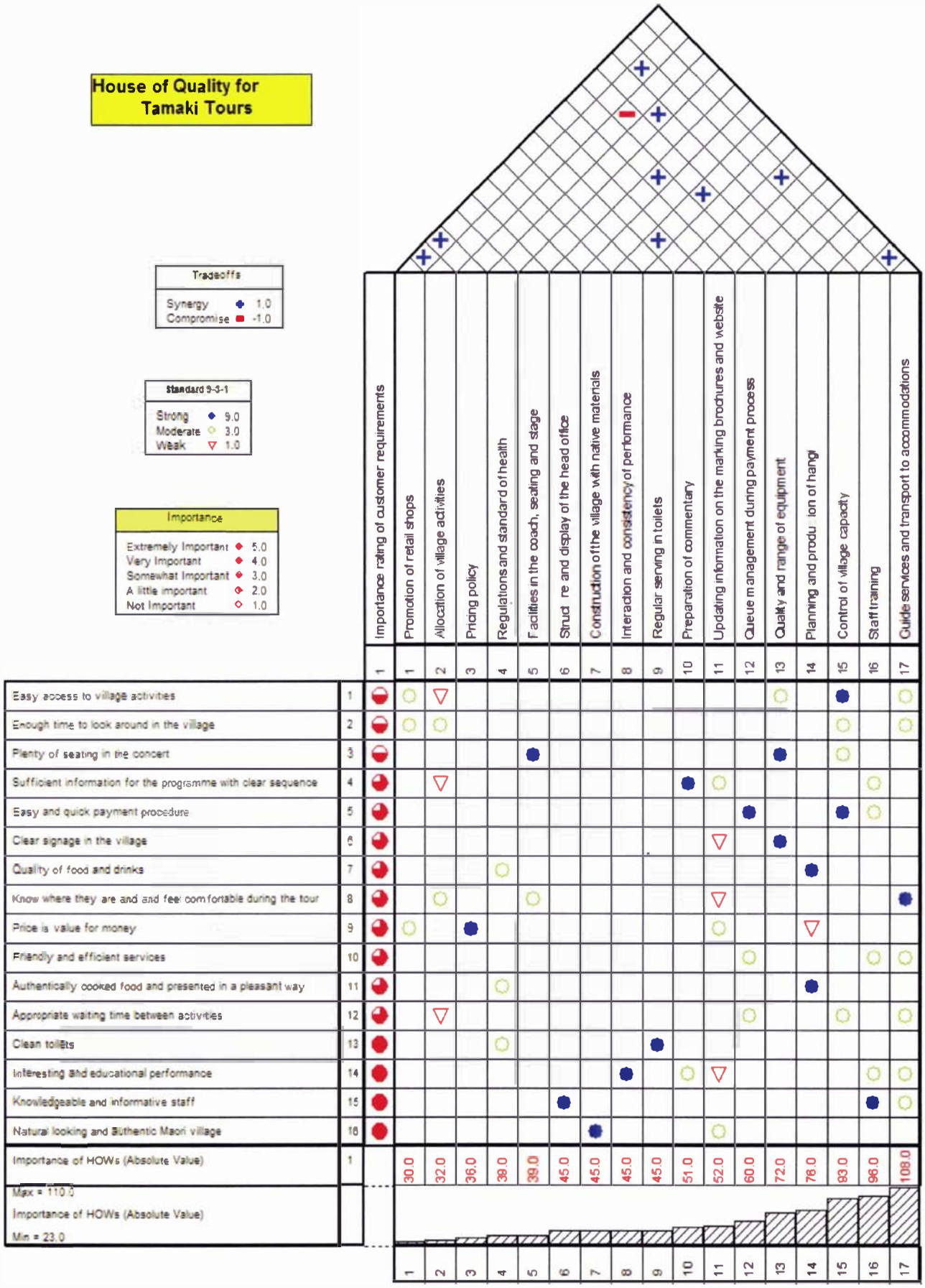

Figure 4.12 House of Quality for Tamaki Tours (2005)

Queue management also requires further staff training in friendly customer service such as smile, tone of voice, attitude, empathy and responsiveness.

7). Updating information on the marketing brochure and website (52)

It was considered as urgent to update the products and services available to the market especially for the overseas visitors who rely on the internet for their bookings in their home countries. A marketing campaign, for example, based on a new brochure and a webpage "designed to supplement existing knowledge and give consumers expectations that buying a particular branded item would be satisfying and pleasurable" (Leiper, 2003, p. 78) especially for a well-known New Zealand Maori cultural attraction like Tamaki Tours. To support the marketing message, the fact that the company is a New Zealand Tourism Awards winner and a Qualmark endorsed tour operator needs to be communicated to the target market.

8). Preparation of commentary (51)

Giving introductions to Maori culture on the bus is the very beginning of the Maori village tour. The bus drivers/tour guides were trained to present their commentary in an informal but entertaining style. However, it is not easy to balance the consistency of drivers' presentation and the flexibility needed for each tour. Thus, preparation of the contents and style of the on-bus entertainment becomes a serious business. Unless the drivers prepare their programme carefully and deliver it with passion and pride in their culture, the quality of the cultural experience for the tourists could be compromised. Preparation of a good commentary will also enhance the professional performance of the drivers.

9). Regular servicing in toilets (45)

One of the service areas in Tamaki Tours which was identified with a relatively low level of customer satisfaction was the toilets. Firstly, the numbers of toilets available in the head office and the Maori village were not enough to accommodate the daily visitor numbers. Secondly, the cleanliness of the toilets was considered as not satisfactory. Page (2003, p. 239) pointed out that the cleanliness of toilets is one of the key service components which can destroy the overall visitor experience if proper care is not given. The management of an attraction can influence the visitor's experience through design and resource issues such as building of sufficient numbers of toilets. Swarbrooke (2002)

argued that a range of elements affect the visitor's experience on site beyond the core focus of the attraction. These are the tangible elements of the product, such as retail outlets, cafes, toilet facilities and site cleanliness. With the feedback from the customers and the analysis from the operational staff, an action plan of building new toilets in the village and scheduling for toilet servicing and maintenance was established.

10). Interaction and consistency of performance (45)

Interaction, entertainment and legitimacy of performance are the basic expectations for cultural tourists. This is because cultural tourism is experiential tourism, based on being involved in, and stimulated by, the performing arts, visual arts and festivals (Hall, 2003, p. 401). To provide a performance the customer expect from different bus drivers and concert groups without surprise and the consistency of that service is important for the success of the attraction. While performers at Tamaki Tours endeavoured to entertain customers in an interactive way, such as getting visitors involved with singing and dancing in the concert and multi-language greetings on the bus, the level of consistency of commentary from each driver and the programme for each show are hard to maintain. The drivers and entertainers were trained to be flexible and to perform with personality and cultural authority to different market groups. However, as shown by the results of the driver comparison there is a variation from driver to driver and as a result, professional and operational standards for these front line staff are required to ensure the quality of the individual delivery.

11). Construction of the Maori village with native materials (45)

One of the customer's expectations about the physical appearance of the Maori village was its authentic physical setting. Authenticity as viewed by Hall (2003, p. 287) is one of the key motivational forces for those tourists with an interest in foreign culture and destinations. Therefore, the attraction created or staged for tourists should be as realistic and particularly authentic. For Tamaki Tours, the challenge is to ensure that the Maori village, which was located in a natural bush environment, should be built with native materials.

12). Structure and display of the head office (45)

The Tamaki Tours head office located in the Rotorua town centre is the first stop for the customers to organise their payment for the village tour, get information about the

village activity, wander around the souvenir shop and enjoy the café facilities before their departure to the Maori village. The physical facilities such as buildings, signs, lighting, and decorations are considered very important to the customers. A good first impression can be achieved by ensuring that materials associated with the service are visually appealing. This includes the stand displaying the brochures and the appearance of staff uniform. A welcoming atmosphere can be created with suitable "tangible" surroundings.

13). Facilities in the coach, seating and stage (39)

The SERVQUAL survey results have shown problems with facilities such as the microphone on the bus, the narrow seats and the poor lighting on the stage in the Maori concert. Based on customers' feedback and through the QFD meetings, decisions were made to change the seating arrangement in the concert hall and a new stage was set up with modern lighting and sound systems.

14). Regulations and standard of health (39)

One of the important features of the Maori village tour at the Tamaki Maori village is to experience the buffet dinner cooked in a Maori *hangi*. While maintaining the authentic cooking style, the company has to establish acceptable health standards and to follow the regulations which have been set and audited at the industry level. There is a challenge between traditional cooking and serving food in a pleasant and comfortable environment. Therefore, updating and monitoring the health standards in the food and beverage department have become the essential tasks for this operational area.

15). Pricing policy (36)

Setting price points, especially in the retail areas, is a challenging task for Tamaki Tours. As Kotler *et al.* (1999, p. 411) argued, pricing requires more than technical expertise. It requires creative judgement and awareness of buyers' motivations to buy. Recognising the target market and their different perceptions of price and value and other external factors influencing consumers' buying decisions are the most important in the company's pricing policy. The QFD focus group examined customers' feedback about the price level and identified the groups of customers who had similar perceptions and requirements regarding the prices being charged for products, such as wine and

souvenirs. Customer feedback has become the guideline for understanding special market needs in the retail department.

16). Allocation of village activities (32)

The three-hour Maori village experience involves sightseeing, a cultural ceremony, dining, entertaining and shopping activities. Each of the activities needs to follow a clear sequence and schedule. Delay in one step could ruin the whole experience and result in dissatisfied customers with the waiting time, the overall length of the show and so forth. The allocation and integration of village activities require the cooperation and support from staff of different departments. The QFD meetings helped the staff team to work together as one group with the ultimate goal of maintaining the successful running of each show instead of focusing on one's own department only.

17). Promotion of retail shops (30).

There are three retail shops located in the Maori village selling New Zealand made arts and crafts, music, garments, and souvenir products. The visitor survey results show that "there was not enough time for visitors to look at the shops". Some did not even notice that there were shops at all. There has been a conflict between retail shops and the bus drivers. For example, due to time constraints, the drivers tended to "rush" the customers to the buffet restaurant immediately after visiting the concert hall. Those who were shopping had to leave because the bus was returning to the city. These logistical conflicts between retail shopping and transport needs have caused unsatisfied customers and disagreements between staff members. The QFD meetings gave the staff the opportunity to integrate the overall interest of the company as well as that from each operational department. The promotion of retail shops and re-organisation of the village activities were able to be planned after the focus group sessions.

4.6.3 Action plans and implications

The final focus group in the principal implementation of QFD summarised the outcomes of the SERVQUAL surveys and the House of Quality and discussed the action plans as discussed in Chapter Three. A summary of the recommended actions in Tamaki Tours was given in a report with selected project management issues recommended for further information and follow-up. Operational requirements were described. For example, a marketing campaign is to be launched to inform the

customers of the improvements made after the QFD application and further promote the product and services offered in the tourist attraction.

After the completion of the QFD project, the general manager was interviewed to review the results of the quality improvement programme. The feedback on the QFD implementation was summarised as in general a good practice with the following benefits identified.

1). QFD has promoted better understanding of customer demands. It allows effective organisation and priority setting for actions to meet customer requirements.

2). QFD has fostered teamwork which breaks down barriers between departments. The outcome of QFD programme indicates that functional department manager should empower the staff member assigned to QFD team to represent their department's interests. Empowerment and self-direction have led to greater motivation and ownership.

3). QFD has enhanced communication within the organisation and demonstrated to staff the top management's commitment to providing human and financial resources. The general manager and the top management team participated in the QFD team meetings and support was given to those members who needed time off from their routine work to attend the meetings.

Despite the successful implementation of the research programme in Tamaki Tours, the building of the House of Quality was found to be rather complicated for the staff team due to lacking of previous knowledge of the methodology. Some of the calculations in the House of Quality matrix are subjective depending on the personal understanding of the QFD team members. Another challenge for the building of House of Quality is that it is time-consuming to complete the Relationship matrix and the items in the Tradeoffs. The whole quality improvement programme takes time and planning among management and staff members and this could be a challenge for busy tour operators. This was also widely recognised by other QFD practitioners in the literature. Although the application of the QFD tools require significant attention to detail and a structured process, the staff felt that constructing House of Quality could be faster, simpler and more straightforward given clear instructions.

According to Ozgener (2003), the role of the QFD team leader should be: 1). Create an environment which is oriented to trust, open communication, creative thinking, and

cohesive team work; 2). Motivate and inspire team members; 3). Ensure discussions and decisions made among team members. 4). Ensure that the team members have the necessary education and training to participate effectively in the project. 5). Familiarise the team with the customer needs, the development process, techniques and tools to support task performance. The process of QFD implementation in Tamaki Tours has proven that effective communication channels between managers and staff need to be established to ensure that all employees are kept fully informed of the quality improvement developments and that they are part of the programme of change within the organisation (Eccles & Durand, 1997).

The management at Tamaki Tours felt very strongly about the need for staff input. At regularly conducted meetings staff involved in the QFD project had the opportunity to voice their opinions and make suggestions relating to improving overall business performance. The application of the quality management programme implies that management support and teamwork are critical to long-term quality improvement. Service quality will be enhanced when an organisation implements an effective improvement system.

The results of the combined SERVQUAL and QFD methodology indicate that findings from this study may be generalisable across other industries. Further research might replicate this research design in a variety of service environments to establish whether these same relationships exist. Repetitive studies within the same industry e.g. the same product and target groups, should be conducted to examine the stability of the findings from this case study. The instrument developed in this study can contribute to the existing literature for assessment of quality service of tourist attractions and it can give rise to replication of related studies.

4.7 Chapter Summary

This chapter has focused on the description and discussion of the result of a full SERVQUAL and QFD application in Tamaki Tours. The introduction explains the information obtained from the three pilot case studies and objectives in the principal case study were established. The methodology section illustrates the sample characteristics and the random sampling process. The research results were analysed by

using gap analysis to see the general pattern of expectation and perception results. The statistical significance of the results was tested using the chi-square test of contingency tables to identify the association between the key respondents' demographics such as gender, educational level, and ethnic groups to establish if there were any relationships between the expectations and the demographic variables. It was found that some of the respondents' expectation levels were affected by their gender and country of origin, but only a few expectation items were related to the respondents' level of education. The differences that exist in the results of expectation among educational groups were mainly due to random variations in the sample. The chi-square test was also used to test the relationship between the different bus driver groups and the respondents' perception of the tourist experience. The results of analysis show that there were only three perception areas that were related to the different bus drivers. The majority of the respondents' perception items appeared to have little or nothing to do with the make-up of the drivers. It also indicates that the drivers' performance as a group was quite consistent throughout the survey period.

After the SERVQUAL survey results were analysed and statistically tested, the information from the customer expectations and importance ratings of service features was transferred to the next stage of the quality improvement programme. A QFD focus group, which comprised of seven staff members from different operational departments, was formed. Four focus group meetings were held between June and September 2005 in which staff reviewed the results of SERVQUAL surveys carried out between January and March 2005 and based on the customer feedback and staff comments through discussions, a House of Quality was completed. The results of House of Quality helped the focus group identify customer needs and operational requirements. The prioritised operational requirements based on the House of Quality calculations indicated the areas of service that needed immediate improvement in order to meet customers' expectations. Findings of the QFD:House of Quality results were discussed in relation to the literature regarding issues in tourism quality and attraction management.

Upon completion of the House of Quality, the results were reported to the top management. An interview with the general manager was conducted to seek feedback on the quality improvement programme and benefits generated within the organisation. It was recognised that identifying the 'key' factors and concentrating the resources on

these instead of giving all aspects of the service operations the same attention were critical to the business success. Only by doing so, can the company achieve high levels of customer satisfaction and service quality. The company should also concentrate attention and resources on the target market and their special needs, as customer expectations were proven different for certain demographic groups. The results of the principal case study show that the combination of the SERVQUAL and QFD quality assessment and improvement tools are feasible to SME tour operators like Tamaki Tours. The next chapter will demonstrate the application of the combined methodology in two other tourist attractions as complementary case studies.

4.8 Chapter References

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CHAPTER 5

COMPLEMENTARY CASE STUDIES – PARADISE VALLEY PARK AND BURIED VILLAGE

5.1 Introduction

The previous chapter has presented the full application of the SERVQUAL and QFD methodology in the principal case study in Tamaki Tours. This chapter describes the process and results of the combined research methodology in two other tourist attractions as complementary case studies. The findings from the pilot case studies undertaken in Paradise Valley Wildlife Park and the Buried Village reflect the patterns identified from the data. A variety of data analysis techniques were employed to explore the reliability of the data collected in these two attractions. The findings of the two case studies were also used as comparison with the principal case study in relation to the feasibility of the research methodology.

This chapter starts with the description of the background information for both organisations involved followed by the results of visitor and staff surveys and further linked the findings from SERVQUAL applications to the implementation of QFD. The results of the implementation were found supportive for the principal case study in adopting the SERVQUAL and QFD methodology as a quality service measurement and improvement tool for these tourist attractions. The experiments in data collection and analysis at different tourist sites have provided lessons and directions for the robust final implementation of the research methodology.

5.2 Background

5.2.1 Paradise Valley Wildlife Park

The second pilot case study undertaken in this project was the Paradise Valley Springs Wildlife Park, Rotorua (hereafter referred to as the Paradise Valley Park) - a natural attraction, to explore the feasibility of applying the research methodology. The focus of nature-based tourism is the study and/or observation of the natural environment (Douglas, Douglas, & Derrett, 2001). An important part of New Zealand's tourism

product is its range of natural environments and wild places. Wilderness can be found in Alpine ranges, volcanic peaks, native forests and mountain grasslands and herb fields (Kearsley *et al.,* 1999). Many tourists are attracted to New Zealand by the opportunity to observe animals, birds or flora. The Paradise Valley Park was selected as an example of nature-based attractions as it concentrated on the promotion of a "quiet natural environment" and relies on the natural environment to market its products.

The Paradise Valley Park is part of The Five Star Attractions in Rotorua, an alliance that allows visitors to buy a "Five Star" package and visit a range of attractions at a reduced cost. The associated attractions include the Agrodome Sheep Show, Whakarewarewa Thermal Reserve & Maori Cultural Centre, Polynesian Spa, and Skyline Skyrides Gondola (http://www.rotoruanz.com). The Five Star Attractions represent the best of Rotorua and each operator has received notable tourism awards for excellence.

Located in a native forest area, the Paradise Valley Park is one of the top tourist attractions in Rotorua. The wildlife park offers bush walks, native wildlife, trout and eels and a pride of lions. It also provides a traditional wooden colonial style coffee shop and souvenir shop at the entrance of the park. Paradise Valley Springs' open style park is well known throughout New Zealand and marketed as one of the finest trout and wildlife sanctuaries (www.paradisev.co.nz).

Opened as a trout sanctuary in 1939, the park has been owned by the present owners since 1975. Between the years of 1992 and 1997, major redevelopment throughout the park was undertaken. In 1996, the company won the "Operator of the Year" award from the Inbound Tour Operators' Council of New Zealand. Paradise Valley Park employs a staff team of 14 to 20 people, depending on demand. All staff are trained to company standards, which emphasise customer service.

As a nature-based tourist attraction, the company is subject to the quality control requirements of a regulatory framework imposed by several organisations. For example, the Ministry of Agriculture and Fisheries inspects annually and monitors the care and enclosure of the lions. The Department of Conservation issues permits to hold noxious animals such as the Thar, opossums and wallabies. All proposed development must pass

the planning approval required by the Resource Management Act in order to minimise any negative effects of the development undertaken. Occupational Safety and Health as well as ACC (New Zealand Accident Compensation Scheme) standards must also be adhered to meet the needs of staff and visitors alike. The Paradise Valley Park became a Qualmark endorsed attraction in October 2002, being assessed against quality standards for customer service, facilities and equipment, people, environmental and cultural aspects, general safety and welfare and overall business operations. Facing increasing competition and market demand, the company is striving to look for initiatives in the design of quality products based on customer needs and to apply a quality management system which is appropriate to the operation of a nature-based tourist attraction.

5.2.2 The Buried Village

Heritage tourism has become increasingly popular world-wide as more and more people seek information about the past, try to discover their 'roots' and to learn about their connection with the built heritage and the natural environment. Heritage tourism focuses on the historical manifestations of human activities in the past. Buildings, historical sites, paintings, monuments and so on are all components of heritage tourism (Collier & Harraway, 2003, p. 195). Heritage attractions can be found in a variety of shapes, sizes, and locations throughout the world. These attractions may range from a small community museum dedicated to preserving local settler memories and experiences to incredible feats of human ingenuity preserved in some monumental form that represent part of a society's industrial past - bridges, canals, factories and the like (Cook, Yale, & Marqua, 2002). The protection of indigenous artefacts and cultural activities, and the conservation of buildings, historic sites and townscapes have all become significant issues of conservation and management of heritage in New Zealand (Hall & McArthur, 1996, p. 2). The heritage sector has the potential to play an important role in New Zealand's overall tourism industry and its approach to heritage awareness and conservation (Warren & Taylor, 2001, p. 85).

The third pilot case study undertaken in this project was the Buried Village, which is located 15 km from the Rotorua City. The Buried Village is an historical site consisting of the old village of Te Wairoa devastated by the eruption of the Mt Tarawera in 1886. The original village was one of the earliest tourism centres in New Zealand. In the village tour, the visitors stroll through the excavations and see exhibits from the effects

of the eruption within a 12-acre archaeological site set in parklike grounds. The visitors also have the opportunity to view the Te Wairoa stream and waterfalls, and to go on a short bush walk around the nature trail. The village features a museum as well as a souvenir shop and the famous Te Wairoa Tea Rooms. The museum introduces visitors to the events and brings history alive today (http://www.buriedvillage.co.nz).

The Buried Village was purchased for farming purposes by the grandparents of the present owner in 1931. It was later developed from a tea-room to a museum, which attracts cultural and educational visitors from all parts of the world. The core business is the walk through the excavated village where visitors follow a meandering path through the park which is dominated by the old English trees that survived the eruption (http://www.rotoruanz.com). At present, the company employs eight full-time, seven part-time and nine casual staff members. The attraction won the New Zealand Tourism Award with the theme of Innovation in Culture and Heritage in 2001.

Since 1998, the Buried Village started to conduct visitor satisfaction surveys to improve service quality and its market competitiveness. The results of such surveys form the basis that influences management decisions. The company became a member of the Rotorua Sustainable Tourism Charter and is at the benchmarking level of Green Globe. Under these regulations, the outdoor components of the attraction must also comply with strict specifications laid down by the Regional District Council. In 2002, the Buried Village joined the Qualmark endorsement system, which is the New Zealand tourism's official quality mark. The trial application of quality management tools of SERVQUAL and QFD in this company has shown the organisation's initiative and strategies in constantly meeting customer satisfaction and improving the quality of service.

This chapter describes the process involved in the trial application of SERVQUAL and QFD in Paradise Valley Park and the Buried Village. It presents the results of the visitor and staff surveys conducted in 2002 using the modified SERVQUAL model and the implementation of QFD. The data analysis and interpretation of results show the effectiveness of the implementation of the quality assessment and improvement tools, which help the two tour operators to identify key areas of service improvement.

5.3 SERVQUAL Surveys Conducted in the Paradise Valley Park

A research proposal was submitted to the management of the Paradise Valley Park in June 2002. The research methodology and questionnaires were approved by the Massey University Human Ethics Committee (see Appendix E 2). A modified SERVQUAL questionnaire was designed based on the specific features and requirements of the company after the focus group discussions with management and staff of the attraction. The modified questionnaire consists of 23 questions which cover the five service quality dimensions as shown in Table 5.1.

Two surveys of visitors and management and staff of the Paradise Valley Park were conducted, the first in August 2002 and the second in October 2002 to see the changes in the visitor profile, customer expectation and satisfaction levels with the service offered by the tourist attraction for different months of the year. The survey questionnaire had three sections which included visitor profile, expectation and perception of service quality and the importance ranking of service features, respectively. The second SERVQUAL survey which was conducted in October 2002 used essentially the same questionnaire with minor alterations based on the management feedback from the first survey.

The population being studied in this case study was day-trippers who visited the attraction during the time of data collection. Due to the nature of the site, the sampling frame was unknown. Some visitors came without previous bookings. Consequently, probability sampling was not appropriate. Instead a convenience sampling technique was used to approach the visitors on a "next-to-pass" basis. According to Adams and Schvaneveldt (1991), convenience sampling is the most frequently used sampling strategy for a variety of pilot projects. The questionnaires were administered to visitors as they entered the park gate. The participants were asked to answer the visitor expectation section before the tour and complete the perception section after seeing all the activities on site. The questionnaires were collected before they left the park. The researcher remained in the park to answer questions raised by the participants, which also encouraged their response to the survey.

Table 5.1 Visitor survey questions relating to service quality in Paradise Valley Wildlife Park

Service Dimension		Service Quality Variables Features, Displays and Services
Tangibles (Physical facilities, equipment, and appearance of personnel)	1.	The physical appearance of the trout and wildlife park
	2.	The physical appearance of the native bush
	3.	The physical appearance of the lion pride
	4.	The information provided about the facility e.g. brochures, advertisement and programme information
Staff (Reliability) (Ability to perform the promised service dependably and accurately)	5.	The friendliness and courtesy of the staff and their politeness to visitors
	6.	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions
	7.	The staff gives prompt service
	8.	Staff inspires trust in visitors
Peripheral Service (Responsiveness) (Willingness to help customers and provide prompt service)	9.	Visitors feel comfortable during their visit, e.g. enough space, good quality of walkways and free umbrellas
	10.	The pricing and range of refreshment in the coffee shop are reasonable
	11.	The pricing and range of products in the souvenir shop are reasonable
	12.	The park design is environmentally friendly and ecologically sound.
	13.	Toilets are provided and are clean
Access (Assurance) (Employees' knowledge and courtesy and their ability to inspire trust and confidence)	14.	There is easy access for visitors with wheelchairs, prams and young children
	15.	Signs inside and outside the park are adequate
	16.	The booking system is prompt
	17.	Tour hours are convenient
	18.	The waiting time between the activities is reasonable
Core Service (Empathy) (Caring employees' individualised attention to customers)	19.	The wildlife and nature-based tour is authentic
	20.	The whole experience is enlightening and educational
	21.	The guided tour in the bush is informative and understandable
	22.	The whole tour is value for money
	23.	The content and length of the activities are appropriate for a day tour

The sample size was determined based on the average daily tourist numbers that came to visit the park during the particular season of the year in which the survey was carried out. In the first survey, 60 visitor questionnaires were distributed, a total of forty-six questionnaires were completed and returned, representing a valid response rate of approximately seventy-seven per cent. In the second visitor survey, 80 questionnaires were distributed and a total of sixty-four questionnaires were completed and returned, representing a valid response rate of approximately eighty per cent. 14 of the 20 full-time staff members participated in the surveys by completing the staff questionnaires.

5.4 The Results of SERVQUAL Surveys – Paradise Valley Park

The results of the SERVQUAL surveys contain data collected from the two surveys conducted in Paradise Valley Park. Gap analysis was used to present the data on customer expectation and perception and the staff's understanding of service quality importance and their view on customer expectations. This was followed by the description of staff knowledge of the availability of the quality standard. Visitor demographic information was then illustrated. The gap analysis of the two samples was compared from Section 5.4.1 to Section 5.4.3.

5.4.1 Gap analysis of visitor expectations and perceptions

Figure 5.1 shows the visitor expectation - perception gap for both the August and October surveys. Detailed figures are given in Appendix B 5 and Appendix B 9. Both surveys presented a positive pattern of visitor satisfaction, as the majority of the visitor perception scores were higher than that of their expectations.

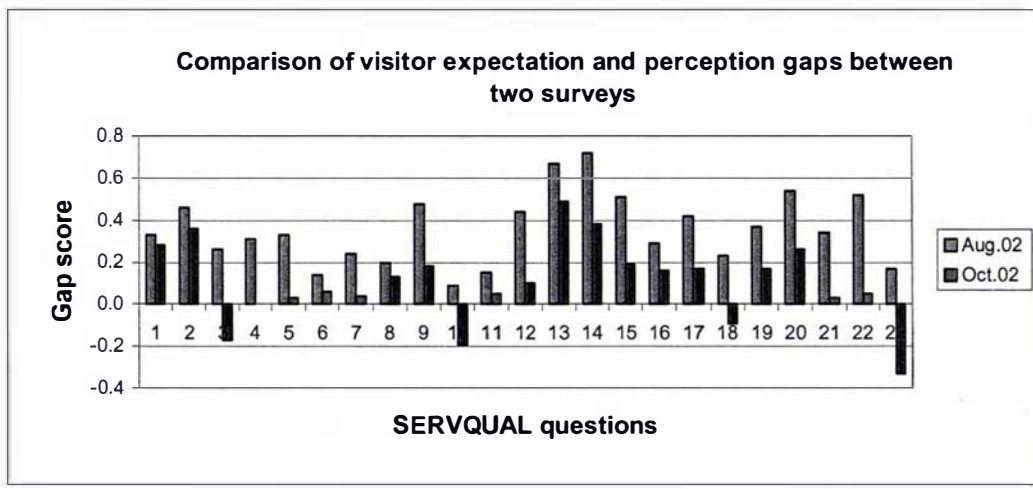

Figure 5.1 Difference between visitor expectation and perception

There were negative gaps in the second visitor survey (Q3, Q10, Q18 and Q23). Both of the visitor groups surveyed were more satisfied with the service offered in the peripheral service (Q13) and access (Q14, Q15, Q16 and Q17) as well as the physical appearance of the wildlife and native bush. The second survey also showed a relatively low level of visitor satisfaction in the area of core service and staff reliability. These negative scores have indicated areas that may need to be addressed in order to meet customer expectations.

5.4.2 Gap analysis of staff view of importance of quality and visitors' expectations

Management and staff surveyed ranked the service dimensions as "important", "very important" and "extremely important". Figure 5.2 shows the gap between staff ranking of importance and the visitor's expectation for both surveys. It should be noted that the results for both surveys follow a similar pattern. For example, service features that are considered as "extremely important" are:

- The physical appearance of the trout and wildlife park, (Q1).
- The friendliness and courtesy of the staff and their politeness to visitors, (Q5).
- The staff gives prompt service, (Q7).
- Toilets are provided and are clean, (Q13).

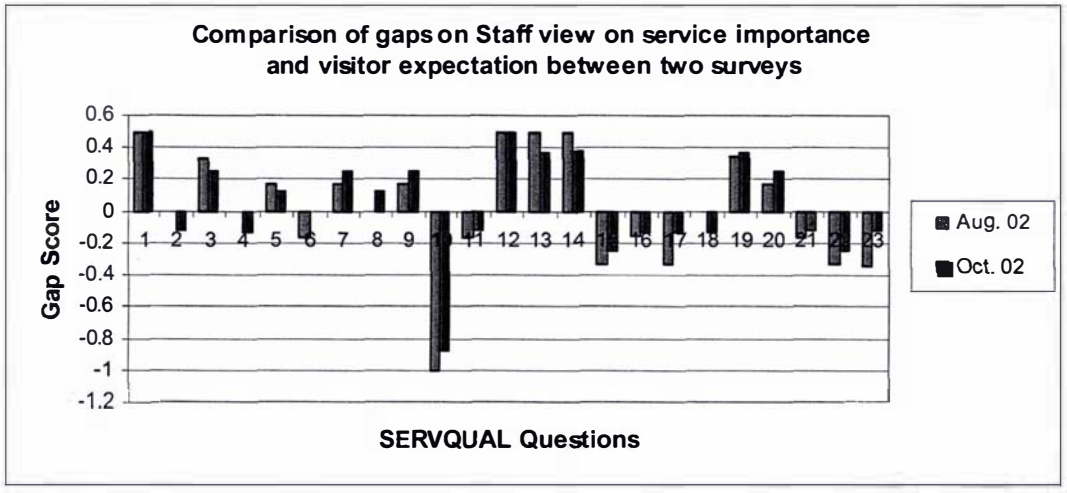

Figure 5.2 Staff importance - expectation gap

In general, the staff survey shows that the management and staff of Paradise Valley Park had placed high importance in most areas of services they offer. As shown in Figure 5.2, the priority was given to the service dimension of tangibles, reliability and responsiveness. The comparison of gaps between staff view of the importance of service quality and their understanding of customer expectations shows a large number of small negative gaps between staff views of importance of service quality and their understanding of customer expectations. The negative gaps were identified in the service areas relating to Q6, Q10, Q11, Q15, Q16, Q17, Q21, Q22, and Q23. These negative gaps indicate that staff and management did not rank the service areas as important to the visitors as they thought the customers might have expected. They have

placed lower importance on these features, as compared with the customer expectations (Liu, Smith, & Barnes, 2002).

Despite the negative gap scores demonstrated above, the survey shows positive gaps for the majority of the service features between staff view of service importance and their understanding of customers' expectations. The positive gaps were demonstrated for the service features relating to Q1, Q3, Q12, Q13, Q14, and Q19 (see Appendix B 7 and Appendix B 11) indicating that staff perceived these areas as more important than customers.

5.4.3 Gap analysis of expectation of service quality

The gap scores of expectation of service quality were obtained using the average of the measured visitors' expectation scores deducted from the staff's perception of visitors' expectation. As shown in Figure 5.3, the overall gap scores were positive which means the Paradise Valley Park staff's perception of their visitor's expectation was higher than the customers had expected. The only negative expectation gap was found in the area of tangible variables - "The information provided about the facility e.g. brochures, advertisements and programme information", (Q4).

Figure 5.3 Gap between staff view of visitor expectation and customer expectations

The negative gap indicates that the actual visitors' expectation for this particular service feature was higher than staff and management's understanding of customer expectations (see Appendix B 6 and Appendix B 10). In both surveys, in general the pattern was

similar with the exception of Question 16 (The booking system is prompt) and Question 22 (The tour is value for money) where the two surveys show a marked difference.

5.4.4 Staff knowledge of the availability of service quality standards

As part of the survey, management and staff of the Paradise Valley Park were asked to indicate their knowledge of the availability of service quality standards and procedures that exist in the company. The results were as shown in Figure 5.4. The frequency distribution of staff responses showed that a large number of staff were aware of the existence of written service standards, while informal and formal standards were also seen to be available in different operational areas. This result indicates that the current quality service standard was not clearly understood by all (See Appendix B 12 and Appendix B 13). It also implies that internal communication needs to be improved in order to ensure the implementation of a quality management programme at a company level. Developing and implementing a well-documented quality system as Besterfield *et al.* (2003) suggested was an essential internal tool in order to deal with the external pressure of meeting quality marks.

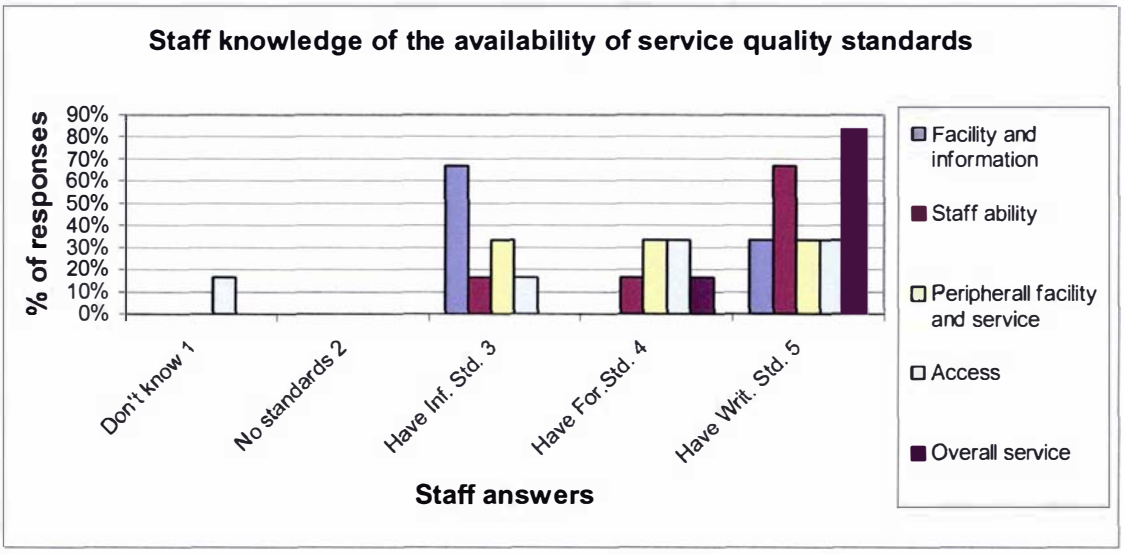

Figure 5.4 Staff knowledge of the availability of quality standards

5.4.5 Comparison of customer importance ranking of quality importance

Figure 5.5 shows the importance ranking of the SERVQUAL questions by the visitors. The results of the two surveys have shown a very similar pattern in the importance rating, with the exception of Q9, Q10, Q11, Q12, Q16, Q17, Q18, and Q20. These importance rating scores imply that although features in all the five service dimensions

were considered as important to the visitors' experience, customers have identified different values to each particular area of service.

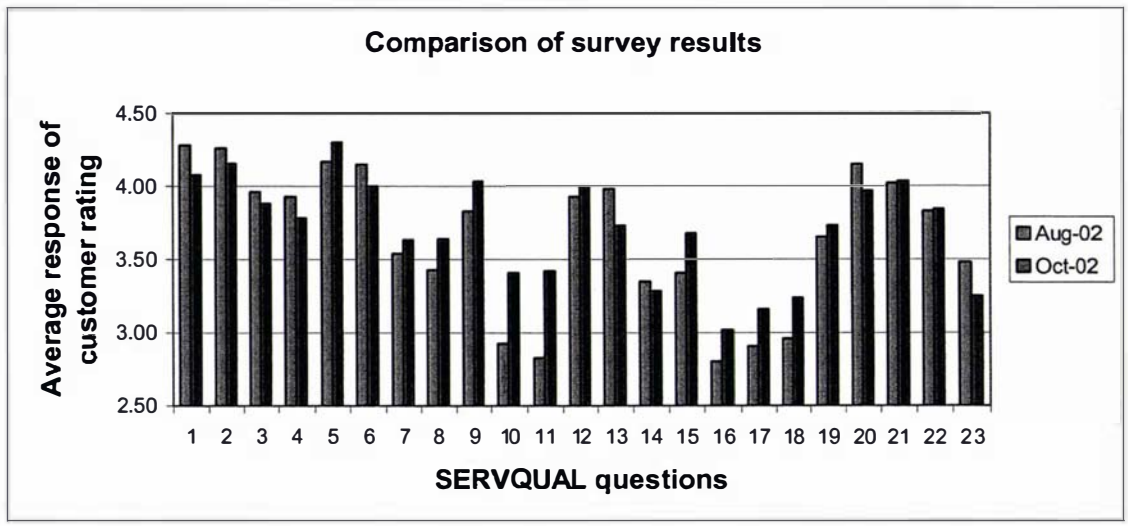

Figure 5.5 Comparison of customer ranking of service importance

Overall, these relative rankings of importance indicated the requirements of customers, which should prove useful to the management team for the company's product design and the establishment of improvement priorities. The reliability and consistency of the importance rating results are tested in Section 5.5.2.

5.4.6 Demographic distribution of respondents

According to Kotler *et al.* (1999, p. 243), one of the important elements of a customer survey is to identify the demographic segmentation for the tourist attraction by dividing the market into groups based on demographic variables such as age, gender, occupation, education and nationality. This is because consumer needs, wants, and use rates often vary with demographic variables and, therefore, demographic characteristics can be used to assess the size of the target market and to reach it efficiently. Comparison of the demographic characteristics with the responses to the surveys in Paradise Valley Park was made to see the possible changes between the two visitor surveys conducted in August and October 2002. The demographic information of the visitors surveyed is described below.

As displayed in Appendix B 21, the majority of the respondents came from New Zealand (48% and 39%), followed by Taiwan and Korea. There were also visitors from

other parts of the world such as Australia, South Africa, Canada, and England. In general there were more visitors from Asia in August than in October 2002.

The results of both surveys show that most of the visitors surveyed are first-time customers with the minority being returned customers of the attraction and there is little difference between the two surveys. The most important difference between the two surveys was that more respondents came with organised groups in the second survey (11%) as compared with the first one, but as with other demographic variables the differences between the two surveys were relatively small. A small number of the respondents in the first survey also came for other reasons such as a group/family gathering. The largest number of visitors surveyed were aged between 40-44 years old (20%) followed by the age group of 20 to 24, 30 to 34, 35-39. Less than 5% of the participants were over 50 years old. There were notable differences in the distribution for the two surveys in the age groups of 45 to 49, 30 to 34 and 20 to 24.

While the majority of the visitors surveyed were students and professionals, there were also a large number of participants from the areas of management and sales/services. The minority of visitors surveyed were those who are working in agriculture, or retired or those who were unemployed. The two surveys show a different distribution of occupational areas in management and technical workers. The results indicate that the majority of the visitors who came to the park were well-educated. A large number of the visitors surveyed came to Rotorua for holiday purposes (77% and 80%). Around 10% of the visitors came for visiting friends and relatives and for business purposes, respectively. A small number of the respondents came for other reasons such as a study trip.

The majority of the respondents got to know about the tourist attraction through word of mouth, brochures, and the information centre in Rotorua. More visitors in October learned about the tour from advertisements than those in August. Only a small percentage of respondents found the attraction through reading road signs and visiting the company's website. Both surveys found a slightly larger proportion of male participants.

Overall, the two visitor samples surveyed have shown very similar patterns of demographic characteristics. The balance between international and domestic tourists to the Paradise Valley Park was 57% to 43%. The park attracts visitors with families within a wide range of age groups and most of them have a high level of education. The majority of the respondents learned about the attraction through word of mouth, brochures, advertisements and the Rotorua Information Centre. It should be noted, however, that neither of the surveys were carried out in the high visitor seasons. To attempt to explain the within-sample variation in the survey results of customer expectation and perception, an analysis of the data by demographic variables such as ethnic groups was undertaken in Section 5.5.3.

5.5 Data Analysis of SERVQUAL Results – Paradise Valley Park

After exploring the specific values of customer expectation and perception and the trends over time for the two surveys using gap analysis, the data of SERVQUAL surveys was further examined to see the consistency of responses and the reliability of the findings. Weighted gap analysis was employed by multiplying each of the 23 questions by their relative importance ratings. As a result, the gap with higher importance weightings was more relevant than those with lower importance weightings. The sample was then divided into two groups to find out the possible variances. The degree of dispersion among the scores for each question was calculated by using the measure of range. If the split-half sample results were very similar, they were considered as homogeneous (have low variability). Even though a measure of central tendency, such as the mean gap scores, provide a numerical index of the average score in a group, it is important to know the variability of the scores to better understand the entire group of values (Huck, 2004, p. 34).

5.5.1 Weighted customer gap split sample analysis

The results of the split sample analysis as displayed in Figure 5.6 and Figure 5.7 show the pattern of weighted gaps between visitor expectation and perception for the two split survey groups (see Appendix B 14 and Appendix B 15). All the gap results in August were positive. For example, for Q7, Q8, Q9, Q11, Q12, Q13, Q17, Q19 and Q23, almost every respondent agreed that their expectations had been met. There was a wide variation between the highest and lowest weighted gap scores for Q1, Q2, Q3, Q4, Q5,

Q18 and Q21. Although Q4 and Q17 show the same mean score, their variability was quite different. This indicates that the level of satisfaction was different for at least some of the respondents, although overall the average scores were positive. In these questions in particular, some respondents had a higher expectation than the others from the same group. The within-survey variation seemed to be greater than the between-survey analysis shown in Figure 5.1. The weighted gap scores for Q21 showed a zero for the split-half sample analyses. This means that the average results of the two groups are essentially the same.

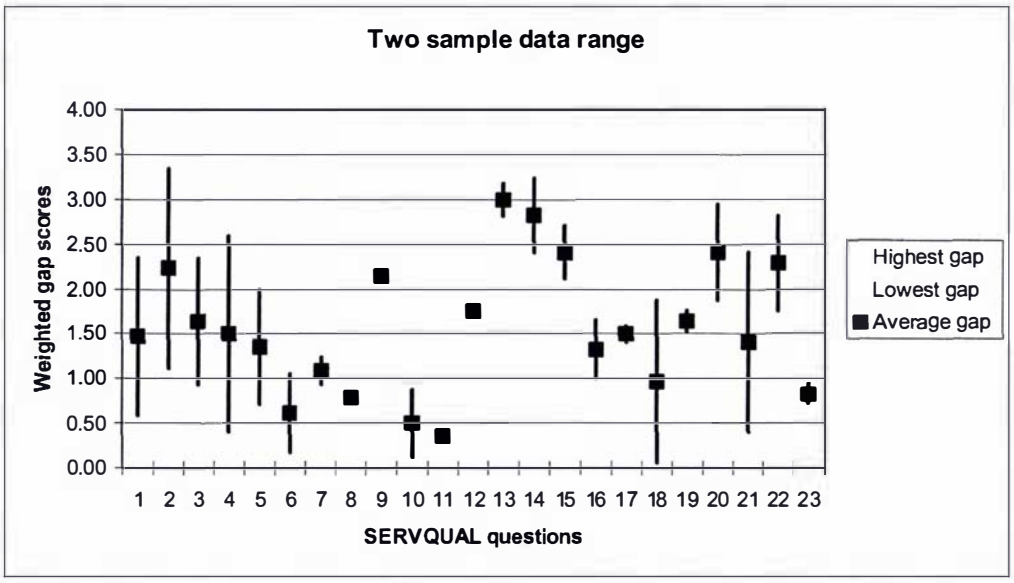

Figure 5.6 Weighted gap comparisons - August 2002

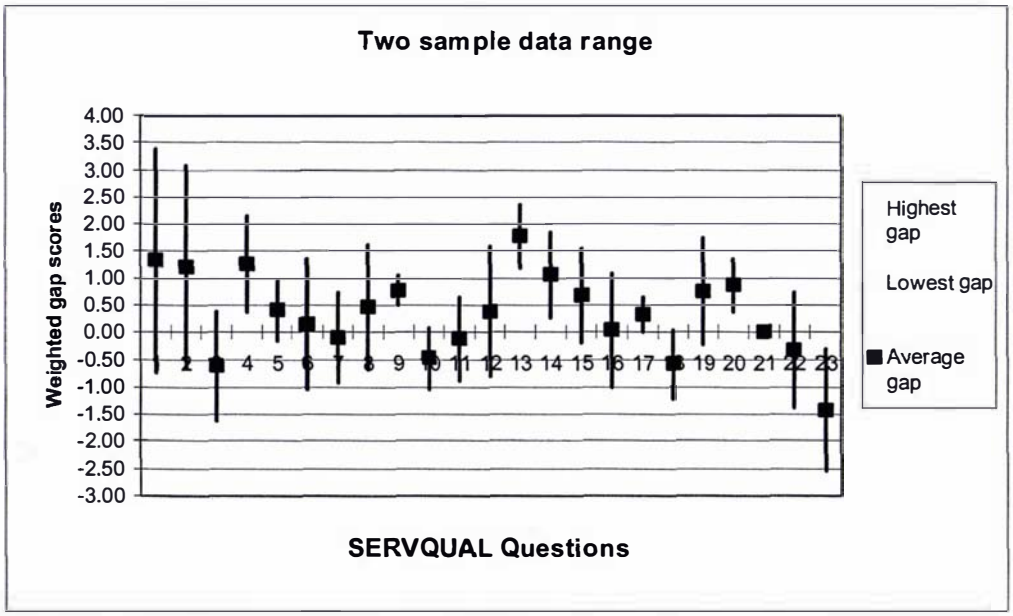

Figure 5.7 Weighted gap comparisons - October 2002

5.5.2 Average visitor importance rating split sample analysis

The consistency of the visitor importance rating data was also tested as described in the methodological chapter. The high-low and average charts in Figure 5.8 and Figure 5.9 show the distribution of the responses for each of the two surveys. For example, the two groups responded almost identically on Q 4 and vary widely on Q 14. Compared with the August survey results, the data distribution of the visitor importance ratings in October was somewhat similar. For instance, the service features which were rated as "very important" were Q1, Q2, Q5, Q6, Q9, Q12, and Q21. While the majority of the SERQUAL items were rated as "important" on average, there were small variances in the responses of Q14, Q16, Q17, and Q18. This indicates that although some of the respondents in the group thought these aspects of service features were "important" to their experience, the others might think this dimension (access/assurance) was only of "some importance" to their experience at the attraction visited.

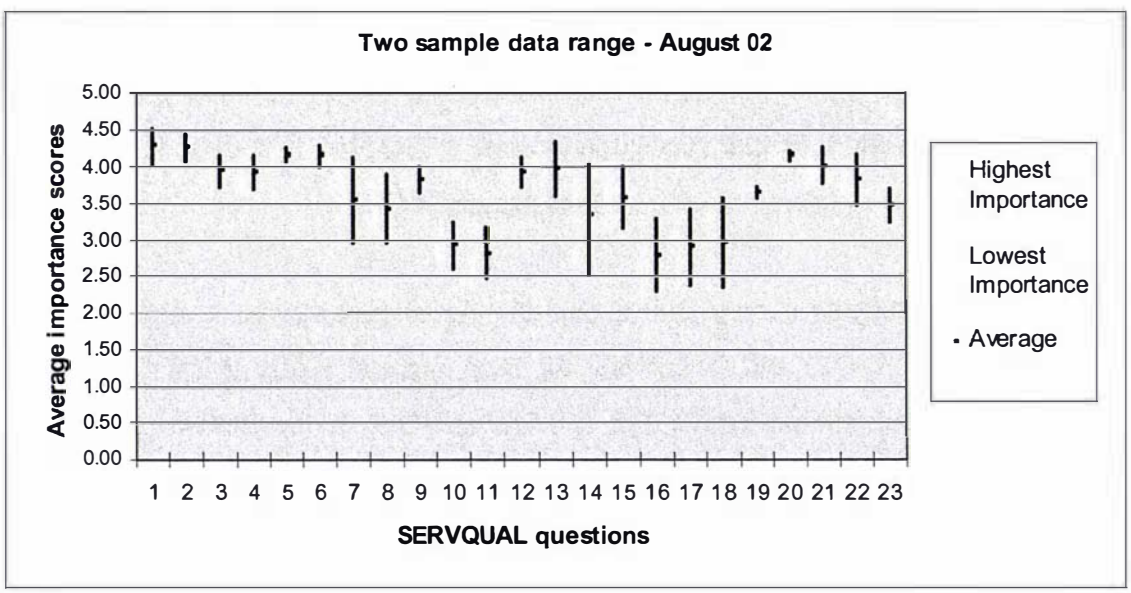

Figure 5.8 Average visitor important rating (August 2002)

As with the results obtained from the August survey, the average scores of visitor importance for the split groups were very similar to that of the total sample group in October (see Appendix B 8 and Appendix B 20). This means that the visitor importance results are relatively consistent.

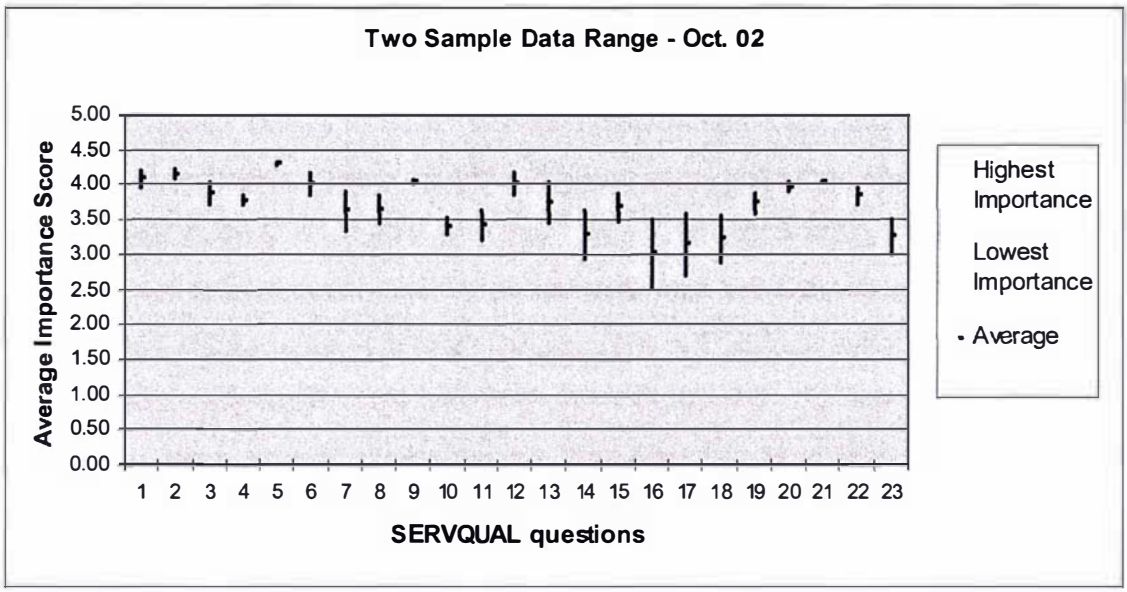

Figure 5.9 Average visitor importance rating (Oct. 02)

5.5.3 Customer expectation and perception gap analysis by ethnicity

The total set of responses for the August survey was divided into two groups according to the major respondent countries of origin (see Appendix B 16) to test the variations in the results of visitor expectation and perception described in the previous gap analysis. The average gap results for the survey conducted in October were divided into three groups for the same comparative analysis (see Appendix B 17).

The data in the August survey shows that the Asian group have a slightly lower expectation for Q16, Q17 and Q18, while the New Zealand visitor group displayed a relatively higher expectation for Q2, Q5, Q7, Q8, and Q12. In the October survey, the New Zealand group indicates higher expectation for Q4, Q12, Q15, Q19, Q22, and Q23 than the other two ethnic groups. However, this group shows a lower perception for Q1, Q2, Q4, Q20, Q21 and Q22 in August, but Q14 only in the October perception result.

In general, the ethnic groups' responses follow similar patterns between the two surveys and the variation in responses for each question in either survey is not consistent with the variation in the split sample analysis, perhaps suggesting that ethnicity is not causing the inconsistency. The statistical significance of these data should be tested further to ensure the rigour of the sample results. However, in this pilot survey, the small sample size did not allow the use of more sophisticated statistical analysis.

5.6 SERVQUAL Surveys Conducted in the Buried Village

An initial letter was mailed to the manager of the Buried Village introducing the research project and inviting their participation in the study in June 2002. A modified SERVQUAL questionnaire was designed, based on the specific features and requirements of the company (see Appendix C 1). The modified questionnaire consists of 22 questions, which cover the five service quality dimensions as shown in Table 5.2.

Table 5.2 Visitor survey questions relating to service quality in the Buried Village

Service Dimensions		Service Quality Variables Features, Displays and Services
Tangibles (Physical facilities, equipment, and appearance of personnel)	1.	The physical appearance of the museum
	2.	The physical appearance of the on-site displays
	3.	The physical appearance of the village setting
	4.	The information provided about the village e.g. brochures, advertisements and programme information
Staff (Reliability) (Ability to perform the promised service dependably and accurately)	5.	The friendliness and courtesy of the staff and their politeness to visitors
	6.	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions
	7.	The staff gives prompt service
	8.	Staff inspires trust in visitors
Peripheral Service (Responsiveness) (Willingness to help customers and provide prompt service)	9.	Visitors feel comfortable during their visit, e.g. enough space, and good quality of walkways
	10.	The pricing and range of refreshment in the tea room are reasonable
	11.	The pricing and selection of products in the souvenir shop are reasonable
	12.	The path design is environmentally friendly and ecologically sound.
	13.	Toilets are provided and are clean
Access (Assurance) (Employees' knowledge and courtesy and their ability to inspire trust and confidence)	14.	There is easy access for visitors with wheelchairs, prams and young children
	15.	Signs inside and outside the complex are adequate
	16.	The booking system is prompt
	17.	Tour hours are convenient
	18.	The buried village and nature-based tour is authentic
Core Service (Empathy) (Caring employees' individualised attention to customers)	19.	The whole experience is enlightening and educational
	20.	The guided tour is informative and understandable
	21.	The whole experience is value for money
	22.	The content and length of the activities are appropriate for a 2-hour tour

The population for this case study was the visitors who came to the museum on a randomly selected day. The sampling frame was based on the booking list for the business day the survey was to be conducted. The visitors were approached before they started the museum tour and were asked to fill in the expectation section of the survey before experiencing the exhibits. The participants took the survey during the village tour and were asked to complete the perception section when they came back to the tea room which is located at the exit point of the museum. This sample selection approach meant that all the visitors who came back from the tour had an equal chance to participate in the survey. The questionnaires were collected before the participants left the attraction. The researcher administered the survey on site which enhanced the response rate. However, due to limited time available to conduct the survey, the sample size was rather small to represent the overall visitor population to the museum.

The first survey of visitors, management and staff of the Buried Village was conducted in September 2002. A total of 80 questionnaires were distributed to visitors to the village on a randomly selected business day. Of the 80 surveys distributed, a total of sixty-six questionnaires were fully completed and returned, to yield a usable response rate of approximately eighty-three per cent. A survey of management and staff was conducted on a voluntary basis. Eight of the 14 full-time staff members participated in the survey by completing the staff questionnaire, which consisted of questions concerning staff understanding of service importance and customer expectations, as well as staff knowledge of the performance standards of the company (see Appendix C 2).

The second SERVQUAL survey was conducted in December 2002 using the modified SERVQUAL questionnaire with minor alterations based on the company's feedback on the first survey. The main purpose of a repeat survey is to identify the trends in changing visitor profiles and identify any changes in customer expectation and their satisfaction of the service offered by the tourist attraction over different months of the year. It also aims at testing the reliability of the results through the comparison of the two surveys. A similar target sample of 80 visitors was targeted for the repeat survey. A total of sixty questionnaires were completed and returned, representing a valid response

rate of seventy-five per cent. The management and staff survey was not repeated in December since the first survey was carried out only two months previously.

5.7 The Results of SERVQUAL Surveys – Buried Village

To test the reliability of the survey results and determine variations in the findings from different surveys, comparisons were made between the two surveys conducted in the Buried Village. The purpose of the comparison was to identify the possible differences in visitor expectation and perception gaps, staff views on importance of service quality and their understanding of visitor expectation, as well as the different levels of visitor importance rating over time.

5.7.1 Gap analysis of visitor expectation and perception

Figure 5.10 and Figure 5.11 show the average visitor expectation and perception values for the two surveys conducted in the Buried Village. Detailed data is given in Appendix C 3 and Appendix C 7.

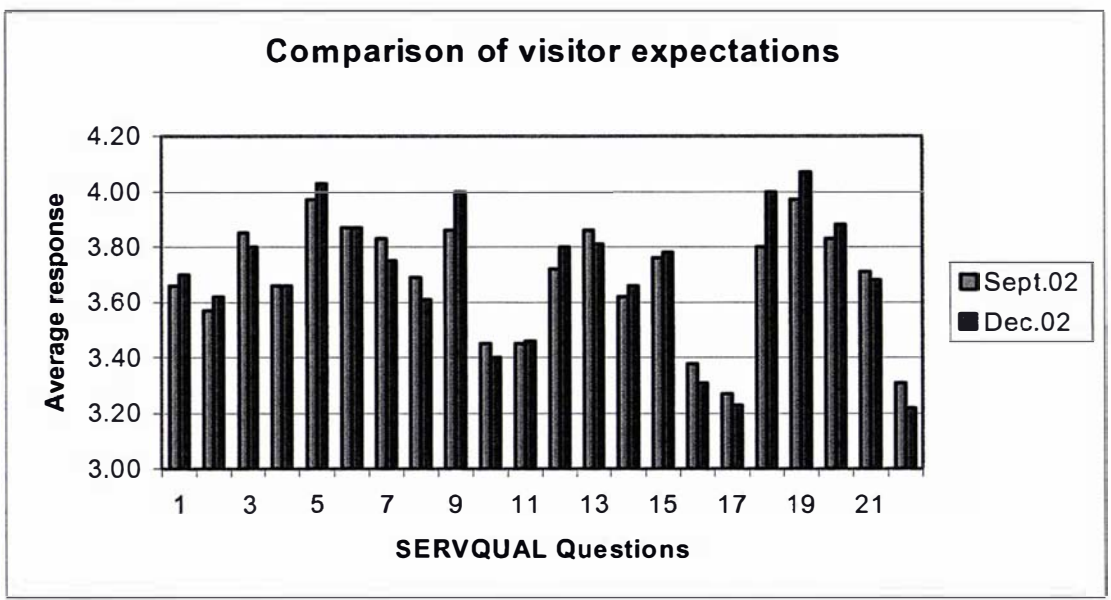

Figure 5.10 Average visitor expectations

The results of the two surveys presented a very similar pattern. Most of the gaps were positive for the majority of the SERVQUAL questions with the exception of Q3 (The physical appearance of the village setting) and Q14 (There is easy access for visitors with wheelchairs, prams, and young children). This means that visitors surveyed were satisfied with almost all service features provided by the Buried Village, although there

was slight variance in the range of gap scores for individual survey items. For example, the two negative visitor expectation and perception gaps were bigger in December than that of the September responses. Some of the positive gap scores in December were bigger than those that appeared in the September results. This indicates that the respondents of the December group were more satisfied with the attraction.

The features and services with negative gap scores are "the physical appearance of the village setting", -0.02 (Q3) and "there is easy access for visitors with wheelchairs, prams and young children", -0.04 (Q14). These negative scores indicate that visitors were not satisfied with the facilities and services offered or their perception of the service was below their expectations. The results of the two visitor surveys indicate that the physical appearance of the village setting and the access for visitors with wheelchairs, prams and young children are the areas for improvement. The results also show that although the majority of the perception scores are positive, there are scores that are very close to zero and only just above the visitors' expectations.

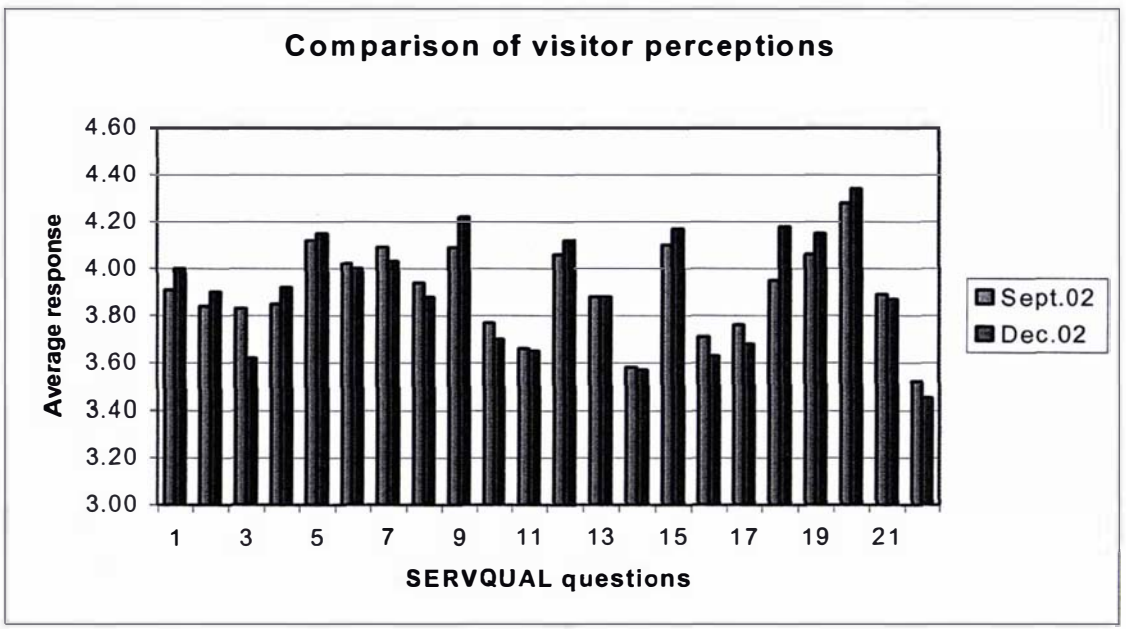

Figure 5.11 Average visitor perceptions

5.7.2 Gap analysis of staff views on importance of quality and visitors' expectations

In general, the staff survey shows that the management and staff of the Buried Village placed a high importance in most areas of the services they offer. As shown in Appendix C 5, the priority order was Tangibles, Reliability, Empathy, and Assurance as well as Responsiveness service dimensions (see Figure 5.12).

The staff survey also included the staff's view on the visitors' expectations of the service delivered. A comparison of gaps between the staff's view of the importance of service quality and their understanding of customer expectations was made based on the average results of the staff survey. The gap scores show a large number of small negative gaps between staff views of the importance of service quality and their understanding of customer expectation.

The negative gaps (-0.25) were shown in the following areas:

1). The tour hours are convenient, (Q17).

2). The booking system is prompt, (Q16).

3). The content and length of the activities are appropriate for a 2-hour tour, (Q22).

4). The path design is environmentally friendly and ecologically sound, (Q12).

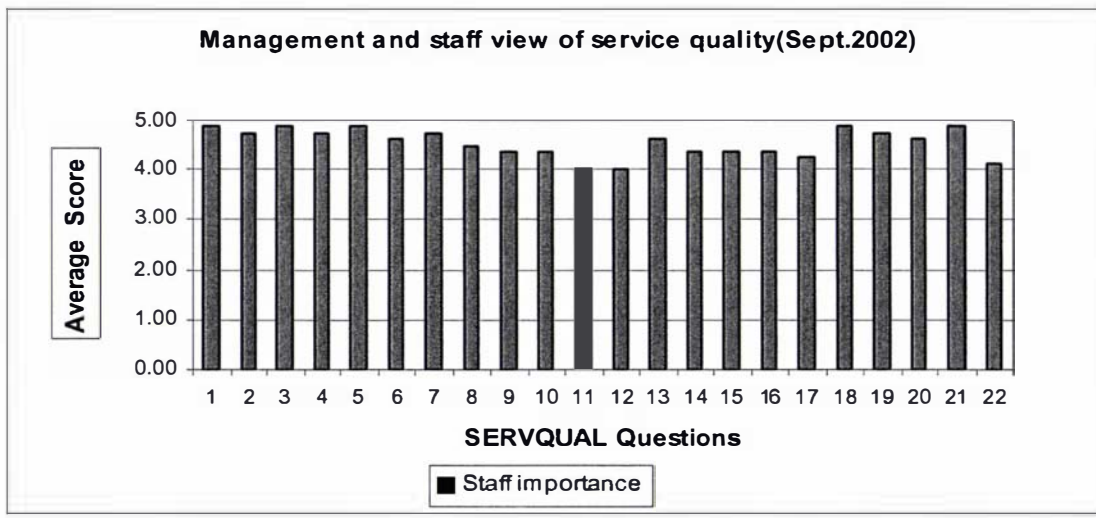

Figure 5.12 Staff view of service importance

As shown in Figure 5.13, the negative gap score of -0.13 was indicated in "the pricing and selection of products in the souvenir shop are reasonable", (Q11). Other areas with a negative score of -0.12 include "the friendliness and courtesy of the staff and their politeness to visitors"(Q5), "signs inside and outside the complex are adequate" (Q15) and "the guided tour is informative and understandable", (Q20). These negative gaps indicate that staff and management did not rank the service areas as important to the visitors as the customers might expect. It means that staff placed lower importance on these features, as compared with customer expectations.

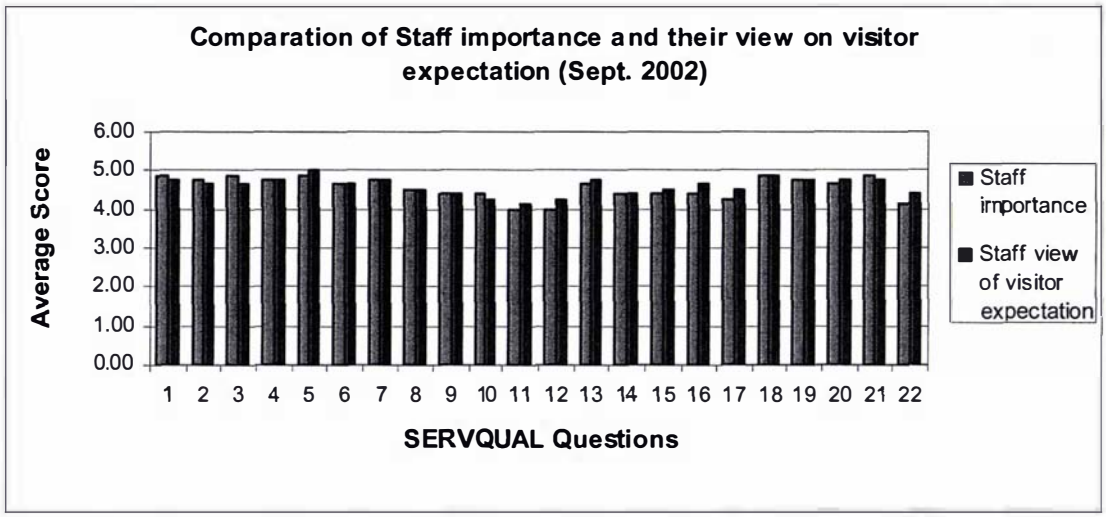

Figure 5.13 Comparison of staff views on service importance and visitor expectations

Despite the negative gap scores outlined above, the survey shows positive gaps for some of the service features between the staff's view of service importance and their understanding of customers' expectations. These service dimensions include Q1, Q2, Q3, and Q21.

5.7.3 Gap analysis of expectation of service quality

The comparison of staff understanding of visitor expectation and the measured expectation gap results obtained from the two surveys shows a very similar pattern. As shown in Figure 5.14, all the gaps were positive, which means that the staff of the Buried Village had a clear understanding of customers' expectations. However, both surveys have also shown the relatively low positive scores in the areas of peripheral service (see Appendix C 4). For example, staff views on the expectation of "the visitors feel comfortable during the tour" (Q9) and "the path design is environmentally friendly and ecological sound" (Q12) were not as high as the other service features.

This result also suggests that tourists to an historical and nature-based tourist attraction like the Buried Village were more concerned about the natural environment and their expectations for the quality of the physical environment tend to be higher than that the tour operators could estimate.

Figure 5.14 Comparison of staff and visitor expectation gaps

5.7.4 Staff knowledge of the availability of service quality standards

As part of the survey, management and staff of the Buried Village were asked to indicate their knowledge of the availability of service quality standards and procedures that exist in the company. The results are shown in Appendix C 9 and Figure 5.15.

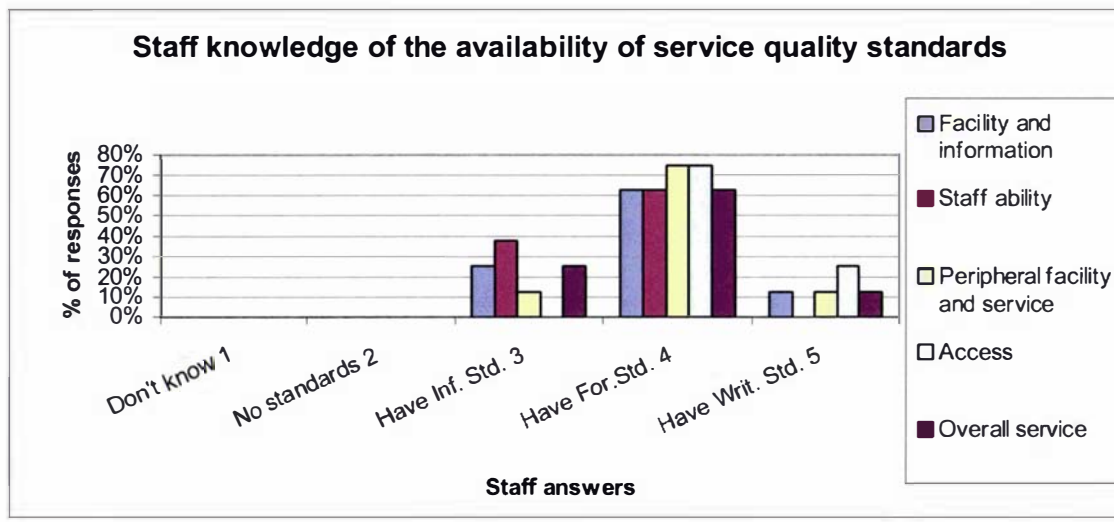

Figure 5.15 Staff knowledge of the availability of service quality standards

The results of the staff survey show that the knowledge of service quality standards was not shared equally among the staff in the Buried Village. Therefore, education and training are needed with regard to the current quality management policies. This is because one of the most important ways to improve service quality is to set service

standards and goals and then communicate them to employees (Kotler, Bowen, & Makens, 1999).

5.7.5 Comparison of customer importance ranking of service importance

In the two visitor surveys conducted in the Buried Village, the respondents were asked to identify the relative importance of service dimensions to their experience in Section 3 of the questionnaire. The mean importance rating was obtained from the total responses of each survey to see the priorities of service quality set by the customers (see Appendix C 6). These average importance ratings are important to help the company establish service quality standards based on customers' feedback. The average scores of relative importance of service features to the visitors' experience were displayed in Figure 5.16, where a scale of 1 to 5 was used to describe the level of importance, and where 1 stands for the least important, 2 - little important, 3 - some important, 4 - very important and 5 - extremely important.

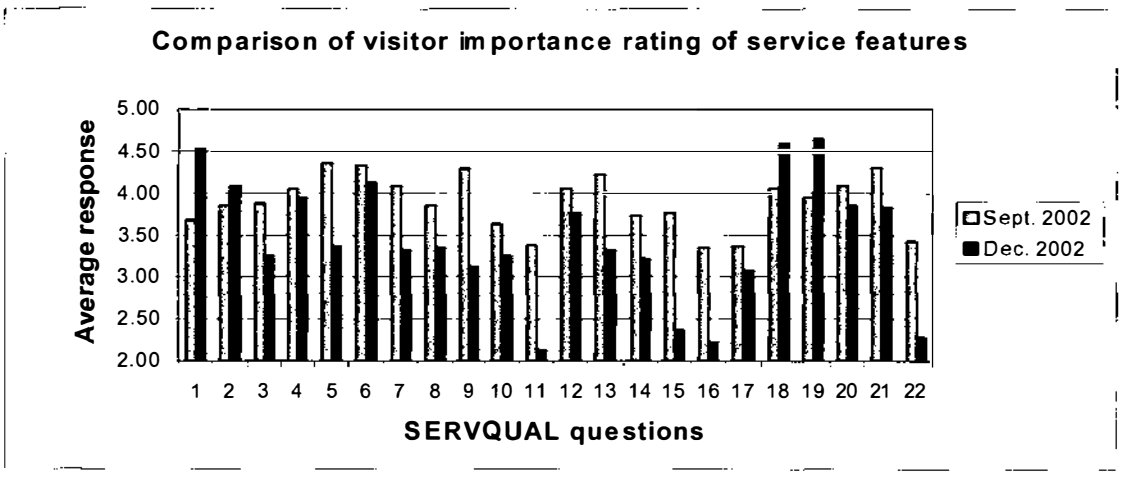

Figure 5.16 Comparison of visitor importance rating of service features

According to the first group of respondents, service features that ranked "very important" to the visitors' experience are Q4, Q5, Q6, Q7, Q9, Q12, Q13, Q20, and Q21. Respondents from the second survey ranked Q1, Q2, Q6, Q18 and Q19 as "very important". These scores indicate the scale and range of those critical factors influencing visitors' perceptions. The examples are the reliability aspect of the staff, the empathy dimension of the tourist attraction, some aspects of tangible features as well as responsiveness in peripheral services such as the path design and the cleanliness of the toilets.

The importance rating levels are varied for different service features in the two surveys. These variations may be produced by differences in the personal experience and cultural background or age of the respondents. The average importance ratings of the two samples were used as the general criteria to be adopted in the application of QFD (see Figure 5.17). The reliability of the data was also tested as discussed in Section 5.8 for internal consistency.

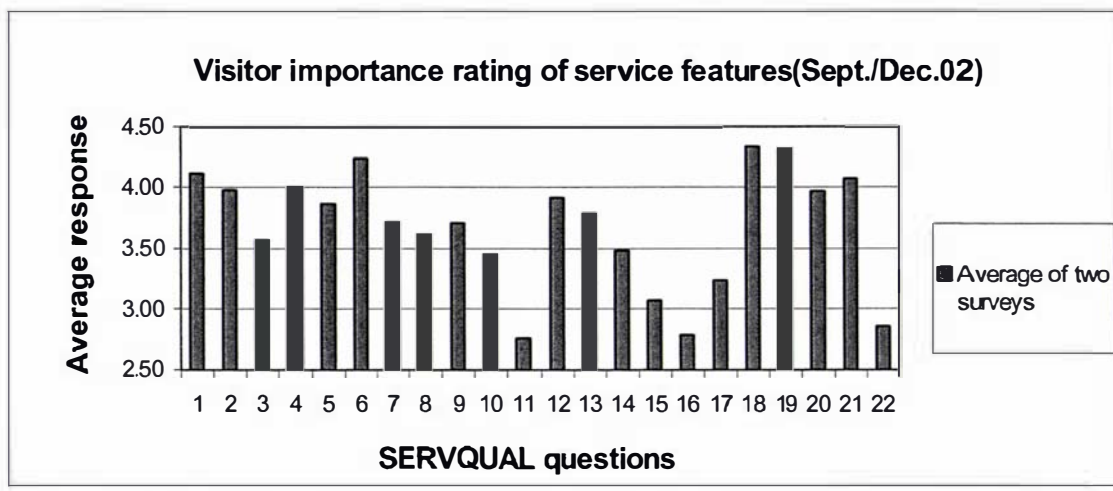

Figure 5.17 Average customer's rating of service importance

5.7.6 Demographic distribution of respondents

The profiles of visitors to the Buried Village were analysed through comparison of the two survey results (see Appendix C 17). The overall demographic information of visitors surveyed is described below.

The majority of the visitors surveyed in September and December 2002 came to the attraction for the first time (68% and 65%, respectively). Over one third of the respondents in December had been to the museum 2-3 times, while this accounted for 23% in the first survey group. In both surveys, only a small number of the visitors came for more than four times (2%), however, 8% of the respondents in the first survey came to the attraction more than 6 times. It can be seen, however, that most of the visitors surveyed are first-time customers of the Buried Village but there was a considerable number of repeat customers.

More than half of the visitors surveyed came to the attraction with their family. Visitors who came with friends account for 21% and 18%, respectively. Some visitors came with organised groups (26% in September and 13% in December). Around 17% of the

respondents in December came alone while around 2% of the respondents in September came with others such as a colleague. This result indicates that the Buried Village attracts a market of families, the VFRs (Visiting Friends & Relatives), as well as the FITs (Free Independent Travellers). The largest visitor groups surveyed came to the Buried Village for sightseeing (36% and 38%), followed by "to learn something" (37% in December and 27% in September). "To see a particular activity" such as the waterfall accounts for 17% in December and 8% in the first survey. 12% of the respondents in the first survey came for other reasons such as a study tour.

The two visitor surveys show a wide spread of age groups. In September, the largest respondent group was people aged 20 to 24 (36%) followed by 50-54 (12%). In December, the largest age group was the 60 and above (15%), followed by 40-44 (13%). Overall, the Buried Village attracts visitors of different age groups. The most notable differences between the two surveys were in the numbers of students and retired people.

In terms of level of education, both surveys have shown a relatively high educational attainment of the respondents. The September survey had a wider range of countries of origin. While the Buried Village attracted people with different nationalities, both surveys show a high rate of visitors from New Zealand (44% and 37%, respectively). Australia was the next largest group (14% and 12%). 24% of the September respondents came from China, while 15% and 8% respondents in December came from England and the USA, respectively. There were also a small number of respondents came from Korea, Taiwan, Germany, Italy, Scotland, Ireland, Russia and Switzerland. Each country accounted for less than 7% of the total visitors surveyed. A great majority of the visitors surveyed (71%) came to Rotorua for holiday purposes, there are also other reasons, such as study trip, business and visiting friends that bring the tourists to this region.

Visitors surveyed learned about the Buried Village attraction through different marketing channels. The largest group of respondents (37% and 20%) found out about the Buried Village through word of mouth, followed by reading brochures (19% and 36%). Many of them heard of the attraction at the Rotorua Information Center (17% and 15%). 12% and 19% of the respondents for both surveys attracted by the

advertisements; however, 7% of those surveyed in September were introduced to the tour by an organised group. Compared with the other source of information, only a small number of respondents found the attraction by road signs and by visiting the web site. The gender distribution of the respondents for both surveys was quite even, with a slightly higher participation rate for females in the first survey and more male participants in December.

Overall, the two visitor samples surveyed have shown a very similar pattern of demographic characteristics. It can be seen that the Buried Village's main market is international (around 60%) but the number of domestic tourists is also significant. The attraction is popular with family groups and senior tourists because of the nature of the tourist experience on offer. This finding is similar to the research conducted about the inbound visitors in New Zealand which suggests that "empty nesters" place a high priority on museums, tours and Maori-culture and performances (Weaver & Oppermann, 2000, p. 190).

5.8 Data Analysis of SERVQUAL Results – Buried Village

The mean results shown in Section 5.7 were used to measure the central tendency of the expectation and perception variables given the ordinal scale of measurement and the skewed distribution of scores (Bordens & Abbott, 2005, p. 372). However, two sets of scores may have highly similar means, yet very different distributions. To evaluate the results further, it is important to calculate the range of the expectation and perception gaps as a measure of variation between two split sample groups. If the range for each question was smaller, the results were considered as more consistent.

5.8.1 Weighted customer gap split sample analysis

The consistency of the data obtained from the September and December 2002 visitor surveys was tested as described in the methodology section of Chapter Three. The high-low and average charts are shown in Figure 5.18 and Figure 5.19.

For Q3, Q4, and Q5 in the September survey, almost every respondent believed that there should be an improvement in these service areas. For Q7, Q8, Q13, Q18, and Q21, some respondents were satisfied with the service provided; however, there were others

who would like to see an improvement. The responses in Q1 and Q9 showed a wide variation, but the gaps were positive (see Appendix C 10). This might indicate that there was a group of visitors who were not overly impressed by the service offered, although the overall average score was positive. As shown in Figure 5.18, the weighted gaps for Q10, Q11, Q12, Q14, Q15, Q16, Q17, Q19, Q20, and Q22 were all positive, which means almost every respondent believed that their expectations have been met. The results show that the ranges for Q7 and Q14 were different although the mean values for the two questions were very similar.

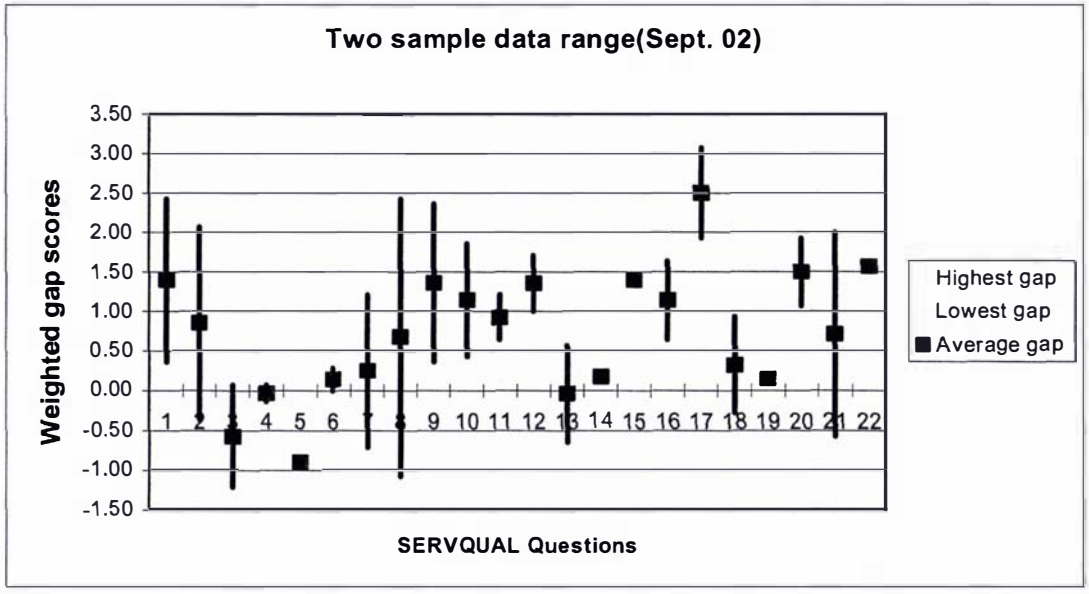

Figure 5.18 Weighted gap comparisons- September 2002

The split samples have shown different results of average weighted gaps for the December 2002 visitor survey. As displayed in Figure 5.19, Q3 was the area, which needs improvement as the two groups shared a very similar level of dissatisfaction with "the physical appearance of the village setting". In Q13, Q14, and Q19, some considered that their expectations have been met, while the others, given the average negative scores, believed that the service should be better than what they have experienced. The range of gap scores for Q 6 and Q18 were also differently distributed due to the extreme values existed in Q18 which indicate a big spread between the lowest and the highest gaps. This means that the range can be dramatically altered by just one exceptionally high or low value and it cannot adequately summarise the extent of variability in a distribution (Schutt, 2004, p. 338).

There was a big variation between the responses for Q1 and Q7, although the average scores were positive (see Appendix C 11). This indicates that some of the respondents might be delighted by the service while the others felt that their expectations were only just being met. The variation could be caused by the visitor's country of origin or other demographic factors of the respondents. Finally, Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q15, Q17 and Q20 have shown a similar pattern in average weighted gaps which indicate that the majority of the visitor groups were satisfied and their expectation and perception levels were similar as well.

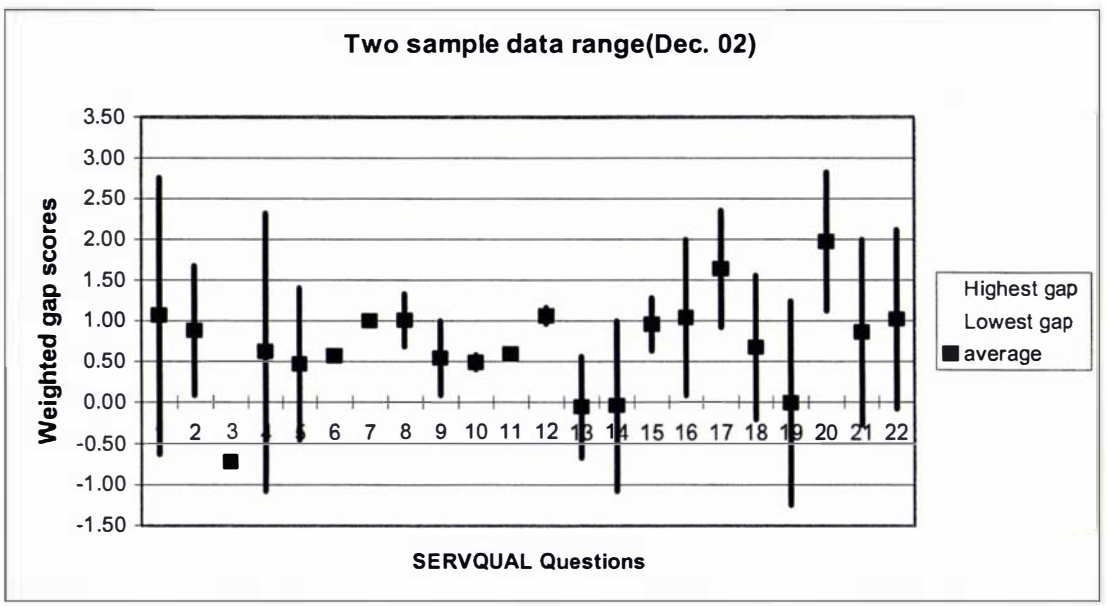

Figure 5.19 Weighted gap comparisons – Dec. 2002

5.8.2 Average visitor importance rating split sample analysis

As discussed in Section 5.7.5, the visitor ratings of relative importance of service features were different for the two surveys. For example, compared with the first survey response, the importance rating scores were lower in the December 2002 survey, with the exception of Q1, Q2, Q6, Q18, and Q19. In particular, Q10, Q11, Q15, Q16, and Q22 were only scored as of 'some importance'. The high-low charts in Figure 5.20 and Figure 5.21 show the variation of visitor importance results for the two split sample analyses.

There was a small variance in the responses for each question in the September results. For example, for Q11, Q17, and Q22, some considered that these service features were "important", but the other groups believed that they were "very important". The

difference between the highest and lowest importance scores has indicated that the visitors' judgement of relative importance was different depending perhaps on their personal expectation of the tourist attraction and their past experience. Despite the variances in the sample groups, the average scores of the visitor importance were very similar to that of the total sample group in the September survey (see Appendix C 6 and Appendix C 15).

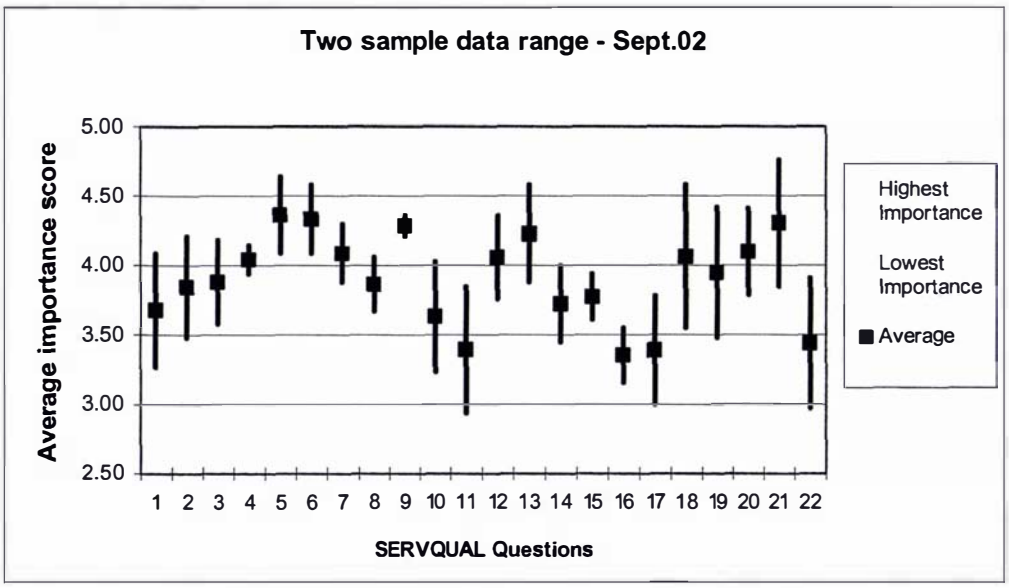

Figure 5.20 Importance rating - Sept. 2002

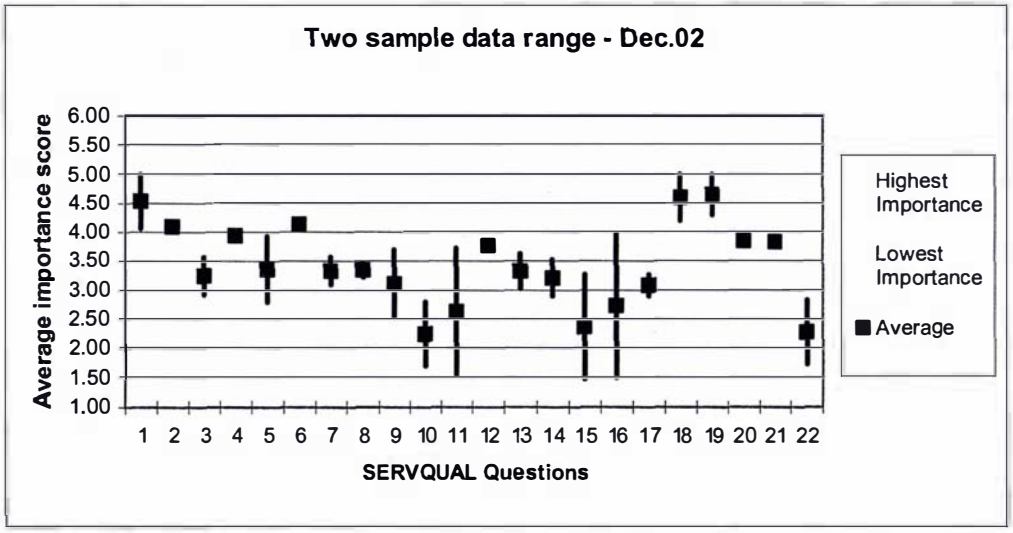

Figure 5.21 Importance rating - Dec. 2002

Compared to the September survey responses, the data range of visitor importance rating in the December survey has shown a different pattern (see Appendix C 16). There was a wider variance between the two split-up sample groups. For instance, for Q11,

Q15, and Q16, some considered that the service features were 'not important'; while the other group believed these items were 'important'. The contradictory opinions might be caused by factors such as respondent's cultural background or other demographic reasons that may affect the visitors' judgement of the importance of service dimensions.

5.8.3 Customer expectation and perception gap analysis by ethnicity

To test the variation of the results with ethnicity, the total set of responses were divided into four groups according to the respondents' countries of origin. The average expectation and perception gaps for the four ethnic groups are given in Appendix C 12.

The differences that were observed may explain some of the inconsistencies noted in section 5.8.1. For example, visitors from Australia have shown the highest expectation level for all the features of the attraction compared with the other visitor groups. In addition, all the expectation values in this group were higher than the overall average expectation of the September survey. The visitor group from Asia has indicated the relatively lowest level of expectation for most of the service features. Almost all the expectation scores from this group were lower than the average score for the whole customer group except for three SERVQUAL questions. The respondents from the Northern Hemisphere also showed a higher level of expectation for most of the survey areas, while the New Zealand visitor group displayed higher expectations in the service dimensions of tangibles and reliability. The difference in visitor expectations among the four visitor groups indicates that culture may be one of the more important determinants of a customer's wants, which comprise the basic values and perception of a particular market (Kotler, Bowen, & Markens, 1999).

The gap analysis by ethnicity also identified a different pattern of visitor perception of the tourist attraction. For example, the New Zealand visitor group has shown the lowest level of perception among the four groups and the expectation levels were slightly lower than the average expectation of the total sample surveyed except for Q1 and Q22.

Comparisons were also made to see the difference between visitor expectations and perceptions for the ethnic groups used for the December survey. The results as listed in Appendix C 13 show that the visitor group from New Zealand has a slightly higher expectation than the other three groups for more than half of the survey questions. The

expectation scores for the visitors from Asia have overtaken the others in the dimension of responsiveness (the peripheral service areas), while the visitors from Australia and Northern Hemisphere have shown a very similar pattern of expectation compared with the total sample group.

The comparison of the visitor perceptions among different ethnic groups in the December survey demonstrates that the perceptions of the four groups were higher in certain service dimensions than the overall average visitor perception. For instance, the visitors from Asia shared higher perception scores in many questions indicating that this particular visitor group was satisfied with staff-related aspects of the service as well as the responsiveness, assurance and the core service. This again suggests that although the overall average perception value for a survey could be high, the perceived service quality might be different for each visitor group. A tourist attraction operator has to pay attention to the specific judgement of perception in order to identify the real customer needs and their level of satisfaction of the particular group of visitors. Although it would be almost impossible and most likely unwarranted to do this on a day-by-day basis, it may be possible to consider some variations by season since, for example, different ethnic groups tend to come at different time of the year.

5.9 The Application of QFD in Paradise Valley Park

The QFD project started with the two owner-managers and two front line staff in the Paradise Valley Park in November 2002. The researcher introduced the main structure of the House of Quality and passed the QFD materials to the management to discuss in the staff meetings. Formal focus group discussion sessions were held among the four QFD project members and the results for each session were checked and analysed between the researcher and the QFD team.

5.9.1 The process of building a House of Quality

A House of Quality was established using the procedures described in Chapter Three.

Step 1: List the set of customer requirements (WHATs) using modified SERVQUAL survey questions. The QFD team structured the items on the SERVQUAL questionnaire and converted the 23 expectations into customer requirements, which were listed in Room 1 of the House of Quality. For example, customers want to see "spectacular

wildlife" in terms of the expectation of the "physical appearance of the Wildlife Park". Table 5.3 shows the customer requirements, which were treated as the representation of what the visitors expected from a nature-based tourist attraction. Customers want to enjoy a "learning experience" and they expect "the whole experience is enlightening and educational".

Table 5.3 Customer requirements (WHATs) and importance rating

No	Customer requirements	Customer Importance Rating (1 to 5)
1	Spectacular wildlife	4
2	Beautiful native bush	4
3	Magnificent lion pride	3
4	Sufficient information about the park	3
5	Friendly and polite staff	4
6	Knowledgeable staff and quick reply	4
7	Prompt service	3
8	Staff inspires trust in visitors	3
9	Comfortable during the tour	3
10	Good price and variety of refreshment	3
11	Reasonable price and selection of souvenir	3
12	Environmentally friendly look of the park	4
13	Clean and convenient toilets	3
14	Easy access to all activities	3
15	Adequate signs in the park	3
16	Prompt booking	2
17	Convenient visiting hours	3
18	Reasonable waiting time between activities	3
19	Fantastic viewing of wildlife	4
20	Learning experience	4
21	Informative guided tour	4
22	A values for money experience	3
23	Appropriate content and length of activity	3

These customer requirements may be seen to embrace a variety of underlying needs, each of which places particular demands on the abilities and capacities of the operator to deliver product on time and to a quality standard. The following is given by way of illustration:

1). Beautiful native bush

This requires the operator to provide an attraction landscape that fits into and complements the destination image and one that is essentially indigenous in origin and composition. The landscape may require pedestrian access so that the visitor can more fully experience legitimate forest values. The foliage and health of the physical landscape thus add further depth and quality to the primary experience – viewing the animals.

2). Knowledgeable staff and quick response

Acquiring knowledge is an important part of the "post modern" visitor experience. The shift from "viewing" to "doing" has placed great stress on the ability of the host to interpret the landscape for the guest. Developing such interpretative skills will usually require carefully crafted training to acquire fluency both in a specific knowledge base, as well as in the skills needed to deliver it to the guest. The logistics of many tours and visitor itineraries requires the operator to fine tune the information provided and makes it possible for the visitor to progress through an experience without undue delays. This means, carefully packaged knowledge providing real understanding delivered at a steady rate by staff who have empathy for and a good knowledge of their subject.

3). Reasonable waiting time between activities

Timing and time management are crucial to most visitors, especially those that present as part of a scheduled tour of Rotorua which may involve visits to several attractions in one day. The visitor requires value for money and this often means visiting the static displays, as well as the scheduled activities and events distributed across a morning or afternoon trip to the attraction. Scheduling animal activity requires an actor's sense of stage management as well as a scientifically based appreciation of the physical and emotional needs of the animals. Pacing the visitor's progress through a "staged" experience requires careful behind the scene logistical management that underpins an upfront casual delivery.

4). Comfortable during the tour

The physiological needs of the visitor are of paramount concern to attraction management. If not met they can become a distraction and irritation and severely downgrade the overall experience. Protection from excessive heat and rain and wind must be made an integral part of park design through the provision of shelters, wind breaks and umbrellas. Tiredness can be mitigated with adequate seating and carefully graded walks. Protection from viewing fatigue through overexposure can be as negative to visitor satisfaction as underexposure. Too many of any one species encourages viewing satiation and boredom. Planning the distribution of the animal types around their specific environmental requirements must also take into account the visitors span of attention and interest.

Step 2: Analysing the importance of customer needs

The relative importance of each customer requirement taken from Table 5.2 was rated from 1 to 5 (1 stands for least important and 5 means extremely important). For example, "the beautiful native bush" was rated as very important, while the "convenient visiting hour" was rated only as of "some importance". This information was entered into Room 2 of the House of Quality and was later used in Step 4.

Step 3: Identifying the operational requirements (HOWs)

23 measurable operational requirements were defined and listed in Room 3 of the House of Quality. As shown in Table 5.4, the customer requirements of "environmentally friendly look of the park" can be satisfied by the operational requirement of maintaining "environmental standard", "park design" and "the maintenance of trout stream". Customer requirement of "fantastic viewing of wildlife" can be fulfilled by the operational requirement of "variety of wild animals and native birds" and "animal encounters" programme, etc.

The 23 operational requirements, which were formulated based on the 23 customer requirements, have represented the general operational characteristics needed to meet the expectations of nature-based tourists. Each HOW is sub-dividable into discrete but interacting threads of activities that combined to produce an overall WHAT. These activities and processes necessarily involve making choices in the allocation and use of resources. A selection of these is illustrated below:

1). Appearance of staff

Staff appearance can be shaped by a variety of component business practices any of which may be set out as part of the S.O.P (Standard Operating Procedures) for the business. Among these the following could be expected to impact on staff appearance:

- The provision and implementation of a uniform dress code
- The daily review and maintenance or otherwise of dress standards
- The training inputs concerned with staff attitudes and mannerism
- The personal behaviour disciplines instilled through good leadership
- The sense of identification that staff, individually and collectively, have with their employers' overall goals and ambitions

- The patterns and levels of Human Resource support – career development, training, and remuneration all affect staff work motivation which can have negative as well as positive effects on their overall motivation.

Table 5.4 Operational requirements (HOWs)

No	Operational Requirements
1	Appearance of the staff
2	Maintenance of trout stream
3	Office environment and decoration
4	Tour activities
5	Park design
6	Brochure, advertisement and website
7	Training of staff
8	Variety of wild animals and native birds
9	Animal encounter
10	Maintenance of grounds and facilities
11	Product collection and price policy
12	Coffee shop setting and catering service
13	Number and location of toilets
14	Gates and wheelchairs
15	Location and number of signs
16	Booking procedure
17	Length of tour
18	Service standard of tour guide
19	Content of programme
20	Lion feeding schedule
21	Product interpretation
22	Maintenance of bush and walkways
23	Environmental standard

2). Animal encounter

The nature and quality of visitor and animal interaction are central to the successful operation of a wildlife park. Key components of this include:

- Correctly matching the visitor viewing routines to the lifecycle requirements of the animal(s) – daily and throughout the seasons;
- The type and kind of contact experience – under or over exposure can lead to customer dissatisfaction on the one hand or animal fatigue and ill health on the other;
- The physical safety of the visitor especially where the animal has the potential to inflict harm – this could present containment verses display issues – to cage or not to cage?
- This also links in turn to risk management practices and the compliance requirements imposed on the enterprise by the interested and responsible governmental agencies.

3). Gates and wheelchairs

Visitors with special needs stemming from physical or other disabilities have become increasingly important in recreation and leisure, especially as their group and individual travel and tourism demands have grown in recent years. How to deal with their requirements may engage the facility in the following concerns:

- Visitor safety and security issues that may arise on top of accepted operating procedures – wheelchair bound visitors have less manoeuvrability and may not be able to avoid the boisterous antics of a startled or overexcited animal. Providing extra security usually comes at a cost in specialist animal handling practices involving training and the use of additional equipment and technology;
- Extra personnel may also be required to provide "interpretative" support such as with the use of hand signage in order to achieve and retain a "Disability Friendly" branding;
- Being fully user friendly may mean designing the facility to deliver the interactive experience to a range of physical types and needs - this could require special viewing platforms, ramps as well as stairs and signage readable from various levels and angles.

4). Product interpretation

Product interpretation deals directly with the value that the visitor places on the "educational aspects" of their experience. The following concerns link closely on this:

- How best to "connect" the visitor with the experience? Defining content and writing good copy is a skill and is especially important where it needs to integrate with and supplement a strongly visual experience;
- How relevant and well pitched is the information provided to meeting the interests and needs of their core customer groups? This involves good promotional strategies and fine tuning the sales pitch to achieve a maximisation of customer experience.

Step 4: Developing a relationship between the WHATs and HOWs

Through pair-wise comparison of each customer requirement and each operational requirement, the relationships between the WHAT and HOW of the 23 service features

were established (see Figure 5.22). For example, the staff focus group decided that there was a strong relationship between customer requirement of "magnificent lion pride" and the operational requirement of "lion feeding schedule", and a moderate relationship with "animal encounter" and a weak relationship with "product interpretation". Customer requirements of "good price and variety of refreshment" were strongly related to "coffee shop setting and catering service" but moderately related to "product collection and pricing policy". The relationship between customer requirements and operational requirements helped the company to understand the extent to which each operation element satisfies the customer needs.

Step 5: Developing an interrelationship between the HOWs (Trade-offs)

The interrelationship between the operational requirements was determined by considering the pair-wise combination for each of the 23 operational requirements. As shown in Figure 5.23, the improvement of "content of programme" would support the improvement of "lion feeding schedule". The "maintenance of bush and walkways" would enhance the keeping up of the "environmental standard". As a result, there was a positive coefficient between the two operational requirements. However, the interrelationship between "variety of wild animals and native birds" and "maintenance of grounds and facilities" might conflict in the need for resources, in which case, some compromise has to be made in order to improve one area of service feature first. Meanwhile, to keep "the environmental standard", the carrying capacity of the tour activities has to be restricted and managed accordingly. This is because the improvement and development of tour activities in the park might challenge the maintenance of environmental standards. The assessment of these interactions was made in discussion with staff and the table in the roof of the House of Quality as shown in Figure 5.23 was developed.

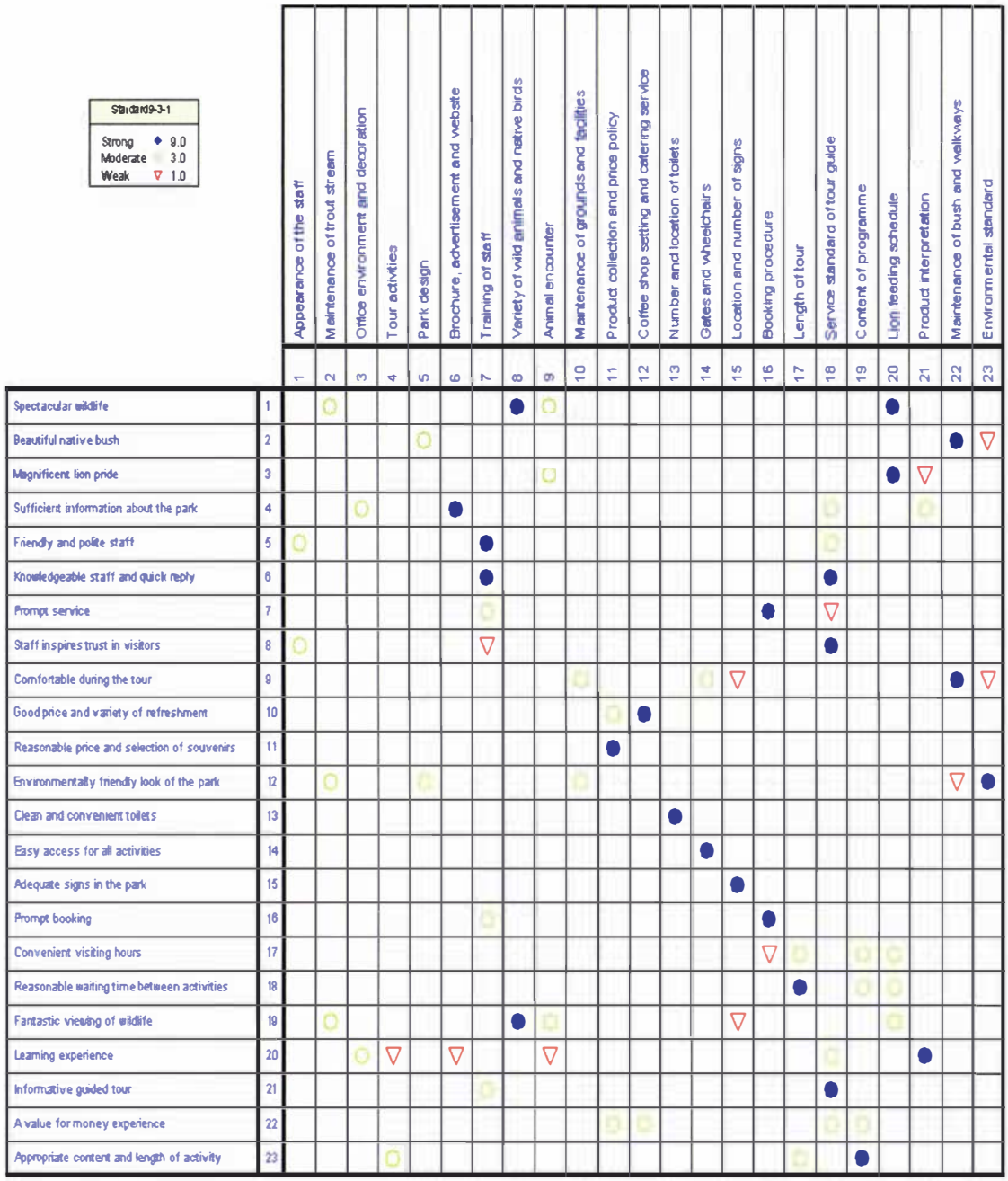

Figure 5.22 Relationships between WHATs and HOWs

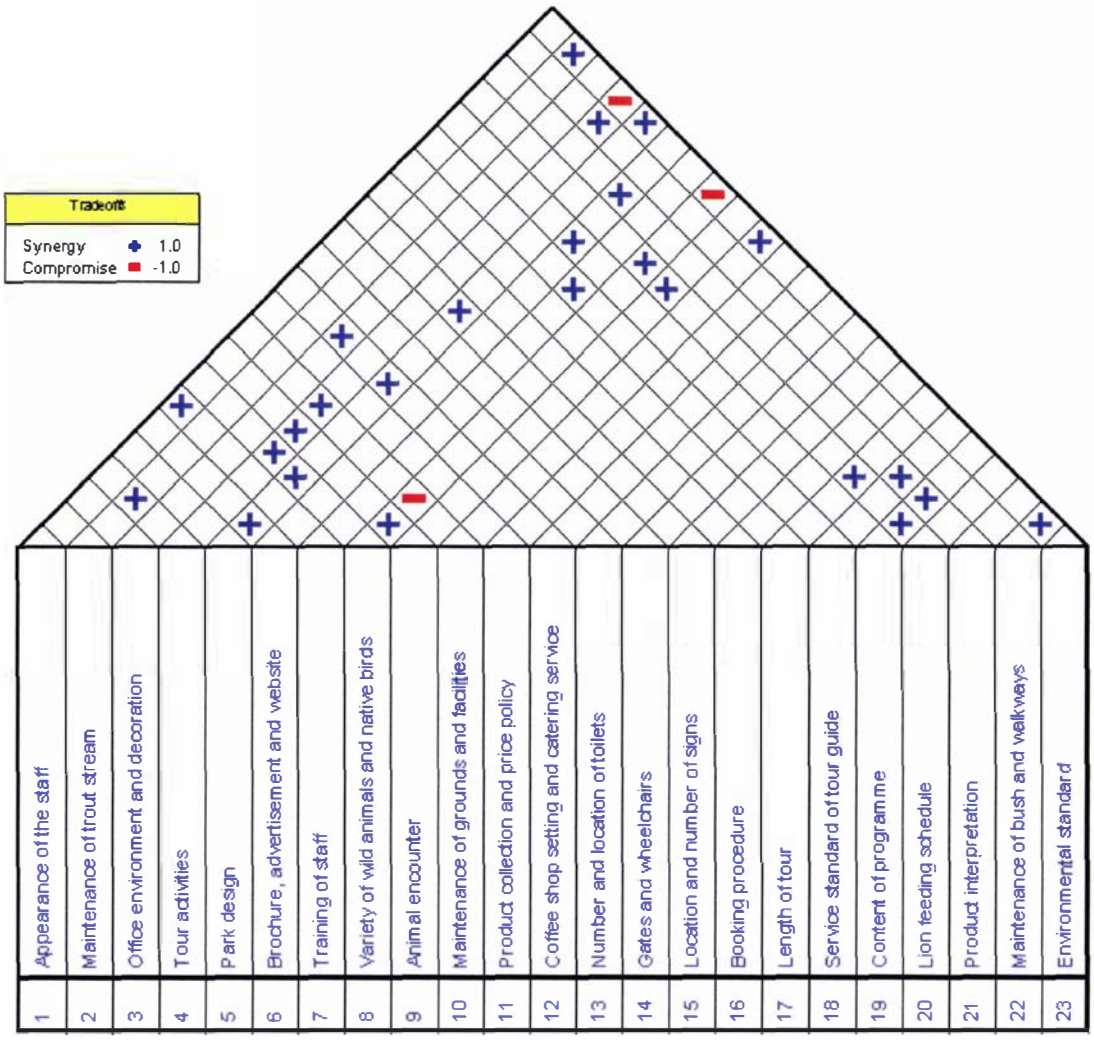

Figure 5.23 Interrelationships between HOWs

Step 6: Prioritising operational features

In the bottom row of the House of Quality, the importance values of the operational requirements are calculated with the input of customer rating and the relationship values. The absolute values were totalled in Room 6 of the House of Quality (see Figure 5.24). A bar graph shows the relative position of the operational requirements in terms of its significance in satisfying the customer needs. The operational requirements were prioritised below according to the sequence of absolute values:

1). Service standard of tour guides (Q18) (144);

2). Training of staff (Q7) (102);

3). Lion feeding schedule (Q20) (93);

4). Variety of wild animals and native birds (Q8) (72);

5). Maintenance of bush and walkways (Q22) (67);

6). Content of programme (Q19) (54);

7). Booking procedure (Q16); and product interpretation (Q21) (48);

8). Product collection and price policy (Q11); and length of tour (Q17) (45);

9). Environmental standard (Q23) (43);

10). Animal encounter (Q9) (37);

11). Maintenance of trout stream (Q2); coffee shop setting and catering service and gates and wheelchairs (Q14) (36);

12). Location and number of signs (Q15) (34);

13). Brochures, advertisements and websites (Q6) (31);

14). Location and number of toilets (Q13) (27);

15). Park design (Q5) (24);

16). Appearance of the staff (Q1); office environment and decorations (Q3), and maintenance of grounds and facilities (Q10) (21);

17). Tour activities (Q4) (13) (see Figure 5.24).

5.9.2 The results of the House of Quality

From the ranking of operational requirements, the key areas of quality improvement were identified, categorised, and documented in the company's quality management programme. The process of building of the House of Quality indicates that the QFD approach has helped the nature-based attraction to identify customer requirements, the specific operational requirements as well as the relationship between the customer needs and the company's capacity to meet customer requirements. Based on the feedback from the customer surveys and situation analysis, the prioritised service areas to be improved are training of staff, re-scheduling of the lion feeding programme and increasing the opportunity of animal encounters. However, due to limited sample size of the visitor surveys and the insufficient numbers of staff participation in the QFD focus group, the findings derived from the House of Quality may not reflect the real situation of the attraction. Consequently, there still remains the need for this organisation to develop an implementation programme to carry out the full project and evaluate the results regularly which should be part of the company's future plan.

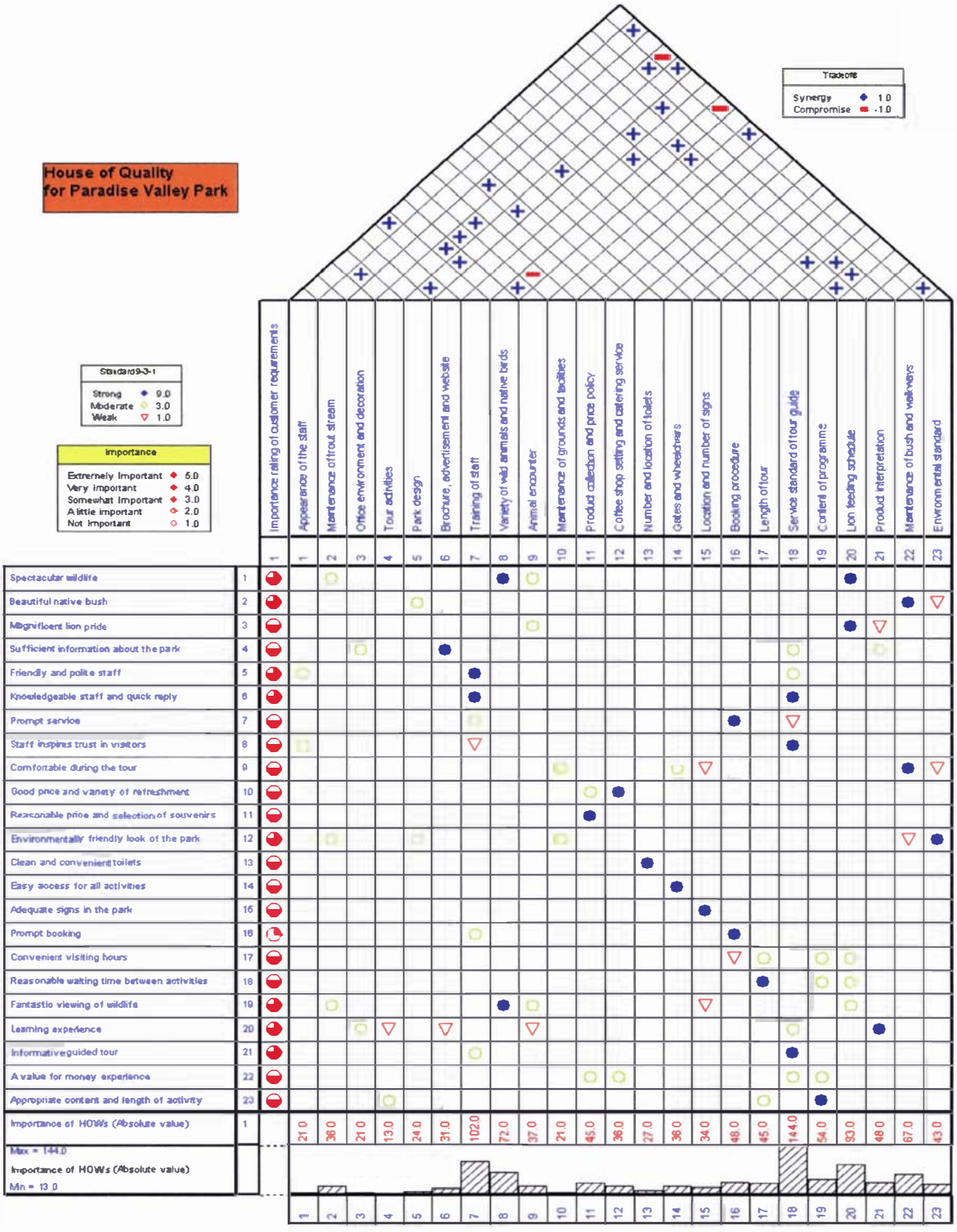

Figure 5.24 House of Quality for Paradise Valley Park

5.10 The Pilot Application of QFD in the Buried Village

The QFD project for the Buried Village started in December 2002. The researcher introduced the QFD technique and provided documents to the general manager. A small team of three people, consisting of a receptionist, a tour guide and the general manager, was formed to undertake the QFD project. The House of Quality matrix was presented to the focus group as an example. Discussions were held among the staff team to examine the results of the SERVQUAL surveys and identify information for customer needs and operational requirements.

5.10.1 The process of constructing the House of Quality

Step 1: List the set of customer requirements using the modified SERVQUAL questions. Table 5.5 shows the customer requirements extracted from the SERQUAL results and which were treated as the representation of what the visitors want from the historical/heritage tourist attraction.

Table 5.5 Customer requirements (WHATs) and importance rating

No	Customer requirements	Customer Importance rating (1 to 5)
1	Outstanding museum layout	4
2	Authentic on-site display	4
3	Beautiful village setting	3
4	Sufficient information about the attraction	4
5	Friendly and welcoming staff	4
6	Knowledgeable staff and quick reply to queries	4
7	Prompt service	4
8	Staff inspire trust in visitors	3
9	Comfortable during the tour	3
10	Good price and variety of food in the tea room	3
11	Reasonable price and selection of souvenir products	2
12	Ecologically sound path and walkway	4
13	Clean and convenient toilets	4
14	Easy access for special needs	3
15	Adequate signs within the complex	3
16	Prompt booking	2
17	Convenient tour hours	3
18	Authentic nature-based tour	4
19	An educational experience	4
20	Informative interpretation of the tour guide	4
21	A value for money tour	4
22	Appropriate length of activities in the attraction	2

The WHATs associated with this type of attraction must define links between the visitor's wants and needs and those elements of the attraction that contribute to their attainment. These would include many of the following:

1). Outstanding museum layout

The visitor to a museum, such as the Buried Village, seeks for some or all of the following:

- To engage with an experience in which the heritage content is packaged and themed so as to meet viewer requirements – amateur and specialist alike. This is especially the case for those tourists that are significantly constrained by their tour or travel logistics - time factors, viewer exhaustion levels, experience overload and similar factors critical to visitor satisfaction levels.
- To acquire insights and understandings about the host culture based as reliably as possible on the underlying facts and assertions provided through the displays.
- To experience an effective combination of education and entertainment – edutainment. Learning should be fun and an enjoyable experience for the visitor. This is especially the case for an attraction of this type positioned as it is in the commercial segment of the tourism industry.

2). Authentic on-site display

The commercialisation of archaeological sites and artefacts may sometimes create a downside. If not properly managed from the heritage perspective, there is a temptation to gain additional economic advantage through the manufacture and sale of inferior duplicates and "fake" products. Such a strategy may develop in response to visitor demand for cheap souvenirs. Souvenir sales have been a part of travel and tourism for as long as their have been wandering scholars and pilgrims. To facilitate this strategy the business needs to:

- Subscribe to and support branding of artefacts and memorabilia in accordance with industry quality benchmarking practices and standards.
- Educate and encourage the visitor to "invest" in a better quality souvenir through the provision of such goods and services offerings.

3). Ecologically sound path and walkway

Environmental impact in an attraction of this type can result from a combination of both high levels of demand as well as poor landscape management practices. Care needs to be taken to ensure that:

- Excessive "wear and tear" does not occur and detract from the scenic and heritage values intrinsic to the site. The impact and consequences of the volcanic eruption on the old village needs to be preserved in as close to original condition as possible. Physical impacts on the site, stemming from excess traffic or overdevelopment, should be kept to a minimum and the final form of the landscape should lack any sense of contrivance and any suggestion of artificiality.
- That the infrastructure needed to create walkways and other means of access and movement through the park do not "clash" in the mind of the visitor with their preconceptions of the experience gained from images and values transmitted through their promotional media.

4). Adequate signs within the complex

Adequate and accurate signage is important to the visitor in that it exists to permit efficient access to and allows the easy use of the component parts that constitute the experience as a whole. To achieve this:

- Signage needs to be accurate, informative and unambiguous to inform and not confuse the visitor.
- Signage should be strategically placed so as to allow the visitor to "map" their choice of best route through the landscape.
- Signage should protect the visitor from areas of risk, such as with hazardous or dangerous features including unstable ground, cliff edges and the like.

Step 2: Analysing the importance of customer needs

The relative importance of each customer requirements taken from Table 5.5 was rated from 1 to 5 (1 stands for least important and 5 for extremely important) and was entered into Room 2 of the House of Quality. These customer requirement ratings were used later in the Relationship matrix in Step 4.

Step 3: Identifying the operational requirements (HOWs)

22 measurable operational requirements were defined and listed in Room 3 of the House of Quality.

The HOWs associated with heritage attractions such as the Buried Village as shown in Table 5.6 present an often complex set of interacting operational as well as strategic elements. Positioning each element against the other requires a deft hand and a sure eye in order to make the parts work together as a whole. This is shown in the listing of some such elements below:

Table 5.6 Operational requirements (HOWs)

No	Operational Requirements (HOWs)
1	Appearance of the staff
2	Maintenance of walkway and playground
3	Museum environments and decorations
4	Village activities
5	Museum design
6	Brochures, advertisement and website
7	Training of staff
8	Catering service and price policy
9	Safety and accessibility of the water fall
10	Staff willingness and responsibility
11	Maintenance of site excavations
12	Souvenir collection and price policy
13	Tea room setting
14	Number and location of toilets
15	Entrance for wheelchairs
16	Location of signs
17	Booking procedure
18	Length of tour
19	Service of tour guide
20	Content of programme
21	Landscaping and spatial patterns
22	Product interpretation

1). Brochures, advertisement and website

Marketing and promotional strategies need to convey the heritage values the attraction is seeking to promote correctly. This is accomplished in part by:

- Ascertaining these values, creating a brand and correctly projecting it in ways appropriate to the creation of a sense of legitimacy, both to the interactive experience as well as to the historical perspective it seeks to represent. Simple and informative images and accompanying textual materials are crucial to this process.
- The sales aids and the channels through which they are promoted should be designed and selected so as to facilitate and promote this sense of legitimacy to the market.

2). Landscaping and spatial patterns

The tourist landscape is in part defined by the operator's perception of the product and partly by the consumer expectations of the experience. Giving this formality may require:

- Prescribing or defining landscaped pathways for the visitor if they wish to be "programmed" through their experience. This suits those looking for a ready and available solution to the question of "Where do I start?" and "Where to next?".
- Additionally, some measures of choice may be left to the visitor to map their own journey – identifying and following their own patterns of viewing choice through what the landscape has to offer. Making such choices possible is a part of defining and using "space" effectively. In this the process is similar to traditional museum constructs except in this case the stage is located outdoors.

3). Museum design

Developing and displaying heritage content within a "built" space involves creating an effective interaction between the physical environment, the material to be presented and the visitor. To achieve this relationship the facility needs to:

- Provide adequate space to allow the objects to draw and absorb the attention of the viewer. Display positioning and layout is a skill that requires a developed aesthetic sense linked to an understanding of the daily operational requirements of running a successful business.
- Employ well placed lighting and highlighting to allow the displays to be presented to their best advantage. The facility needs to install and employ such

resources in order to showcase the heritage factors that have drawn the visitor to the attraction.

- Display cases and plinths that allow for an effective layout of the material so that a sequential visual storyboard can be created that is supported by the accompanying commentary.

4). Product interpretation

Interpretation is the essential element in effective display practice. The heritage landscape will remain mute and silent and the visitor isolated from the experience unless-

- The interaction between the visitor and the experience is facilitated by some form of interpretation – in real time with a human guide or through the provision of an aid using recorded explanations of what the visitors see around them.
- The depth and complexity of the interpretation are matched to visitor requirements, their needs and the logistical framework within which they operate. In practice this may require the provision of a variety of presentations – differentiated by the required length of viewing time and by a general rather than a more technical and scientific version of events.

As shown in Table 5.6, the customer requirement of "comfortable during the tour" can be fulfilled by the operational element of "maintenance of walkway and play ground", and "safety and accessibility of the waterfall", "entrance for wheelchairs" and "number and location of toilets". "An educational experience" can be satisfied by the operational element of "content of programme", "product interpretation" and "service of the tour guide". Based on the five service dimensions of the historical attraction products, the QFD team converted 22 customer requirements into 22 operational requirements, which represent the general operational characteristics needed to meet the visitor expectations.

Step 4: Developing a relationship between WHATs and HOWs

The QFD team matched the customer requirements and operational requirements in Room 4 of the House of Quality as described in Chapter Three. The relationships between WHATs and HOWs were determined through brainstorming sessions where staff estimated the appropriate level of relationship based on their experience and professional judgement. Symbols were used to indicate the weak, moderate or strong

relationship by carrying a numeric value of 1, 3 and 9, respectively. The relationship matrix was completed through pair-wise comparisons of each customer need and operational need combination. For example, there was a strong relationship between the customer requirement of "outstanding museum layout" and operational requirement of "museum design", a moderate relationship with "museum environment and decorations", and a weak relationship with "landscaping and spatial patterns". The customer requirement of "sufficient information about the attraction" is strongly related to "brochures, advertisements, and website" design which is an important marketing operation. It is also slightly influenced by "location of signs", and related moderately by the operational element of "product interpretation" including the video display of the tour before the on-site experience (see Figure 5.25).

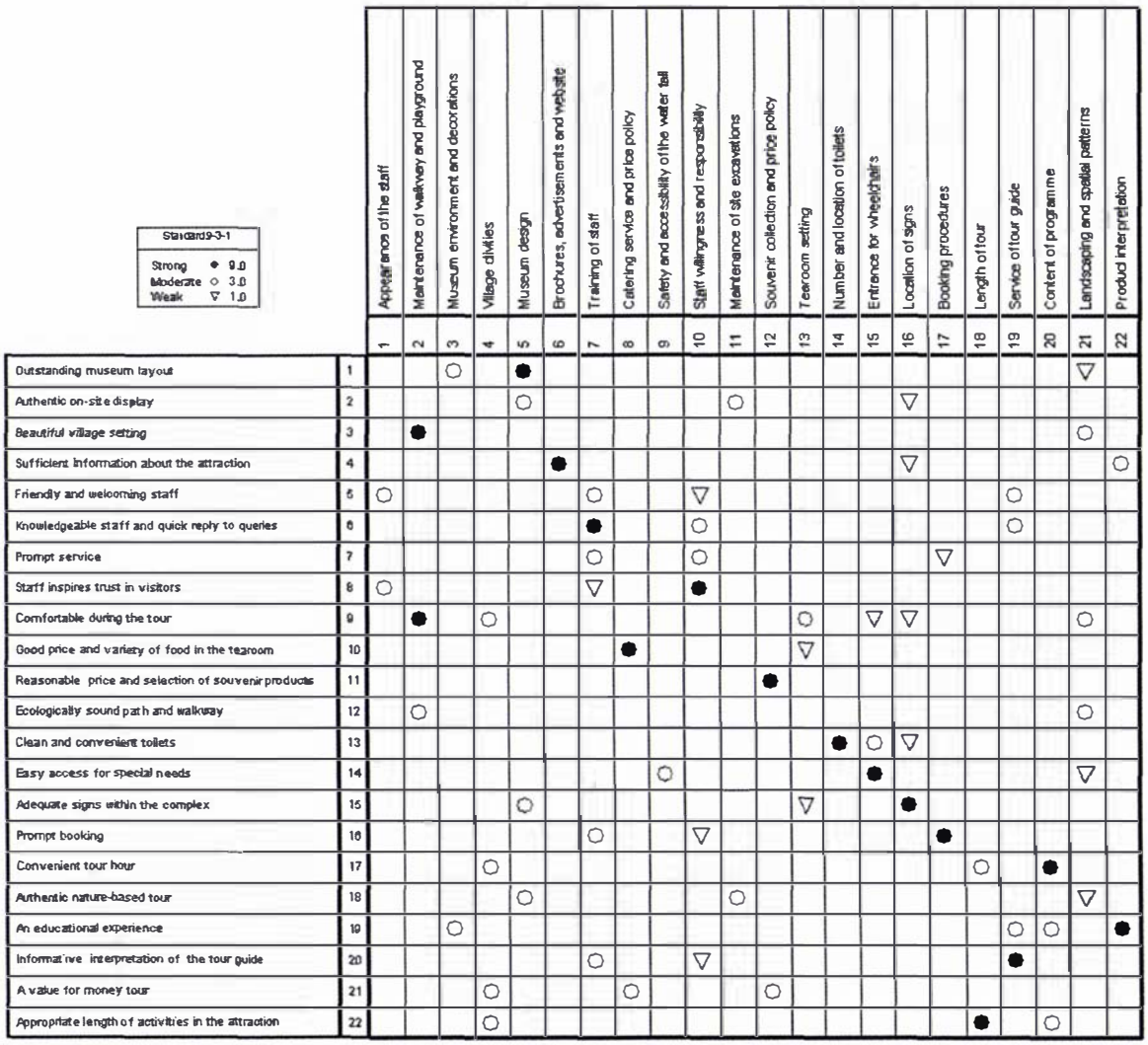

Figure 5.25 Relationships between WHATs and HOWs

The strength of the links between a service element and a corresponding customer expectation help the company to understand how various operational requirements affect the company's capacity to satisfy the different customer expectations (Fitzsimmons & Fitzsimmons, 1998).

Step 5: Developing an interrelationship between the HOWs (Trade-offs)

The interrelationship between the operational elements was decided by pair-wise combination for each operational requirement. In Room 5 of the House of Quality matrix, a symbol was inserted which describes the strength of the positive (+) and negative (-) interrelationship. As displayed in Figure 5.26, the improvement of "service of tour guide" would support the improvement of "product interpretation". There was a positive relationship between "maintenance of walkway and play ground" and "safety and accessibility of the water fall". However, the improvement of "tea room setting" and "catering service and price policy" conflict at some levels. This has to be considered as a trade off if each was found important.

Step 6: Prioritising operational features for improvement

The next important step was the calculation of the degree of importance of the operational requirements as the product of the cell value and the customer importance rating. Numbers in the columns were totalled and the absolute values were displayed in the bottom rows of the House of Quality in Room 6 (see Figure 5.27). A bar graph of these values was also created. These totals show which operational aspects of the features and services of the tourist attraction matters the most to satisfy the customer needs. The operational requirements according to the order of their absolute importance value as shown in Figure 5.27 are listed below:

1). Training of staff (81);
2). Service of tour guide (72);
3). Museum design (69);
4). Maintenance of walkway and play ground (66);
5). Staff willingness and responsibility (61);
6). Content of programme and product interpretation (45);
7). Entrance for wheelchairs and location of signs (42);
8). Landscaping and spatial patterns (41);

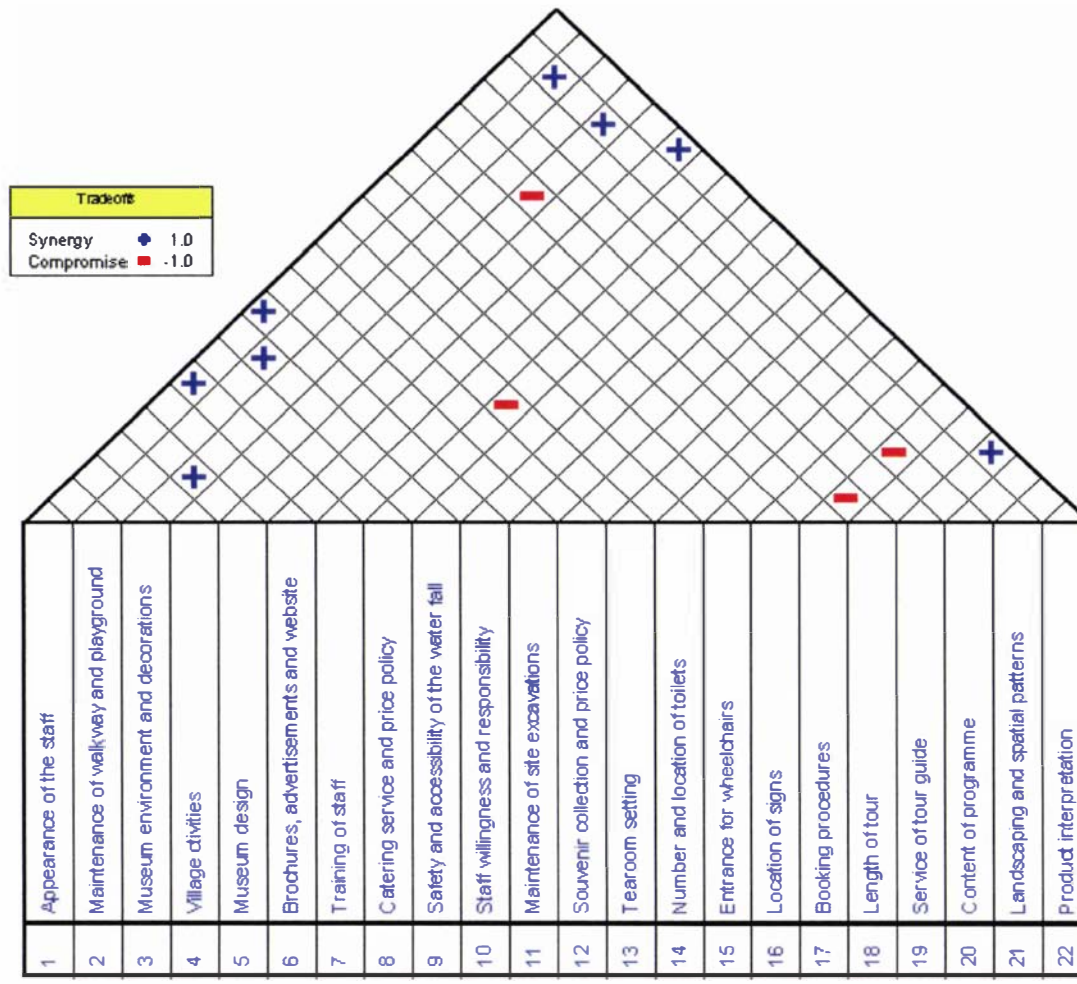

Figure 5.26 The interrelationship between operational requirements

9). Village activities; brochures, advertisements and website; and number of toilets (36);

10). Souvenir collection and price policy (30);

11). Length of tour (27);

12). Museum environment and decoration and maintenance of site excavations (24);

13). Booking procedures (22);

14). Appearance of the staff (21);

15). Tea room setting (15); and

16). Safety and accessibility of the waterfall (9).

These weighted results depend on the estimate of relative importance and relationship scores. Therefore, they were treated with common sense when decisions were made in terms of the sequence of improvement areas. From the relative rankings, the key areas of quality improvement were identified. These items could be categorised, and further planned for and integrated into the company's quality management programme.

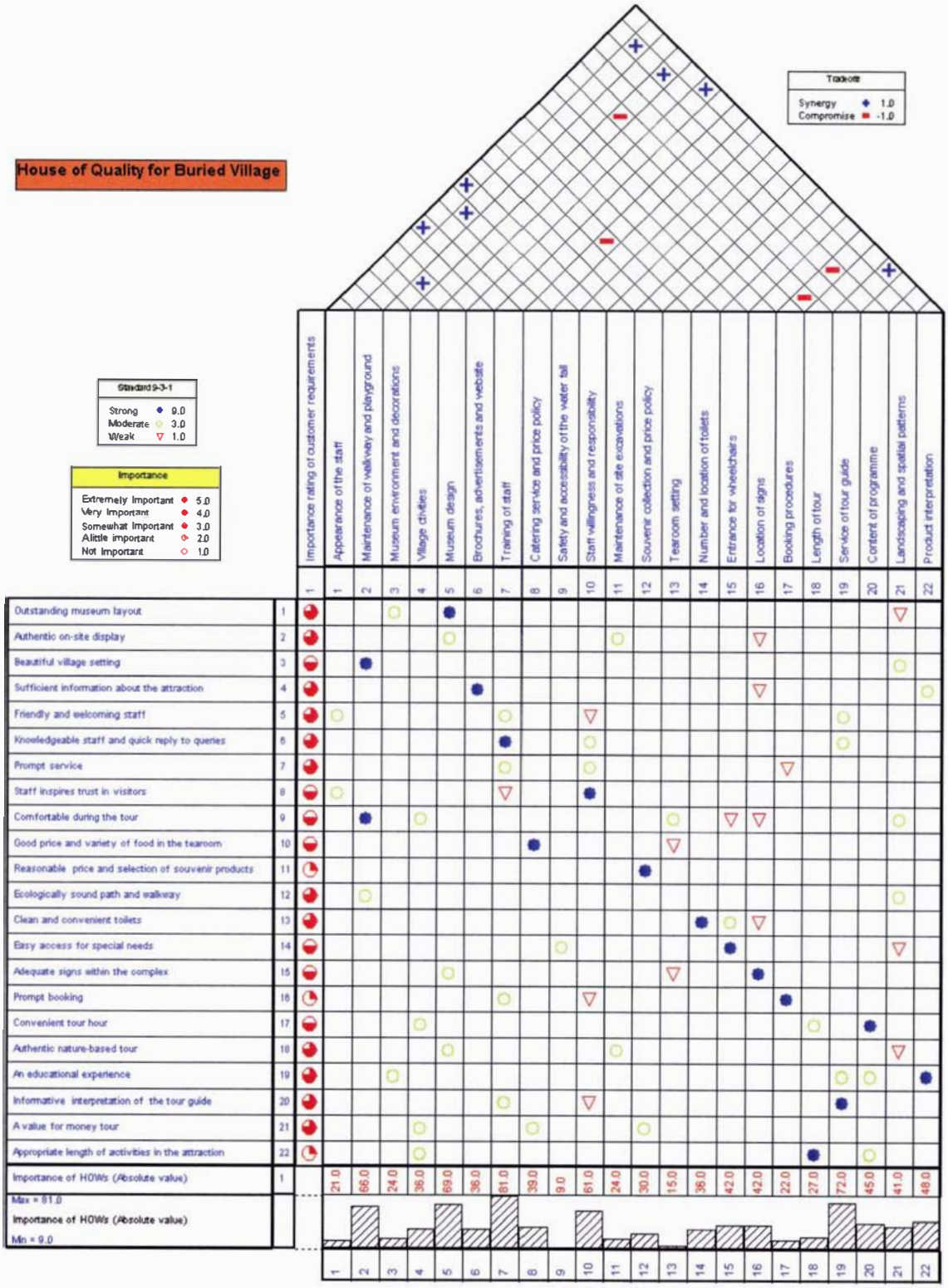

Figure 5.27 The House of Quality for Buried Village

5.10.2 The results of the House of Quality

The process of building the House of Quality in the Buried Village has demonstrated that QFD can help the company to identify the voice of the customers, the specific operational requirements, and the relationship between the customer needs and operational elements. More importantly, the QFD team has identified the priorities of service improvement through careful calculation with the input of the customers' feedback. The evaluation of the interrelationship between the operational requirements also helped the company to assess the internal strengths and weaknesses in meeting customer requirements. The results have guided the company to set up a future plan for quality improvement, which is based on both the requirements of the customer as well as the ability of the organisation. The immediate improvement areas are training of staff, village landscaping and re-packaging of the visitor programmes.

5.11 Chapter Summary

This chapter has focused on two tourist attractions as pilot case studies to complement the principal case study – Tamaki Tours, for the implementation of the SERVQUAL measurement and building of the House of Quality by using the results of the two visitor surveys carried out in Paradise Valley Park and the Buried Village, respectively. In Paradise Valley Park, the visitor survey results show that overall the visitors were satisfied as indicated by the positive gap scores between visitor expectations and perceptions of service quality. The staff surveyed also provided their perception of the availability of performance standards and procedures in different service dimensions. It was found that most staff considered the company had informal performance standards and formal and documented service standards across different service dimensions. The overall responses of staff suggested that the knowledge of service quality standards was not shared evenly among the staff. It implies, as for the other case studies that internal communications need to be improved in order to ensure the implementation of quality management procedures at a company level.

Analyses of the QFD result in Paradise Valley Park have identified the five highest priorities for areas of quality improvement. They are the service standards of tour guide, training of staff, lion feeding schedule, variety of wildlife and native birds, and the maintenance of bush and walkways. These tasks should lead to management actions

such as setting new training programmes for those staff members who are dealing directly with the visitors, providing opportunity for animal encounters, updating facilities that are needed for special needs and improving product interpretation by updating brochures and website as well as training the tour guides.

The consistency of the survey results obtained from Paradise Valley park was tested by split sample analysis and it was found that some of the questions showed a wide range of responses between the two samples, particularly for the expectation data. The weighted gap analyses have presented the areas with significant gaps in relation to the relative importance weighting to each SERVQUAL question. The analysis of customer expectation and perception gaps by respondents' ethnic groups has shown a similar pattern in general with slight difference displayed for some country groups. It was difficult, however, to define the representativeness of this result due to the limited number of sub-groups available in the sample.

The linkage of SERVQUAL results and the trial application of QFD was explained through a step by step sequence. The results of this pilot case study in Paradise Valley Park show that the SERVQAL and QFD quality management tools can be applied in the nature-based tourist attraction if a sufficiently large sample was chosen and a broad involvement from staff was achieved.

The case study at the historical and heritage tourist attraction – the Buried Village and data analysis helped the company identify the target market segments for the tourist attraction and the levels of customer satisfaction with the product and service offered over the period of data collection. The importance ratings of the service features were obtained from the visitors, which were used as the important input into the implementation of QFD. The reliability and consistency of the data were tested by splitting up the responses into two groups to compare the similarities and differences in the results. The range analysis of weighted expectation and perception gaps tested the extent of consistency and reliability of the average results. The reasons for using these data analysis techniques were based on the assumptions about the data characteristics and the shape of distribution. The average gaps between visitor expectation and perception of the service were also analysed by respondents' country of origin to identify the possible gap differences among the major visitor ethnic groups.

The trial application of QFD in the Buried Village case study implies that the SERVQUAL and QFD quality measurement and improvement tools are appropriate for the planning of quality management programmes of a small heritage tourist attraction like the Buried Village. However, the successful application of these techniques depend on the support from the management and staff as well as the control of a quality data collection process. The next chapter will discuss the general findings of this research by comparing and contrasting the three applications of the research methodology in relation to its strengths and limitations.

5.12 Chapter References

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therefore need to perceive and interpret the wishes of different customers and adapt their behaviours accordingly.

All three tourist attractions were found to appeal to first time visitors. Only a small number of respondents were repeat customers. A possible explanation for this result is that the visitors surveyed were mainly from overseas who would not have the time to re-visit the attractions during their stay in Rotorua. The majority of the respondents came to the attractions with family and friends and this was followed by organised groups. Sightseeing was the main purpose for visiting the Paradise Valley Wildlife Park and the Buried Village, while nearly half of the visitors surveyed in Tamaki Tours came to learn something. Given the nature of these tourist attractions, this finding is not surprising. As evidenced in the three case studies, most visitors came to Rotorua for holidays which include exploring the popular attractions such as the Maori culture and the natural beauty of New Zealand.

With regard to age categories, the largest group of the respondents was aged 20 to 30 and followed by those who were over 60 from Tamaki Tours and the Buried Village. On the other hand, the Paradise Valley Park attracted visitors between the age group of 40 to 50. This attraction is more appealing to people with young families. In terms of educational levels, the majority of the respondents from all three studies have shown a high educational attainment. With Tamaki Tours, more than 70% of the respondents held tertiary educational qualifications. This finding is consistent with that of similar research conducted in cultural tourist attractions. Douglas *et al.* (2001) referred to these tourists as "culturally motivated who tend to be better educated and better off financially".

The results from the three case studies also show that a large number of the respondents who came to Tamaki Tours and the Paradise Valley Park were retired professionals, while students formed the largest group who visited the Buried Village. This is probably because the surveys were conducted during a school holiday when the museum received more students for their field trips. The findings from Tamaki Tours are in line with the outcomes of the New Zealand international visitor surveys in that the majority of the respondents came from five international markets such as Australia, UK, USA, China and other western European countries. On the other hand, the results from Paradise

Valley Park and the Buried Village have shown a larger proportion of New Zealand visitors (40%).

The findings are quite similar for all three attractions in relation to the source of information about the tours. For example, word of mouth was considered as the most frequently used channel of information followed by organised groups, brochures and information centers. Advertisements, road signs and company websites have shown an insignificant rate of usage. This result is supported by the findings from the literature. For example, according to Kurtz and Clow (1998, p. 73), word of mouth communication is the strongest source of information used by consumers in forming expectations. For services of which consumers have little knowledge and experience, word of mouth communications can be used to build up the desired or ideal level of service expectation. In Rotorua, the accommodation providers were often considered as the expert sources for those international tourists. In addition, all three case studies have indicated a very similar pattern of male and female numbers. It can be concluded that the gender distribution of visitors surveyed was quite even in all these tourist attractions.

6.2.2 Customer expectations and perceptions

The findings from the principal case study conducted in Tamaki Tours suggest that customers surveyed had high expectations in the areas of peripheral services (e.g. the toilets), and core services such as "the whole tour experience should be enlightening, entertaining and educational"; and "the cultural performance should be authentic, informative and understandable". The respondents have also shown a high expectation of staff reliability expressed in such service features as the friendliness and courtesy of the staff and their knowledge to respond to visitor requests. The respondents in Tamaki Tours were satisfied about the tour guides and the Maori performance in the concert. However, the results have shown areas below their expectations in the service dimension of assurance. For example, the waiting time between activities was perceived as unreasonable.

The findings from the complementary case study of Paradise Valley Park reveal that both of the visitor groups surveyed were more satisfied with the service offered in the peripheral service and access as well as the physical appearance of the wildlife and

native bush. The results for the two surveys show a similar pattern in the levels of customer expectations and perceptions. Service features that were considered as "extremely important" are the physical appearance of the trout and wildlife park; the friendliness and courtesy of the staff and their politeness to visitors; the prompt service of staff; and that toilets are provided and are clean. Similar to the findings from Tamaki Tours, the visitors surveyed in the Paradise Valley Park also emphasized on the importance of toilets and the quality of service personnel.

The findings from the Buried Village case study have shown a different shape in customer expectation and perception. Most of the gaps were positive for the majority of the SERVQUAL questions, but with the exception of the physical appearance of the village setting and the easy access for visitors with wheelchairs, prams, and young children. The negative gap scores identified from the survey indicate that visitors were not satisfied with some of the facilities and services offered and that their perception of the service was below their expectations. This result suggests that visitors who came to the heritage tourist attraction were more concerned about the tangibles of the product and the accessibility to the attraction. As evidenced in the literature of service quality, although the perception of quality in the service delivery of an organisation is intangible, perception itself will result, at least partially, from a bundle of tangible factors. The tangible factors are the integral parts of the design of a service operational system (Jennings & Nickerson, 2006, p. 95). Tangible clues provided by visitors through the meanings they attach to their experiences can help to improve or create a quality tourism experience.

6.2.3 Staff view of importance of service quality and visitor expectations

The findings from the Tamaki Tours case study reveal that management and staff surveyed ranked 12 out of 23 service areas as "extremely important" and the remaining areas as "very important". However, the comparison of staff importance of service quality values and their view on the level of visitor expectations have shown a number of negative gaps. These service areas with negative gaps are "the pricing and range of products in the tribal market and bar"; "information provided about the facilities"; "waiting time between activities"; and "the introduction to the Maori culture on the bus". These under estimated service features exist in the tangible, responsiveness, and core

service dimensions. The differences between the staff perception of importance and their perception of visitor expectation of the service quality indicate that staff did not rank certain service elements as important to visitors as their estimates of the customers' own ranking indicated. For example, staff surveyed might think that customers had high expectations on the pricing and range of products in the tribal market, but to the customers' overall experience, this service item was not considered as important as some of the other features from the company's point of view. As suggested by Brown, Churchill, and Peter (1993), managers should carefully consider which issues are important to quality in their specific environment and to modify the scale as needed by customers.

The findings from the Paradise Valley Park reveal that in general the staff team had placed high importance on most areas of the services they offer. The priority of service importance was given to the dimensions of tangibles, reliability and responsiveness. The comparison of gaps between staff view of the importance of service quality and their understanding of customer expectation results as displayed in Chapter Five shows a large number of small negative gaps. The negative gaps were identified in the service areas relating to the service dimensions of reliability, responsiveness, assurance and core services. Compared to the customers' expectations, the staff and management surveyed have overlooked the importance of access such as signage and tour hours. Access was the ease with which potential customers approach, enter and access a service business in terms of location and hours of operation (Kurtz & Clow, 1998, p. 218). This view was also supported by Evans and Lindsay (2005) who state that providing easy access to employees is one of the most important aspects of a customer-focused organisation.

The staff survey results of the Buried Village show a high importance in most areas of the services they offer. Service features that were ranked lower in importance than customer expectations are shown in the areas of information provided, staff knowledge and prompt service, quality of the walkway and the easy access to an authentic tour. Due to the under-estimation of visitor expectations, these areas of service were perceived as less satisfactory to the customers. This result demonstrates that tourism experiences can be and will be affected by the settings as well as visitors' expectations. Therefore, travel and tourism providers need to be aware of the expectations tourists

bring to the sites. As Jennings and Nickerson (2006) pointed out, managers will be able to develop more effective strategic initiatives including communications if they understand the types of experiences expected and valued by their customers.

6.2.4 Visitor ranking of the relative importance of features and service

The average scores of the survey results in the Tamaki Tours survey show that customers considered the "extremely important" features and services to their tour experience were "the cultural performance is authentic, informative and understandable", "the physical appearance of the Maori village", and "the whole experience is enlightening, entertaining and educational". The overall results of customer relative importance rating of service features indicate that the visitors considered the provision of core services and the tangibility of the product were extremely important to their satisfaction with the whole tour experience. The lowest level of customer importance rating was found in the physical appearance of the city booking office, the food house and also the information provided about the facility. These variables were considered as being of only "some importance" to a visitor's cultural experience as they were secondary to the main purpose of the visit.

In the Paradise Valley Park case study, the two surveys have shown a very similar pattern in the importance rating with the exception of responsiveness, assurance and core service such as the authentic wildlife and nature-based tour experience. These importance rating scores imply that although features in all the five service dimensions were considered as important to a visitor's individual experience, customers have identified different values to each particular area of the service provided. Overall, these relative rankings of importance indicated the requirements of customers, which should prove useful to the management team for the company's product design and the establishment of improvement priorities.

The findings from the Buried Village show that service features that ranked "very important" to the visitors' experiences are tangibles, reliability, responsiveness and core services. These scores indicate the scale and range of those critical factors influencing visitors' perceptions. The examples are the reliability aspect of the staff, the empathy dimension of the tourist attraction, some aspects of the tangible features as well as

responsiveness in peripheral services such as the path design and the cleanliness of the toilets. The importance rating of service dimensions was varied for different service features in the two surveys conducted in the Buried Village. These variations may be produced by differences in the personal experience and cultural background or age of the respondents. These findings indicate that while the core services and supporting services are both important parts of the tourism products, the core services and the customer interaction are paramount as they can compensate for poorer technical performance (what is provided) (Moutinho, 2000, p. 243).

6.2.5 Staff knowledge of service quality standards

The findings from Tamaki Tours reveal that most staff members were aware of the written standards and procedures for the key service quality dimensions. Some staff indicated that there were also informal standards for the major service quality areas. A small number of staff surveyed did not have any ideas about the availability of service quality standards and procedures regarding the tangible and the peripheral facilities and services provided. These results show the difference between staff's levels of awareness and understanding of the quality service standards and procedures within the company. Obviously, this calls for clear communication inside the organisation with regard to standards and procedures.

The frequency distribution of staff responses from Paradise Valley Park shows that a large number of staff were aware of the existence of written service standards, while informal and formal standards were also seen to be available in different operational areas. This result indicates that the current quality service standard was not clearly understood by all. It also implies that internal communication needs to be improved in order to ensure the implementation of a quality management programme at a company level. Developing and implementing a well-documented quality system as Besterfield *et al.* (2003) suggested was an essential internal tool in order to deal with the external pressure of meeting quality marks.

Similar to the findings from the other two attractions, the findings from the Buried Village case study suggest that the knowledge of service quality standards was not shared equally among the staff team. As advocated by Kotler, Bowen, and Makens

(1999), education and training of staff are needed with regard to the current quality management policies. This is because one of the most important ways to improve service quality is to set service standards and goals and then communicate them to employees.

In general, the three case studies have shown a very similar pattern in terms of internal understanding of quality standards. As the literature suggested in Chapter Two, it is essential for tour operators to educate and train employees' awareness of the quality management concepts to promote their involvement and teamwork (Dale & Bunny, 1999). Management should understand the organisation's definition of quality and make every effort to ensure that each employee knows and understands how the organisation defines quality. This will, as suggested by Tamimi and Sebastianelli (1996), enable the successful application of a quality programme and achieve its objectives.

6.3 QFD RESULTS

The results of the House of Quality implementation in the three case studies are discussed in the following sections in relation to customer requirements, operational requirement and the prioritized improvement areas identified through the process of the QFD application. The findings of QFD implementations are also discussed in light of the literature reviewed in Chapter Two.

6.3.1 Customer requirements

The findings from the Tamaki Tours case study suggest that authentic and informative cultural performance was the primary customer requirement. People coming to New Zealand prefer to relate to Maori in their own environment rather than in a hotel or museum. They want to see the protocol and experience a genuine cultural performance. Instead of simply viewing culture from a distance, tourists wish to become absorbed within the cultural experience (Timothy & Prideaux, 2004). Increasingly, Maori tourism operators seek to differentiate themselves in the market on the basis of cultural legitimacy and have developed branding to support this strategy. Tamaki Tours has been a leader and innovator in this area. To keep this strategy alive, the company has to ensure that the content of the concert does not infringe on or abrogate any particular tribal "taonga" but that it represents Maori custom and culture in a general or generic

way – the "staging" is authentic and the visitor may "view" the experience with confidence. Where necessary the content provided needs to be sanctioned by those responsible for its upkeep and preservation. The cultural performance should thus provide a benchmark experience. The visitor leaves the experience with an expanded view and understanding of what it means to be Maori and that the insights gained can be used to audit their subsequent experiences with things Maori.

Another important aspect of customer requirements for the cultural tourist attraction is an educational and entertaining experience. The modern visitor increasingly seeks intimate engagement with their destination and to acquire and absorb the new experiences as part of an experiential outreach. The demographics of the surveyed visitors to the Maori Village experience in 2005 strongly suggest that the product appeals most especially to the old, professional and tertiary educated visitor market. This market could be expected to be discerning in their taste and demanding in the quality of its delivery. In a commercial environment the host is usually required to both entertain as well as educate. This would necessitate striking a careful balance between the two outcomes so that new knowledge is transmitted in a manner likely to reinforce the learning process – if either overrides the other, the likely result would be lowered levels of visitor satisfaction.

The findings from the Paradise Valley Park case study indicate that the customer requirements with high importance rating are spectacular wildlife, fantastic viewing of wildlife and learning experiences. The visitors surveyed demonstrated their preferred features for this tourist attraction as physical setting and interaction with natural environment. Similar to the other case studies, visitors came to the Paradise Valley Park also showed high expectations for staff-related dimension of the tourist service such as friendly and knowledgeable staff and informative tour guides. These findings are compatible with results from the literature on tourist and recreational demand for wilderness, natural parks and natural areas. For example, Higham's (1997) investigation found a variety of wilderness motivations for visiting New Zealand nature-based attractions. These include experiencing natural beauty and outstanding scenery, experiencing New Zealand's distinctive flora, fauna and natural systems, and engaging in the physical challenges that natural areas present. As Curtin (2005) concluded, tourism consumption is about purchasing experiences rather than things and

increasingly these experiences include natural spaces and wild animals. An experiential view of wildlife tourism provides a different understanding of a significant and growing market.

Findings from the Buried Village reveal that tourists visiting an historical museum seek for an outstanding museum layout. They want to engage with an experience in which the heritage content is packaged and themed so as to meet viewer requirements – amateur and specialist alike. This is especially the case for those tourists that are significantly constrained by their tour or travel logistics - time factors, viewer exhaustion levels, experience overload and similar factors critical to visitor satisfaction levels. In addition, an educational experience and informative interpretation of the tour guide were identified as the primary customer requirements. These findings are supportive to the literature on museum tourism. Weaver and Lawton (2006) argue that museums differ widely in the way that items are selected, displayed and interpreted. These differences in museum products and service features can influence market segmentation and customer requirements. However, it is considered as common in the literature to regard tourism to historic locations as a phenomenon mainly motivated by the willingness to learn and to be educated (Falk & Dierking, 2000).

The information collected on customer requirements through the QFD process has assisted these tour operators to understand customer expectations as well as factors that influence their evaluation of the services. By using the SERVQUAL technique, the essence of customer needs and expectations was captured and this valid customer information was used as the input for identifying operational requirements which can meet and exceed customer expectations.

6.3.2 Operational requirements

Operational requirements for visitor attractions are the elements of the service process that represent customer needs. The major operational requirements obtained from the Tamaki Tours case study were more specific as compared with that of the complementary case studies. The process side of the House of Quality is centred on creating the outputs required to meet customer expectations. In the case of the Maori village experience, the core product consists of both built environment as well as a

carefully constructed or staged experience. The staff focus groups identified the measurable design features of the service together with the methods and processes necessary for the service delivery. For example, one of the key operational requirements which established to satisfy customer requirements for an easy and quick payment procedure is queue management during payment process. This operational requirement was broken down into scheduling and coping strategies in capacity management of this tourist attraction.

The operational requirements collected in the Paradise Valley Park were based on the analysis of the 23 customer requirements obtained from the staff focus group. They covered the five dimensions of service quality as indicated in the SERVQUAL surveys. The operational requirements which are unique for this nature-based tourist attraction are maintenance of trout stream, park design, variety of wild animals and native birds, animal encounter, lion feeding schedule and maintenance of bush and walkways. The planning and allocation of resources in these areas of operation require systematic methods to meet the industry standards as well as external customer expectations.

Different from the Maori village and the wildlife park studies, the findings from the Buried Village emphasized on "the museum environment and decoration"; "catering service"; "safety and accessibility to the waterfall" which was an integral part of the village scenery and experience; "landscaping and spatial patterns of the attraction and the maintenance of the site excavations". These operational requirements are considered as significant in the successful operation of the historical museum.

Overall, the QFD process has provided means where customer expectation information can be translated into organisational actions representing the nature and characteristics of the tourist products. As discussed in the literature review in Chapter Two, linking customer requirements to operational requirements is an essential part of the TQM system which ensures that customer database information is collected and deployed in an effective manner. For example, focusing on the customers enables the organisation to recognise changing market conditions and effect to appropriate changes (Tenner & DeToro, 1992). A customer-driven company which shows constant sensitivity to emerging customer and market requirements should measure the factors that drive customer satisfaction (Evans & Lindsay, 1999). QFD provides a way of systematically

apply the voice of customers to process development which facilitating the initial step towards TQM orientation.

6.3.3 The House of Quality

The findings of the case studies indicate that the House of Quality provided the tourist attractions with an important tool to understand customer needs and give management strategic directions in terms of their priorities in the continuous improvement of service quality. The voice of customers was carried out through firstly the SERVQUAL surveys and then the staff focus group analysis to define the operational requirements and further the interrelationship between customer requirements and operational requirements. The final result of the House of Quality was the identification of operational features and areas which are in need of vigorous attention based on the feedback from customers and the staff's evaluation of the resources.

The results of the House of Quality for the three case studies indicate that the operational areas which are common to the three tourist attractions are staff trainings, change in content of programmes and access. However, the results were found to be rather different for those operational priorities derived from individual applications of QFD. For example, museum design and product interpretation were identified as the top five areas for quality improvement for the Buried Village. This finding was supported by the literature on heritage tourism studies. Yale (1997) argued that historical museums are about the past and good history is also about interpreting the evidence of the past. A good historical museum should interpret the items as well as simply exhibiting them. While the findings from the Paradise Valley Park suggest the re-scheduling of the lion feeding programme and increasing the opportunity of animal encounters, there still remains the need to develop an implementation programme, to carry out the full project and evaluate the results which should be part of the future plan for this tourist attraction.

The lower end of the priority list of the House of Quality for the three case studies shows the operational areas which do not require immediate improvement. In the case of the Paradise Valley Park, this can be explained for the fact that the company has renovated the signage and toilets before the visitor surveys were conducted and that these service areas have met customer expectations.

In general, the results of QFD implementation provided insights into the realistic possibilities and the necessities for improvement for the companies involved in the study. The absolute values and relative ranking from the House of Quality matrix have enabled the company to focus on those quality characteristics that are most important to meet customer needs. The results of the QFD application in the principal case study also guided the cultural tourist attraction to produce detailed plans for its improvement programme.

Both the findings of the research and the literature support the point that QFD is a reasonably complex approach to planning and designing services. For example, Ozgener's (2003) study revealed that without the support of top management, all attempts at QFD implementation could fail. Cross-functional commitment and participation need to be incorporated in the QFD implementation process. In this research, it was found that the application of QFD in the principal case study has fostered teamwork which breaks down barriers in communication between departments and that management support and commitment to human and financial resources have played a key role in the success of QFD implementation. As Williams and Buswell (2003, p. 116) pointed out, for QFD to work in a leisure and tourism organisation, the tour operators need to take a market approach, clearly define customer requirements based on both internal and external customers, commit to continuous improvement, applying systematically tools and techniques for achieving customer satisfaction, and establishing teamwork and cross-functional departments.

6.4 The General Findings

The findings from the three case studies support the view that the five service dimensions are appropriate in the design of SERVQUAL questions for the tourist attractions. As Saleh and Ryan (1991) indicated in their research conducted in the hospitality industry, the five dimensions in the tourism industry were found to be different from the original SERVQUAL instruments due to the characters of tourist sites and products. While SERVQUAL has been used as an important tool of service quality and customer satisfaction measurement, it did not however provide internal process of improvement. Therefore, as discussed in the literature review in Chapter Two, by using the QFD method as a model, a systematic process for quality improvement becomes

manageable and information can be obtained from problem identification through to resolution (Pitman *et al.*, 1995). Similar to the findings from Stuart and Tax (1996), the application of QFD in Tamaki Tours reveals that the building of the House of Quality through staff focus groups has encouraged discussions and communications among marketing, tour guides, retails and the Food and Beverage departments. The successful implementation of SERVQUAL and QFD in the principal case study shows that total quality management techniques need to be tailored to the unique needs of the organisation and it also depends on the support and cooperation among employees (Beheshti & Lollar, 2003). Because of limited resources, high work-load and the educational levels of the employees, training has become the most important factor in the effective implementation of a quality programme like QFD. As Bestfield *et al.* (2003) argued, employees who are trained in TQM and other appropriate improvement programmes can make substantial quality contributions.

6.4.1 The principal case study in the cultural tourist attraction

The SERVQUAL survey conducted in Tamaki Tours in 2005 has identified the characteristics of the market segments for cultural attractions in New Zealand and the level of customer expectation and satisfaction matched to the product and services offered in the attraction. The staff survey captured the employees' understanding of quality importance, their knowledge of performance standards and the staff's own views on customer expectations. Based on gap analysis, the areas which appear to be of concern and in need of improvement were identified. These include the service dimensions of tangibles (the physical appearance of the food house), reliability (staff gives prompt service and inspires trust in visitors), responsiveness (the pricing and range of products in the tribal market), assurance (signs inside and outside the village and easy access for visitors with special needs), and empathy (the whole tour is value for money). These service features were recognised as important areas to be improved as their rating indicated possible shortfalls in customer satisfaction.

The application of QFD in Tamaki Tours identified the prioritised areas of service improvement, which appeared to lie in the service dimensions of reliability, empathy and responsiveness. Through the translation of customer needs, the service features which should be enhanced are the authentic Maori village appearance as well as an

informative nature of the associated cultural performance. This indicates the characteristics of the cultural tourism market whose customers are looking for a true and un-commercialised encounter with a culture different from their own.

6.4.2 The complementary case study in the nature-based tourist attraction

The results of gap analysis of visitor expectation and perception data obtained from the two surveys conducted in the Paradise Valley Park indicate a number of service performance areas that were below customers' expectations. These areas are "the physical appearance of the lion pride"; "the pricing and range of refreshments in the coffee shop"; "the waiting time between activities"; and "the content and length of the activities". When weighted against the relative importance ratings, there appeared more areas which need to be improved. These service features with negative weighted gaps were "the staff give prompt service"; "the pricing and range of products in the souvenir shop are reasonable"; and "the whole tour is value for money". Based on the feedback from customers, these areas should be more closely monitored.

The trial implementation of the House of Quality in Paradise Valley Park shows that the prioritised areas for improvement are staff training, re-scheduling of lion feeding programme and the experience of encounters with the animals. These operational elements are very important to the customer satisfaction levels of the "nature lovers". This is possibly because the primary purposes for those tourists interested in nature are viewing the physical environment as well as experiencing a quality encounter with wildlife. The results of the House of Quality also help the company to subdivide the operational requirements into detailed activities that satisfy the customer needs. Other important aspects of operations include knowledgeable staff and quick reply, reasonable waiting time between activities, and ensuring visitors' comfort during the tour. This information has guided the management of the attraction to design a strategic plan for continuous improvement in these key operational areas identified in the study.

6.4.3 The complementary case study in the heritage tourist attraction

The visitor survey results derived from the Buried Village show that overall, the visitors were satisfied as indicated by the positive gap scores between visitor expectations and perceptions of service quality. The findings of the staff survey identified the gaps

between the staff's view of the importance of service quality and their understanding of customer expectations. The results showed that staff appeared to have a good understanding of their customers' expectations for a majority of the service features. The staff survey also found that despite the inconsistent responses, most staff considered the company had informal performance standards and formal and documented service standards across different service dimensions. The results of the gap analysis of visitors' expectation and perception data indicate that the service performance in the Buried Village was below customer expectations in the service dimensions of tangibles, assurance, and reliability.

The trial application of House of Quality in the Buried Village shows that the top five service features which need to be monitored are training of staff, service of tour guide, museum design, maintenance of walkway and playground, and content of programme and product interpretation. These areas for improvement appear to be related to visitor expectation and perception gaps in core product, reliability, assurance and tangibles. Action plans were set up based on the results of the SERVQUAL surveys and the implementation of QFD. The results of this case study have helped the organisation identified the customer expectations and the importance of keeping track of the changing demand for their product and service being offered.

6.5 Common issues with the application of SERVQUAL and QFD

The Houses of Quality in the principal case study and the two complementary case studies were based on the general information taken from the SERVQUAL survey questions that covered the five service dimensions. The wording of the customer requirements and operational requirements was qualitative and derivative in nature as they were based on the staff group meetings rather than the visitors themselves. As part of the respondent company's quality management improvement initiative, the application of the QFD method was restricted to the first matrix of the House of Quality. Another concern with the use of SERVQUAL results as the input for QFD was that the data inputs were limited by the number of surveys conducted during the study. Customer requirements and their importance rating are changing constantly and once a customer expectation of service quality was met, there would be new demands for other improvements. As Kandampully (2002, p. 74) suggested, service organisations can

achieve a strong reputation for quality service only when they consistently meet or exceed customer expectations.

The two SERVQUAL surveys in the Paradise Valley Park were carried out in August and October 2002, which were rather close in time. Consequently, the results might not be representative of all the customers who have visited the park throughout the year. Due to the seasonality of the nature-based attraction, the sample size was smaller in August as compared to that of October. The visitor profile for this attraction was different during the winter season in New Zealand. Data collection was difficult to undertake in the field when some visitors missed some of the attraction items resulting in an element of missing data on the questionnaires returned. This has caused problems in data analysis and interpretations. For example, the removal of null responses had to be made in many cases before calculating the average weighted gaps between the visitor expectation and perception scores. This may have caused a measure of bias in the final result. The House of Quality matrix for Paradise Valley Park was developed and completed with the effort of the management and front line staff team instead of getting all staff involved. Some of the employees were not available for participating in the quality improvement programme due to special duties. In addition, the results of the prioritised areas of improvement were also subjective due to the personal preference and judgement of the management team on the relationship between customer needs and operational requirements.

Similar to the Paradise Valley Park case study, the two SERVQUAL surveys in the Buried Village were carried out during the same season, and the results were not fully representative of all the customer groups who have visited the museum throughout the year. For example, the domestic visitor segment was larger in September than that of December because the survey was conducted over the school holiday weekend. This might have caused bias in the overall findings and would certainly have altered the relative demographic constitution of the two samples. A convenience sampling was employed in the data collection due to the restricted accessibility to the site. The findings might prove quite interesting and useful for the company but the problem with such a sampling strategy was that it is difficult to generalise the findings because it was not clear that this sample was representative of the general visitor population. Further, due to the administration of the survey, some of the participants left the village half way

through the tour and could not use the tea room and playground facilities. As a result, their responses to the expectation and perception items were not as valid as that from the others owing to the missing information on the returned questionnaires.

In spite of the limitations existed in the two complementary case studies, the findings were used for the data analysis and QFD tribal implementation to support the application of the methodology in the principal study. Although the applications of the methodology proved difficult due to characteristics of the data themselves, they are found acceptable on empirical grounds. The experiments of various data analysis techniques employed in 2003 in the two complementary case studies have provided foundation and direction for the implementation of SERVQUAL and QFD in the principal case study conducted in 2005 in Tamaki Tours. The findings from the three case studies suggest that a tourist attraction operator needs to establish an appropriate quality management system under which customer feedback information is collected and analysed regularly to guide the continuous improvement in quality customer service. It can be concluded that the demonstrations of case study results have filled in the gap in the research of small tourism sector in New Zealand.

6.6 Chapter Summary

This chapter has examined further the results of case studies presented in Chapter Four and Chapter Five by explaining and interpreting the findings and comparing them to the literature in Chapter Two. Each of the major issues as discussed in the SERVQUAL and QFD implementation has been addressed and similarities and differences were investigated. The final chapter of this thesis - Chapter Seven will provide conclusions and implications. Significant findings of the research and contributions will be summarised to give insight to future research.

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CHAPTER 7

CONCLUSIONS AND IMPLICATIONS

7.1 Introduction

For a variety of reasons small to medium sized tourist attractions in New Zealand are increasingly motivated to provide best quality service delivery to their customers. These reasons include the growth in competitor numbers, domestic and international, as well as rising levels of service standards. As a reflection of this, increasing numbers of operators have participated in various quality assurance and branding programmes such as the New Zealand Tourism Awards and the Qualmark quality standards system. They represent an initiative by industry to define and institutionalise processes and systems across the industry as a whole. Although they rate and officially "recognise" the quality of service delivery, they are not, however, on a consistent basis embedded and effectively implement the on-going commitment and compliance necessary to sustain a continuous improvement programme keyed to visitor need satisfaction.

The review of literature found that the simplification and application of an appropriate quality assessment and improvement technique for SME tourist organisations is a real and current need at both industry and operator levels. There is, however, debate surrounding the most appropriate method and although all have to some extent methodological drawbacks and concerns, there is little dispute regarding the requirement by tourist operators for an agreed and consistent approach to customer service need analysis and response. This applies both to the measurement of service quality itself as well as to the identification and remediation of perceived low standards of performance from both a customer and organisational perspective.

This study was conducted through a process that used the quality measurement and analysis tools of SERVQUAL and QFD (via the House of Quality) as applied to three pilot case studies of New Zealand tourist attractions followed by a larger scale implementation of the research method in one of the companies involved. During the process of research, investigation has identified a number of issues which contribute to the body of knowledge relating to quality assessment and improvement techniques

applicable to SME tourist attraction operators. The objective of this chapter is therefore to make these issues explicit within the overall research framework and draw conclusions for the research problem established in the previous chapters.

This final chapter examines the feasibility of the application of the research methodology in the principal and complementary case studies. The main conclusions from the study are then summarised in relation to the research questions discussed. The generalisation of research findings is reviewed and implications for both researchers and practitioners are explained. After evaluating the strengths and limitations of the study, areas for potential future research are identified.

7.2 Similarities and Differences of Research Findings

As discussed in Chapter Two, an integrated system of quality management strategy is needed for organisations to achieve continuous improvement. The sequential process of service quality improvement for small to medium sized tourist attractions designed in this study (see Figure 2.4) was carried out in the principal case study in Tamaki Tours. However, the complementary case studies in Paradise Valley Wildlife Park and the Buried Village have experimented with the application of SERVQUAL and QFD to provide supportive evidence and show the viability of using the combined methodology. The design and implementation of improvement programmes and their measurement are still under development. Overall, the results show some similarities in the areas where service improvement appears to be required. All three case studies have emphasised the importance of staff training. Despite the general findings in the major service dimensions, there are some unexpected differences between the tourist services due to the nature of product and the market preferences. For example, the physical environment is considered as the most important variable influencing the satisfaction of the nature-oriented tourists. However, the authenticity of cultural products and learning experience are respectively the draw card for the heritage and cultural tourist attractions. These findings should be reflected in the operational management of each site.

The common operational features that were found of most interest and concern in the three tourist attractions are staff skills, service standard of tour guides, and the contents of tours. This result suggests that the operators need to commit resources to staff

training and the packaging of core products. Depending on the theme of each tourist attraction and the SERVQUAL results from the customers, there were also specific features that were recognised as important. For example, guided service and transportation, control of village capacity, and the planning and production of *hangi* were identified as the priorities for the cultural attraction, while the lion-feeding schedule, the variety of wild animals and native birds in the Paradise Valley Wildlife Park are the essential priorities in that attraction. The Buried Village has emphasised the significance of museum design and product interpretation. It is interesting to note that the maintenance of the bush, walkway and play ground are considered as important for both the nature-based and the heritage tourism attractions. This indicates the awareness and understanding of environmental protection from both the customers as well as the tourist operators themselves. This finding supported the proposition put forward by Norton (1987) that managers of nature-based attractions should ensure the quality of the available natural experience and work towards instilling "transformative values" through a learning experience with nature that yields greater environment awareness, appreciation, and respect for nature. The findings also implied that resources and environment are the most important factors in ensuring the long-term development of nature-based and heritage tourism. As suggested by Tsaur, Lin, and Lin (2006), interpretative service based on environmental education could raise the quality of experiences for tourists at the spiritual level and help them to develop more awareness in conserving and protecting resources.

This study suggests that the SERVQUAL instrument has proven to be a useful conceptual and analytical tool for measuring service quality in terms of the customer requirements in the tourist attractions involved. The importance ratings of quality service from the visitors can be used as an important input for the application of QFD which leads to the operational action plans required in the process of continuous quality improvement. It was found that the effectiveness of the quality measurement and improvement technique can be different depending on the support and commitment of the management and staff. The companies need to ensure that clear communication of the quality improvement programme throughout all the departments is necessary so as to encourage staff in the delivery of quality service.

7.3 Contributions of the Study

This study focuses on the use of SERVQUAL gap analysis in the identification of customer needs as a preliminary step in the development of a QFD process and House of Quality approach for small to medium sized tourism operators seeking to meet service delivery standards. It was proposed that SERVQUAL combined with QFD provides a means for tourism operators to establish and implement a quality improvement programme, based both on the identification of customer expectations as well as those held by the organisation itself (Liu, Smith, & Barnes, 2002). It sets out a process for identifying service delivery gaps (SERVQUAL) and for taking the first step towards the identification of their underlying causes (QFD: House of Quality). The next and subsequent step would be to look at the ways and means of incorporating these into the organisation's strategic planning process. The three pilot studies identified that although this combined tool approach was possible, further research was necessary to probe issues that were hinted at but not fully developed as a consequence of sample size and sampling strategy. Further surveys should be carried out by the organisations to better explore and identify the possible causes of variation between the separate case studies and between different applications within the same company. This was necessary in order to give additional confidence to the use of customer need measures as identified by the SERVQUAL process through the use of larger samples and more regular and frequent time frames for data collection.

The contribution of this research to the field of service quality measurement is centred on the combination of SERVQUAL and QFD to produce a quality improvement tool and technique which can be applied in the small business area of tourism. The application of the combination helps not only in the identification of gaps between the customers' expectations and the service provided, but also the generation of priorities for the improvement of its business processes with a view to close the gaps with negative values. With regular implementation of these quality measurement and improvement techniques, the company could build a profile of customer needs that would allow for careful monitoring and management as a part of the management process itself. As a consequence, an important and crucial contribution would be made to strategic management decision making and management's use of available resources to improve the critical areas identified by the combined SERVQUAL: QFD model. This

in turn would provide a knowledge base on customer needs from which the organisation could draw when seeking industry accreditation, such as through Qualmark by demonstrating their ability to commit to continuously meeting and achieving customer satisfaction over the longer term.

In addition, the study also reveals the important role that empirical evidence provides in assessing the consistency and integrity of the SERVQUAL results over time, and within and between each survey. Repeating visitor surveys allows the organisation to identify the true voice of the customers on a regular basis over a given period of time. Also, by using the multiple split sample method of establishing the consistency of the responses and inferential statistical analysis such as the chi-square test, it is possible to identify differing responses caused by demographic differences in the visitor sample. As stated above, this method can be used to make allowances for different market segments where the content and form of delivery of the product and its service environment and values are likely to vary across and along specific culture of origin dimensions. Care does need to be taken to ensure that what emerges from any one survey is noted for future reference – both in respect of seeking confirmation of problem persistence or solution but also as a means of strategically tracking organisational performance against environmental change over time. This provides the organisation which employs such a process with the information needed to demonstrate their ability to meet best practice specifications established by industry accrediting bodies. For example, the New Zealand quality awards criteria require that an entrant be able to show that they have an ability to track performance and measure the success or otherwise of interventions.

This study provides descriptive results and comparisons that were made to test the consistency of data acquired at different time and representing a variety of different market segments. This allows the researcher to examine and consider possible explanations for any variance within the data and the possible reasons why such differences appear to exist between different customer groups. The results have provided valuable insights into how and why particular tourism operators focused on certain aspects of quality management. For example, cultural attractions emphasise the authenticity of the product while the nature-based attraction places more emphasis on the physical environment. The heritage tourism attraction highlights the importance of

product interpretation, which provides the learning component of that particular type of tourist experience.

7.4 Implications of the Findings

This study has a number of implications for the application of the combined SERVQUAL: QFD measurement and improvement tool for SME tourist attractions. The implications are discussed from the following three perspectives.

First, this study used repeat surveys for the two complementary case studies to identify through these research possible changes in market segmentation and differences in visitors' expectations and perceptions. Results have shown variances, in customer expectations and perceptions of the service being offered, between surveys which were conducted during different months of the year. This raises the strong possibility that visitor expectations and perceptions may vary depending upon such factors as their demographic background, their market of origin and also because of the product seasonality aspects of the tourist attractions involved. Therefore, regular customer surveys need to be carried out in order to obtain reliable and consistent feedback from the market, particularly in order to both raise the quality levels of the data gained as well as to establish reliable trends within the data over time. This is especially the case when the data outputs from these surveys are used as the input for the implementation of QFD to identify a programme of quality improvement. It was supported through other similar research that in order to meet customer expectations, the tourism attraction needs to listen to the customer continuously and not just at discrete and infrequent intervals (Singh & Deshmukh, 1999).

Second, the simplified House of Quality tool employed in this study removes the components that are considered to complicate the implementation of QFD for SME tourism operators but preserves the basic structure and outputs of QFD. Based on the inputs of customer requirements from the SERVQUAL analysis, the outputs from the use of the House of Quality have helped the organisations involved to identify and prioritise areas for performance improvement. This approach provides a means by which the customer perceptions and staff perceptions can be aligned and the perceived differences in service delivery standards between the two groups can be addressed.

For the case study companies involved in this research, the process has assisted them to refine their understanding of operational areas of performance in need of service improvement and have assisted them also to incorporate a customer service focus into their strategic planning activities. This in turn has helped them to design business plans which concentrate on service dimensions that are judged to be of most importance by both the customers as well as the staff team. The implementation experience with the House of Quality in the case studies strongly suggests that QFD provides a sufficiently systematic framework for continuous quality improvement. The successful application of QFD depends on the understanding and commitment of the total service quality philosophy of management and the skills of the employees who participate in the processes of quality improvement. Therefore, training becomes important for SME tourism operators in the administration of SERVQUAL surveys, information analysis and equally importantly, the construction of the House of Quality.

Third, the results of the SERVQUAL survey in the principal case study were analysed through statistical hypothesis testing to determine the nature of the relationship between different levels of customer expectation and perception and the respondents' demographic information. The results of chi-square testing suggest that the visitor's expectations and perceptions of a tourist attraction tended to be influenced by their demographic characteristics such as gender, educational level and ethnic mix of the sample group. These results may help to explain the probable source of the variance between visitor expectation, perception and the gaps for a particular question within a survey group. By selecting the responses related to the demographic variable which showed statistical significance, it is possible to see where the groups identified by the variable differed and it enables the continuous improvement programme to be targeted at specific groups. As a result, this method can provide insights for the companies involved in the application in SERVQUAL in terms of time and target population to be selected in order to identify reliable and consistent improvement programmes related to key market segments for a particular tourist attraction.

7.5 Limitations of the Study

The limitations of the methodologies employed in this study have been described in Chapter Six. However, it is necessary to note some of the general limitations of the research.

Firstly, gap analysis was limited mainly to Gap 1 (expected service versus perceived service) and Gap 5 (consumer expectations versus management perception of consumer expectations) of the SERVQUAL model due to the objectives of this research and the nature of the case studies involved. This result however aligns strongly with the findings from Augustyn's (1997) research findings from travel agencies which identified two important gaps in the tourism industry – the quality perception gap and the delivery gap.

Secondly, there could be general limitations arising out of the personal bias of those involved in the application of QFD when the relationships between customer requirements and operational requirements were established. The study was also restricted to six rooms of the House of Quality so as to ensure that the focus of the research was directed to the areas on interaction between the SERVQUAL and QFD techniques. The calculation of absolute values in the operational priorities of the House of Quality matrix has excluded the external competitor's information, which might be a compromise to the complete application of QFD.

Thirdly, the sample selected from each case's visitor survey was not able to fully reflect the diversity represented by the range of small tourism operators in New Zealand. In addition, the study was based on one geographical area, which may not truly be representative of all tourism attractions operating in New Zealand.

7.6 Recommendations for Future Research

As the literature has suggested, service quality measurement and improvement in the SME sector of the New Zealand tourism industry is a relatively new field of study and there is much scope for challenging research work. The results obtained from this

research have suggested a variety of future research directions. The following recommendations are given based on the limitations discussed in Section 7.5.

Firstly, a deeper understanding needs to be gained of the role played by managerial needs and motivations in the decision by operators to engage with and apply quality measurement and assurance systems to their business operations. It was clear in all three study cases that a substantial level of owner and operator commitment was required to establish and sustain any such initiative and that the economic and human costs were significant, especially in small companies where multitasking and job sharing is the order of the day. This study found that successful SERVQUAL surveys and the building of the House of Quality depended heavily on support from management and teamwork from the staff members. Therefore, the relationship between management's attitude towards delivering customer satisfaction and their commitment towards quality improvement programmes needs to be addressed.

Secondly, the issues involved in the adoption and use of different quality improvement tools need researching, both to acquire an understanding of the benefits or otherwise that flow from their adoption as well as to also understand the differential effects that they have had on the organisations involved. Such research may help to provide directions for those tour operators looking for the appropriate quality improvement techniques that best suit their business. An extension to this would be to assess these effects and consequences over time and across a range of applications and uses.

Thirdly, the application of QFD in this study has concentrated on the primary needs of visitors only, and subsequent applications of the methods could usefully explore their secondary needs as well. For example, turning prioritised operational requirements into new customer requirements in further designs of a House of Quality.

Fourthly, the operational requirements involved in the QFD implementation could be extended to take the HOWs and detail them into the company's business plan as part of the organisation's goals and strategies. The design of a quality management system is the responsibility of management which requires a focus on the strategic benefits from the continuous improvement of the service offering (Moutinho, 2000). The effects of

such implementation could then be fed back into the QFD model to further refine its application and use.

Finally, it would be valuable to use the same methodology in other tourism attractions in other regions within New Zealand in order to compare the results. This would help to refine the notion that the combination of the SERVQUAL and QFD is an appropriate system for quality improvement of SME type tourism attractions. Further, the House of Quality might need to be tested in relatively large tourism organisations to compare the applicability of QFD in conjunction with other TQM tools.

7.7 Concluding Remarks

As the result of this research, a means for measuring and improving service quality in tourist attractions has been identified and the effects have been examined through an implementation exercise carried out in one of the case study organisations – Tamaki Tours. A simplified QFD application has been employed that appears to have potential as a practical measure for bridging operational and strategic issues and concerns.

The current research has identified areas to be investigated in more detail as part of future research. Such studies may seek to further refine the data analysis and interpretation process as well as to focus more closely on the influence such effects as supply and demand seasonality, varied cultural and market of origin backgrounds and aspect of service logistics may have on customer perception of delivery standards and values. Variations in SERVQUAL results need to be more closely examined and understood most especially for the effects this will have on the outputs of the QFD House of Quality and outcomes from their use in organisational strategic planning.

This research has progressed the following three objectives of the study by documenting and analysing the development process and implementation of the quality improvement tools in the three case studies.

1). To demonstrate that it is possible to link the results of a SERVQUAL analysis to a simplified QFD process in order to provide a customer satisfaction improvement programme for the management of tourism attractions. It has done this by realigning

and linking the focus and use of these two tools so as to permit their combination in ways that facilitate the matching of service gap identification to service gap closure.

2). To continue to evaluate the SERVQUAL process as a means of identifying areas for quality improvement in a range of small to medium sized New Zealand tourism attractions. It has set in place a starting point and base through which individual operators and the industry as a whole may acquire a benefit. It adds value to existing industry methods such as Qualmark and Industry Awards by making a beginning at developing data on quality service performance that may enhance their utility as industry recognised benchmarking and quality assurance tools.

3). To analyse the demographic composition of the tourist attractions' customer base to identify specific market segments which may require special attention to improve customer satisfaction. It makes possible a means through which the effects of differences in the market place and in the ways organisations create value can be measured and the results used to further the better matching of visitor needs with tourism product development in New Zealand.

The research question, *how to discover an appropriate tool for the measurement and improvement of the service quality for small to medium sized tour operators,* has been addressed firstly, through the investigation of two complementary case studies which have helped to refine research instrumentation and methodologies of SERVQUAL and QFD and secondly, through the application of this to a more extensive study of the principal case. Out of this has come a more refined understanding of how the two techniques may, with appropriate modification, be utilized on a regular basis in order to define and meet customer expectations of service quality levels as well as meeting the criteria set by the Qualmark and Tourism Awards measurement. A key to the successful implementation of these quality tools is the management's attitudes towards the quality system, staff skills in customer survey and data analysis. A lack of resources and time constraints are other reasons that might hinder the effective application of these quality management tools.

The SERVQUAL surveys conducted in the case studies have identified areas for improvement and the importance rating of visitor expectations. The results of different

visitor surveys were incorporated in the development of QFD, which further identified the prioritised areas for improvement in relation to operational requirements and produced a plan for service improvement in the principal case study. This has set up the foundation for the company in compliance with external quality assessment. One by-product of the research was that the SERVQUAL and QFD methods employed at each of the tourist attractions provided an opportunity for a company to more formally identify customer needs and customer satisfaction with the services offered. The gap analysis process helped the companies to discover in a structured way the differences between visitors' expectations and their perceptions of the services experienced. This in turn assisted management to pinpoint areas of service performance where they were delivering well and areas that could be improved.

In addition to the SERVQUAL and QFD analysis, an investigation of the performance standards and procedures used in the three case study companies was undertaken. This identified the areas where staff were unaware of existing standards and should be trained to achieve the standard or where standards did not exist and should be developed. The visitor profile of the tourist attractions was obtained as part of the surveys to identify target markets and to help to explain the reasons for any significant differences in customer requirements or expectations regarding service quality standards. This profile has provided a beginning customer database from which the companies may gain further value and utility as they extend and refine its usage.

The repeat surveys suggest that the SERVQUAL instrument should be applied several times to any given tourist attraction to obtain a more precise measure of the variability in service quality from time to time. The information on the importance rating of the quality of service indicated by the visitors can be employed as the input to the quality improvement strategy and programme of a company. The results of SERVQUAL surveys and the findings from a QFD House of Quality exercise may assist a company with the redesign of service performance standards and the delivery of quality service. The modified House of Quality as employed in this research shows that it is a tool that helps match customer requirements with the necessary technical service quality characteristics. The relational data that is created by this process enables a company to focus on those operational characteristics that are most important for strategically meeting customers' needs.

Overall, the results of the methodology taken together demonstrate a good level of practicality associated with the application of SERVQUAL and QFD in the tourism industry. This is especially so for those companies with the resources and the will to make a long term commitment to the process and its associated quality goals. As well, the principal results did show that the service quality measurement and management tools of SERVQUAL and QFD employed in this study provide valuable insights by helping the smaller tourist attraction to make the quality management journey. The conclusion can be drawn that the repeated and regular application of these tools may be used to enhance the satisfaction of visitors as well as assisting in meeting any external quality assessment criteria required by such industry sponsored initiatives as Qualmark and the New Zealand Tourism Awards. They do so by helping to identify customer needs and by linking the results to the better design of the product and the achievement of enhanced service quality standards.

In this chapter, assertions are made based on the findings and the comparison with previous research. The usefulness of the findings and the potential significance of the implications of this study to the knowledge base of the quality management discipline are explained with a range of suggestions. The strengths and limitations of this research are presented and recommendations for future research based on the experience in conducting the study are made.

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Appendix A: Pilot Case Study 1 ---Tamaki Tours

A 1. Tamaki Tours Visitor Survey Questionnaire

Visitor Survey

Dear Sir/Madam,
My name is Claire Liu, a Ph.D. student at Massey University. This survey is part of my research requirements. My supervisors are Dr Robin Smith and Dr Don Barnes.
The purpose of this questionnaire is to measure expectations and satisfactions of visitors to the Tamaki Village. The information will help Tamaki Tours to identify customer needs.

The information provided will be treated in confidence and the individual source of information will be kept confidential to Massey University. Should you decide to take part in the survey, you will have to fill in one part prior to commencing the tour. When leaving the village, you need to fill out the rest of the questionnaires.

This survey should take about 10 to 15 minutes to complete. You are not obliged to answer all the questions, and may refuse to provide details on any particular question. Please feel free to clarify with the staff any issues relating to this research. Participation in this survey is voluntary and filling in the questionnaire implies your consent to take part in the survey. The results of the survey may be published but it will not be possible to identify any respondent from the published results.
A summary of the results will be available when the analysis has been completed by email should you wish it. If so please add your email address here:

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/53. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North, Tel: 06-3505249, email: S.V.Rumball@massey.ac.nz.

Thank you for your participation and support!

Student

Claire Liu
Massey University
New Zealand

Supervisors

Dr Robin Smith
Massey University
Palmerston North, New Zealand

Dr Don Barnes
Massey University
New Zealand

Sponsor

Mike Tamaki
Managing Director
Tamaki Tours
Rotorua, New Zealand

Part 1: Visitor Profile

The following visitor information will be treated as confidential. Please make your choice by ticking the appropriate box and writing the other information in the spaces provided.

1. How many times has Tamaki Tours guided you?

- ❑ First time
- ❑ 2-3 times
- ❑ 4-6 times
- ❑ More than 6 times

2. With whom did you come here today?

- ❑ Alone
- ❑ Family
- ❑ Friends
- ❑ Organised group
- ❑ Others, please specify: _____

3. What is your main reason for this visit? (you can tick more than one)

- ❑ To see a particular activity
- ❑ To learn something
- ❑ Something to do
- ❑ Sightseeing
- ❑ Others, please specify: _____

4. What age group are you in?

- ❑ 15-19
- ❑ 20-24
- ❑ 25-29
- ❑ 30-34
- ❑ 35-39
- ❑ 40-44
- ❑ 45-49
- ❑ 50-54
- ❑ 55-59
- ❑ 60 & above

5. What is your occupational area?

- ❑ Farming
- ❑ Professional
- ❑ Management
- ❑ Student
- ❑ Clerical
- ❑ Sales/service
- ❑ Technical
- ❑ Retired
- ❑ Unemployed
- ❑ Others, please specify: _____

6. What is your education level?

- ❑ Primary
- ❑ Secondary
- ❑ Polytechnic (other tertiary)
- ❑ University
- ❑ Others, please specify: _____

7. Where do you live? (Name of Country)

_____

8. What is your purpose of visiting Rotorua?

- ❑ Visiting friends and relatives
- ❑ Holiday
- ❑ Business
- ❑ Others, please specify: _____

9. Where do you find out about Tamaki Tour? (You can tick more than one)

- ❑ Brochure
- ❑ Advertisement
- ❑ Information centre
- ❑ Word of mouth
- ❑ Road sign
- ❑ Website
- ❑ Others, please specify: _____

10. Gender

- ❑ Male
- ❑ Female

Part 2: What are your expectations before your visit and How do you feel after your visit to the Maori Village

We would like to know your expectations with the facilities and services before your tour, and how you feel about this after your tour with Tamaki Tours.

Make your choice by circling the number, which best represents how you feel about the facilities and services provided by Tamaki Tours.

	Features, Displays and Services	My Expectation is 1= Very low; 2= Low; 3= Neither; 4= High; 5= Very high.	My Impression of the standard was 1= Very low; 2= Low; 3= Neither; 4= High; 5= Very high.
1	The physical appearance of the city booking office	1 2 3 4 5	1 2 3 4 5
2	The physical appearance of the Maori village	1 2 3 4 5	1 2 3 4 5
3	The physical appearance of the wharekai (the food house)	1 2 3 4 5	1 2 3 4 5
4	The information provided about the facility e.g. brochures, advertisements and programme information	1 2 3 4 5	1 2 3 4 5
5	The friendliness and courtesy of the staff and their politeness to visitors	1 2 3 4 5	1 2 3 4 5
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	1 2 3 4 5	1 2 3 4 5
7	The staff gives prompt service	1 2 3 4 5	1 2 3 4 5
8	Staff inspires trust in visitors	1 2 3 4 5	1 2 3 4 5
9	Visitors feel comfortable during their visit, e.g. enough seats, heating, lighting, space between the seats	1 2 3 4 5	1 2 3 4 5
10	The pricing and range of refreshment in the bar are reasonable	1 2 3 4 5	1 2 3 4 5
11	The quality in presentation of the food provided by the wharekai (the food house) are adequate	1 2 3 4 5	1 2 3 4 5

12	The pricing and range of products in the tribal market place are reasonable	1 2 3 4 5	1 2 3 4 5
13	Toilets are provided and clean	1 2 3 4 5	1 2 3 4 5
14	There is easy access for visitors with wheelchairs, prams and young children	1 2 3 4 5	1 2 3 4 5
15	Signs inside and outside the village are adequate	1 2 3 4 5	1 2 3 4 5
16	The booking system is prompt	1 2 3 4 5	1 2 3 4 5
17	Tour hours are convenient	1 2 3 4 5	1 2 3 4 5
18	The waiting time between the activities is reasonable	1 2 3 4 5	1 2 3 4 5
19	The introduction to the Maori culture on the bus is enlightening	1 2 3 4 5	1 2 3 4 5
20	The whole experience is enlightening, entertaining and educational	1 2 3 4 5	1 2 3 4 5
21	The cultural performance is authentic, informative and understandable	1 2 3 4 5	1 2 3 4 5
22	The whole tour is value for money	1 2 3 4 5	1 2 3 4 5
23	The content and length of the activities are appropriate	1 2 3 4 5	1 2 3 4 5

Part 3: Level of Importance of features and services

*Please indicate how **relatively important** you think each of the following facilities and services is as compared to the others. Make your choice by circling the appropriate number.*

	Features, Displays and Services	How relatively important are the following to your tour? 1=Not important; 2=Some important; 3= Important; 4= Very important; 5= Extremely important.
1	The physical appearance of the city booking office	1 2 3 4 5
2	The physical appearance of the Maori village	1 2 3 4 5
3	The physical appearance of the wharekai (the food house)	1 2 3 4 5
4	The information provided about the facility e.g. brochures, advertisements and programme information	1 2 3 4 5
5	The friendliness and courtesy of the staff and their politeness to visitors	1 2 3 4 5
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	1 2 3 4 5
7	The staff gives prompt service	1 2 3 4 5
8	Staff inspires trust in visitors	1 2 3 4 5
9	Visitors feel comfortable during their visit, e.g. enough seats, heating, lighting, space between the seats	1 2 3 4 5
10	The pricing and range of refreshment in the bar are reasonable	1 2 3 4 5
11	The quality in presentation of the food provided by the wharekai (the food house) are adequate	1 2 3 4 5
12	The pricing and range of products in the tribal market place are reasonable	1 2 3 4 5
13	Toilets are provided and clean	1 2 3 4 5

14	There is easy access for visitors with wheelchairs prams and young children	1	2	3	4	5
15	Signs inside and outside the village are adequate	1	2	3	4	5
16	The booking system is prompt	1	2	3	4	5
17	Tour hours are convenient	1	2	3	4	5
18	The waiting time between the activities is reasonable	1	2	3	4	5
19	The introduction to the Maori culture on the bus is enlightening	1	2	3	4	5
20	The whole experience is enlightening, entertaining and educational	1	2	3	4	5
21	The cultural performance is authentic, informative and understandable	1	2	3	4	5
22	The whole tour is value for money	1	2	3	4	5
23	The content and length of the activities are appropriate	1	2	3	4	5

A 2. Tamaki Tours Staff Survey Questionnaire

Staff Survey

Dear Sir/Madam,

My name is Claire Liu, a Ph.D. student at Massey University. This survey is part of my research requirements. My supervisors are Dr Robin Smith and Dr Don Barnes.

The purpose of this questionnaire is to measure the staff expectations of provided service at the Tamaki Tours. The information will help Tamaki Tours to improve the business.

The information provided will be treated in confidence and the individual source of information will be kept confidential to Massey University.

This survey should take about 10 to 15 minutes to complete. You are not obliged to answer all the questions, and may refuse to provide details on any particular question.

Participation in this survey is voluntary and filling in the questionnaire implies your consent to take part in the survey. The results of the survey may be published but it will not be possible to identify any respondent from the published results.

If you have any questions or comments about any aspect of this survey, please contact my supervisors at the addresses given below.

Thank you for your participation and support!

Student
Claire Liu
Massey University
New Zealand

Supervisors

Dr Robin Smith
Dept. of Management
Massey University
Palmerston North, New Zealand

Dr Don Barnes
Massey University
New Zealand

Sponsor
Mike Tamaki
Managing Director
Tamaki Tours
Rotorua, New Zealand

Part 1: Level of Importance and Visitor Expectations --- Staff

We would like you to think about the kind of facilities and services that Tamiki Tours provide.
For each item listed below, please indicate how important you think each one is for the visitors and then please indicate what you would expect from the services provided by Tamaki Tours.

Make your choice by circling the number, which best represents how you feel about the facilities and services provided by Tamaki Tours.

	Features, Displays and Services	**How important are the following to the visitors?** 1= Not important; 2= Some important; 3= Important; 4= Very important; 5= Extremely important.	**What standard do you think the visitor expecting?** 1=Very low; 2=Low; 3=Neither; 4=High; 5=Very high
1	The physical appearance of the city booking office	1 2 3 4 5	1 2 3 4 5
2	The physical appearance of the Maori village	1 2 3 4 5	1 2 3 4 5
3	The physical appearance of the wharekai (the food house)	1 2 3 4 5	1 2 3 4 5
4	The information provided about the facility e.g. brochures, advertisements and programme information	1 2 3 4 5	1 2 3 4 5
5	The friendliness and courtesy of the staff and their politeness to visitors	1 2 3 4 5	1 2 3 4 5
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	1 2 3 4 5	1 2 3 4 5
7	The staff gives prompt service	1 2 3 4 5	1 2 3 4 5
8	Staff inspires trust in visitors	1 2 3 4 5	1 2 3 4 5

9	Visitors feel comfortable during their visit, e.g. enough seats, heating, lighting, space between the seats	1 2 3 4 5	1 2 3 4 5
10	The pricing and range of refreshment in the bar are reasonable	1 2 3 4 5	1 2 3 4 5
11	The quality in presentation of the food provided by the wharekai (the food house) are adequate	1 2 3 4 5	1 2 3 4 5
12	The pricing and range of products in the tribal market place are reasonable	1 2 3 4 5	1 2 3 4 5
13	Toilets are provided and clean	1 2 3 4 5	1 2 3 4 5
14	There is easy access for visitors with wheelchairs, prams and young children	1 2 3 4 5	1 2 3 4 5
15	Signs inside and outside the village are adequate	1 2 3 4 5	1 2 3 4 5
16	The booking system is prompt	1 2 3 4 5	1 2 3 4 5
17	Tour hours are convenient	1 2 3 4 5	1 2 3 4 5
18	The waiting time between the activities is reasonable	1 2 3 4 5	1 2 3 4 5
19	The introduction to the Maori culture on the bus i s enlightening	1 2 3 4 5	1 2 3 4 5
20	The whole experience is enlightening, entertaining and educational	1 2 3 4 5	1 2 3 4 5
21	The cultural performance is authentic, informative and understandable	1 2 3 4 5	1 2 3 4 5
22	The whole tour is value for money	1 2 3 4 5	1 2 3 4 5
23	The content and length of the activities are appropriate	1 2 3 4 5	1 2 3 4 5

Part 2: To Identify the Current Status of Tamaki Tours on its Performance Standards- Staff

Performance standards in Tamaki Tours can be formal – written, explicit and communicated to staff. They can also be informal – verbal, implicit, and assumed to be understood by staff. ***For each of the following features, please place a tick in the appropriate boxes.***

	Standards	Don't know	No Standards Exist	Have Informal Standards	Have Formal Standards not Documented	Have Documented Standards
1	The appearance of the physical facilities and information materials					
2	The knowledge and courtesy of the staff and their ability to convey confidence					
3	The peripheral facilities and services provided by the booking system, shop, restaurant and toilets					
4	The signs, opening hours and easy access for wheelchairs					
5	The overall services provided by Tamaki Tours					

Thank you for completing the questionnaire!

We welcome any other comments or suggestions that you feel would help to improve the quality of the services.

_____

_____

_____

_____

_____

Appendix B: Pilot Case Study 2 ---Paradise Valley Wildlife Park

B 1. Information Sheet for Visitors

INFORMATION SHEET FOR VISITORS

Claire Liu, a Ph.D. student from Massey University, Palmerston North, is currently conducting a Visitor Survey in conjunction with Paradise Valley Wildlife Park, Rotorua on the Development of Quality Management Assessment and Improvement Tools and Techniques Appropriate to the Tourist Industry.

The purpose of this questionnaire is to measure the expectation and satisfaction of visitors to the Paradise Valley Wildlife Park property. The information will assist the company in identifying customer needs and any improvements, which may be required in order to meet those needs.

The information provided in the questionnaires will be treated in the strictest confidence and those taking part will do so anonymously. If you decide to take part in the survey, you will be invited to fill in Part One of the questionnaire before you visit the park. When you have completed tour and before you leave, you will be invited to fill in the rest of the questionnaire. Each part of the questionnaire will take approximately 5 to 10 minutes to complete. You are not obliged to answer all the questions, and may refuse to provide details on any particular question. Please feel free to clarify with the property staff for any issues relating this research.

Participation in this survey is voluntary and filling in the questionnaire implies your consent to take part in this survey. The result of the survey may be published in management journals or in a local newspaper. This will be done after consultation between Claire Liu, Massey University and the company involved. It will not be possible to identify any respondent from the published results. A summary of the results will be available by email to participants in the survey when the analysis has been completed should it be requested.

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/53. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North, Tel: 06 350 5249, email: *S.V.Rumball@massey.ac.nz*.

Thank you for your participation and support.

Claire Liu

PhD student, Massey University

Supervisors

Dr Robin Smith

Massey University

Dr Don Barnes

Stuart Hamlett

Managing Director
Paradise Valley Wildlife Park
Rotorua, New Zealand

B 2. Information Sheet for Staff

INFORMATION SHEET FOR STAFF

Claire Liu, a Ph.D. student from Massey University, Palmerston North, is currently conducting a Staff Survey in conjunction with Paradise Valley Wildlife Park, Rotorua on the Development of Quality Management Assessment and Improvement Tools and Techniques Appropriate to the Tourist Industry.

The purpose of this questionnaire is to measure staff understanding of customer expectation of visitors to the Paradise Valley Wildlife Park property and staff view of the importance of service quality together with the present status of quality standards. The information will assist the company in identifying customer needs and any improvements, which may be required in order to meet those needs.

The information provided in the questionnaires will be treated in the strictest confidence and those taking part will do so anonymously. If you decide to take part in the survey, you will be invited to fill in Part One of the questionnaire to indicate how important you think each item of the facilities and services is for the visitors and then indicate what the visitors would expect from the facilities and services provided by your company. Part Two of the questionnaire requires you to identify the current status of Paradise Valley Wildlife Park on its performance standards. Each part of the questionnaire will take approximately 5 to 10 minutes to complete. You are not obliged to answer all the questions, and may refuse to provide details on any particular question. Non-participation by staff should have no affect on their employment status.

Participation in this survey is voluntary and filling in the questionnaire implies your consent to take part in this survey. The result of the survey may be published in management journals or in a local newspaper. This will be done after consultation between Claire Liu, Massey University and the company involved.

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/53. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North, Tel: 06 350 5249, email: S.V.Rumball@massey.ac.nz.

Thank you for your participation and support.

Claire Liu

PhD student, Massey University

Supervisors

Dr Robin Smith

Massey University

Dr Don Barnes

Stuart Hamlett

Managing Director
Paradise Valley Wildlife Park
Rotorua, New Zealand

B 3. Paradise Valley Springs Visitor Survey Questionnaire

Visitor Survey

Dear Sir/Madam,

My name is Claire Liu, a Ph.D. student at Massey University. This survey is part of my research requirements. My supervisors are Dr Robin Smith and Dr Don Barnes. The purpose of this questionnaire is to measure expectations and satisfactions of visitors to the Paradise Valley Wildlife Park. The information will help the Park to identify customer needs.

The information provided will be treated in confidence and the individual source of information will be kept confidential to Massey University. Should you decide to take part in the survey, you will have to fill in one part prior to commencing the tour. When leaving the park, you need to fill out the rest of the questionnaires.

This survey should take about 10 to 15 minutes to complete. You are not obliged to answer all the questions, and may refuse to provide details on any particular question. Please feel free to clarify with the staff any issues relating to this research.

Participation in this survey is voluntary and filling in the questionnaire implies your consent to take part in the survey. The results of the survey may be published but it will not be possible to identify any respondent from the published results.
A summary of the results will be available when the analysis has been completed by email should you wish it. If so please add your email address here:

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/53. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North, Tel: 06-3505249, email: S.V.Rumball@massey.ac.nz.

Thank you for your participation and support!

Student

Claire Liu

Massey University
New Zealand

Supervisors

Dr Robin Smith
Dept. of Management
Massey University
New Zealand

Dr Don Barnes
Massey University
New Zealand

Sponsor

Stuart Hamlett
Managing Director
Paradise Valley Springs Wildlife Park
Rotorua, New Zealand

Part 1: Visitor Profile

The following visitor information will be treated as confidential. Please make your choice by ticking the appropriate box or writing the other information requested in the spaces provided.

1. How many times have you been to this park?

- ☐ First time
- ☐ 2-3 times
- ☐ 4-6 times
- ☐ More than 6 times

2. With whom did you come here today?

- ☐ Alone
- ☐ Family
- ☐ Friends
- ☐ Organised group
- ☐ Others, please specify: _____

3. What is your main reason for this visit? (You can tick more than one)

- ☐ To see a particular activity
- ☐ To learn something
- ☐ Something to do
- ☐ Sightseeing
- ☐ Others, please specify: _____

4. What age group are you in?

- ☐ 15-19
- ☐ 20-24
- ☐ 25-29
- ☐ 30-34
- ☐ 35-39
- ☐ 40-44
- ☐ 45-49
- ☐ 50-54
- ☐ 55-59
- ☐ 60 & above

5. What is your occupational area?

- ❑ Farming
- ❑ Professional
- ❑ Management
- ❑ Student
- ❑ Clerical
- ❑ Sales/service
- ❑ Technical
- ❑ Retired
- ❑ Unemployed
- ❑ Others, please specify: _____

6. What is your education level?

- ❑ Primary
- ❑ Secondary
- ❑ Polytechnic
- ❑ University
- ❑ Others, please specify: _____

7. Where do you live? (Name of Country)

_____

8. What is your reason for visiting Rotorua?

- ❑ Visiting friends and relatives
- ❑ Holiday
- ❑ Business
- ❑ Others, please specify: _____

9. How did you find out about Paradise Valley Wildlife Park? (You can tick more than one)

- ❑ Brochure
- ❑ Advertisement
- ❑ Information centre
- ❑ Word of mouth
- ❑ Road sign
- ❑ Website
- ❑ Others, please specify: _____

10. Gender

- ❑ Male
- ❑ Female

Part 2: What were your expectations before your visit and how were these met during your visit to the park

We would like to know what you expected from the facilities and services before your tour, and how well you feel that your expectations were met after your tour with Paradise Valley Springs Wildlife Park.

Make your choice by circling the number, which best represents how you feel about the facilities and services provided by Paradise Valley Springs Wildlife Park.

		To be filled in before the tour	To be filled in after your tour
NO	**Features, Displays and Services**	**My Expectation is** 1= Very low; 2= Low; 3= Neither; 4= High; 5= Very high	**My Impression of the standard was** 1= Very low; 2= Low; 3= Neither; 4= High; 5= Very high
1	The physical appearance of the trout and wildlife park	1 2 3 4 5	1 2 3 4 5
2	The physical appearance of the native bush	1 2 3 4 5	1 2 3 4 5
3	The physical appearance of the lion pride	1 2 3 4 5	1 2 3 4 5
4	The information provided about the facility e.g. brochures, advertisements and programme information	1 2 3 4 5	1 2 3 4 5
5	The friendliness and courtesy of the staff and their politeness to visitors	1 2 3 4 5	1 2 3 4 5
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	1 2 3 4 5	1 2 3 4 5
7	The staff gives prompt service	1 2 3 4 5	1 2 3 4 5
8	Staff inspires trust in visitors	1 2 3 4 5	1 2 3 4 5
9	Visitors feel comfortable during their visit, e.g. enough space, good quality of walkways and free umbrellas	1 2 3 4 5	1 2 3 4 5
10	The pricing and range of refreshment in the coffee shop are reasonable	1 2 3 4 5	1 2 3 4 5
11	The pricing and range of products in and souvenir shop are reasonable	1 2 3 4 5	1 2 3 4 5

12	The park design is environmentally friendly and ecologically sound.	1 2 3 4 5	1 2 3 4 5
13	Toilets are provided and are clean	1 2 3 4 5	1 2 3 4 5
14	There is easy access for visitors with wheelchairs, prams and young children	1 2 3 4 5	1 2 3 4 5
15	Signs inside and outside the park are adequate	1 2 3 4 5	1 2 3 4 5
16	The booking system is prompt	1 2 3 4 5	1 2 3 4 5
17	Tour hours are convenient	1 2 3 4 5	1 2 3 4 5
18	The waiting time between the activities is reasonable	1 2 3 4 5	1 2 3 4 5
19	The wildlife and nature-based tour is authentic	1 2 3 4 5	1 2 3 4 5
20	The whole experience is enlightening and educational	1 2 3 4 5	1 2 3 4 5
21	The guided tour in the bush is informative and understandable	1 2 3 4 5	1 2 3 4 5
22	The whole tour is value for money	1 2 3 4 5	1 2 3 4 5
23	The content and length of the activities are appropriate for a day tour	1 2 3 4 5	1 2 3 4 5

Part 3: Level of Importance of features and services

*Please indicate how **relatively important** you think each of the following features, facilities and services is compared to the others for your tour experience. Make your choice by circling the appropriate number.*

NO	Features, Displays and Services	How relatively important are the following to your tour? 1= Not important 2= Some important 3= important 4= very important 5= Extremely important				
1	The physical appearance of the trout and wildlife park	1	2	3	4	5
2	The physical appearance of the native bush	1	2	3	4	5
3	The physical appearance of the lion pride	1	2	3	4	5
4	The information provided about the facility e.g. brochures, advertisements and programme information	1	2	3	4	5
5	The friendliness and courtesy of the staff and their politeness to visitors	1	2	3	4	5
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	1	2	3	4	5
7	The staff gives prompt service	1	2	3	4	5
8	Staff inspires trust in visitors	1	2	3	4	5
9	Visitors feel comfortable during their visit, e.g. enough space, good quality of walkways and free umbrellas	1	2	3	4	5
10	The pricing and range of refreshment in the coffee shop are reasonable	1	2	3	4	5
11	The pricing and range of products in and souvenir shop are reasonable	1	2	3	4	5
12	The park design is environmentally friendly and ecologically sound.	1	2	3	4	5
13	Toilets are provided and are clean	1	2	3	4	5

14	There is easy access for visitors with wheelchairs, prams and young children	1	2	3	4	5
15	Signs inside and outside the park are adequate	1	2	3	4	5
16	The booking system is prompt	1	2	3	4	5
17	Tour hours are convenient	1	2	3	4	5
18	The waiting time between the activities is reasonable	1	2	3	4	5
19	The wildlife and nature-based tour is authentic	1	2	3	4	5
20	The whole experience is enlightening and educational	1	2	3	4	5
21	The guided tour in the bush is informative and understandable	1	2	3	4	5
22	The whole tour is value for money	1	2	3	4	5
23	The content and length of the activities are appropriate for a day tour	1	2	3	4	5

Thank you for completing the questionnaire!

B 4. Paradise Valley Springs Staff Survey Questionnaire

Staff Survey

Dear Sir/Madam,

My name is Claire Liu, a Ph.D. student at Massey University. This survey is part of my research requirements. My supervisors are Dr Robin Smith and Dr Don Barnes.

The purpose of this questionnaire is to measure the staff expectations of the service provided at the Paradise Valley Spring Wildlife Park. The information will help the company to improve the business. The information provided will be treated in confidence and the identity of those who respond to the questionnaire will not be known to the researcher.

This survey should take about 10 to 15 minutes to complete. You are not obliged to answer all the questions, and may refuse to provide details on any particular question. Participation in this survey is voluntary and filling in the questionnaire implies your consent to take part in the survey. The results of the survey may be published but it will not be possible to identify any respondent from the published results. A summary of the results will be available when the analysis has been completed by email should you wish it. If so please add your email address here:

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/53. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North, Tel: 06-3505249, email: S.V.Rumball@massey.ac.nz.

Thank you for your participation and support!

Student

Claire Liu
Massey University
New Zealand

Supervisors

Dr Robin Smith
Dept. of Management
Massey University
New Zealand

Dr Don Barnes
Massey University
New Zealand

Sponsor

Stuart Hamlett
Managing Director
Paradise Valley Springs Wildlife Park
Rotorua, New Zealand

Part 1: Level of Importance and Visitor Expectations --- Staff

We would like you to think about the kind of facilities and services that Paradise valley Wildlife Park provides.
For each item listed below, please indicate how important you think each one is for the visitors and then please indicate what you would expect from the services provided by the park.

Make your choice by circling the number, which best represents how you feel about the facilities and services provided by the park.

	Features, Displays and Services	How important are the following to the visitors? 1 = Not important 2 = Some important 3 = Important 4 = Very important 5 = Extremely important	What standard do you think the visitor will expect? 1 = Very low 2 = Low 3 = Neither 4 = High 5 = Very high
1	The physical appearance of the trout and wildlife park	1 2 3 4 5	1 2 3 4 5
2	The physical appearance of the native bush	1 2 3 4 5	1 2 3 4 5
3	The physical appearance of the lion pride	1 2 3 4 5	1 2 3 4 5
4	The information provided about the facility e.g. brochures, advertisements and programme information	1 2 3 4 5	1 2 3 4 5
5	The friendliness and courtesy of the staff and their politeness to visitors	1 2 3 4 5	1 2 3 4 5
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	1 2 3 4 5	1 2 3 4 5
7	The staff gives prompt service	1 2 3 4 5	1 2 3 4 5
8	Staff inspires trust in visitors	1 2 3 4 5	1 2 3 4 5

9	Visitors feel comfortable during their visit, e.g. enough space, good quality of walkways and free umbrellas	1 2 3 4 5	1 2 3 4 5
10	The pricing and range of refreshment in the coffee shop are reasonable	1 2 3 4 5	1 2 3 4 5
11	The pricing and range of products in and souvenir shop are reasonable	1 2 3 4 5	1 2 3 4 5
12	The park design is environmentally friendly and ecologically sound.	1 2 3 4 5	1 2 3 4 5
13	Toilets are provided and are clean	1 2 3 4 5	1 2 3 4 5
14	There is easy access for visitors with wheelchair, prams and young children	1 2 3 4 5	1 2 3 4 5
15	Signs inside and outside the park are adequate	1 2 3 4 5	1 2 3 4 5
16	The booking system is prompt	1 2 3 4 5	1 2 3 4 5
17	Tour hours are convenient	1 2 3 4 5	1 2 3 4 5
18	The waiting time between the activities is reasonable	1 2 3 4 5	1 2 3 4 5
19	The wildlife and nature-based tour is authentic	1 2 3 4 5	1 2 3 4 5
20	The whole experience is enlightening and educational	1 2 3 4 5	1 2 3 4 5
21	The guided tour in the bush is informative and understandable	1 2 3 4 5	1 2 3 4 5
22	The whole tour is value for money	1 2 3 4 5	1 2 3 4 5
23	The content and length of the activities are appropriate for a day tour	1 2 3 4 5	1 2 3 4 5

Part 2: Staff 's knowledge on the company's performance standards

This questionnaire is to identify your knowledge of performance standards at the Paradise Valley Wildlife Park. Performance standards can be formal – written, explicit and communicated to staff. They can also be informal – verbal, implicit, and assumed to be understood by staff. ***For each of the following features, please place a tick in the appropriate boxes to indicate your knowledge or understanding of the level of performance standards at the Paradise Valley Wildlife Park.***

	Standards	Don't know	No Standards Exist	Have Informal Standards	Have Formal Standards not Documented	Have Documented Standards
1	The appearance of the physical facilities and information materials					
2	The knowledge and courtesy of the staff and their ability to convey confidence					
3	The peripheral facilities and services provided by the park e.g. booking system, shop, and toilets					
4	The signs, opening hours and easy access for wheelchairs					
5	The wildlife programme provided by Paradise Valley Wildlife Park					

Thank you for completing the questionnaire!

We welcome any other comments or suggestions that you feel would help to improve the quality of the services.

_____

_____

_____

B 5. Gap Analysis of Customers' Perception and Expectation (Aug. 2002)

	Features, displays and services	Customers Expectations and Perceptions		
No.	The SERVQUAL Questions	Expectations	Perception	Diff(P-E)
1	The physical appearance of the trout and wildlife park	4.02	4.35	0.33
2	The physical appearance of the native bush	3.93	4.39	0.46
3	The physical appearance of the lion pride	3.50	3.76	0.26
4	The information provided about the facility e.g. brochures, advertisements and programme information	3.76	4.07	0.31
5	The friendliness and courtesy of the staff and their politeness to visitors	4.04	4.37	0.33
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	3.95	4.09	0.14
7	The staff gives prompt service	3.56	3.80	0.24
8	Staff inspires trust in visitors	3.76	3.96	0.20
9	Visitors feel comfortable during their visit, e.g. enough space, good quality of walkways and free umbrellas	4.04	4.52	0.48
10	The pricing and range of refreshment in the coffee shop are reasonable	3.31	3.40	0.09
11	The pricing and range of products in and souvenir shop are reasonable	3.26	3.41	0.15
12	The park design is environmentally friendly and ecologically sound.	4.15	4.59	0.44
13	Toilets are provided and are clean	3.84	4.51	0.67
14	There is easy access for visitors with wheelchairs, prams and young children	3.28	4.00	0.72
15	Signs inside and outside the park are adequate	3.71	4.22	0.51
16	The booking system is prompt	3.26	3.55	0.29
17	Tour hours are convenient	3.31	3.73	0.42
18	The waiting time between the activities is reasonable	3.31	3.54	0.23
19	The wildlife and nature-based tour is authentic	4.07	4.44	0.37
20	The whole experience is enlightening and educational	3.89	4.43	0.54
21	The guided tour in the bush is informative and understandable	3.74	4.08	0.34
22	The whole tour is value for money	3.44	3.96	0.52
23	The content and length of the activities are appropriate for a day tour	3.53	3.70	0.17

B 6. Gap Analysis of Expectation of Service Quality (Aug. 02)

	Features, displays and services	Staff and Customer Expectation of Service Quality		
No.	The SERVQUAL Questions	Staff Exp.	Customer Exp.	Difference (S-C)
1	The physical appearance of the trout and wildlife park	4.50	4.02	0.48
2	The physical appearance of the native bush	4.00	3.93	0.07
3	The physical appearance of the lion pride	4.17	3.50	0.67
4	The information provided about the facility e.g. brochures, advertisements and programme information	3.67	3.76	-0.09
5	The friendliness and courtesy of the staff and their politeness to visitors	4.83	4.04	0.79
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	4.67	3.95	0.72
7	The staff gives prompt service	4.83	3.56	1.27
8	Staff inspires trust in visitors	4.33	3.76	0.57
9	Visitors feel comfortable during their visit, e.g. enough space, good quality of walkways and free umbrellas	4.33	4.04	0.29
10	The pricing and range of refreshment in the coffee shop are reasonable	4.17	3.31	0.86
11	The pricing and range of products in and souvenir shop are reasonable	4.00	3.26	0.74
12	The park design is environmentally friendly and ecologically sound.	4.17	4.15	0.02
13	Toilets are provided and are clean	4.50	3.84	0.66
14	There is easy access for visitors with wheelchairs, prams and young children	3.67	3.28	0.39
15	Signs inside and outside the park are adequate	4.00	3.71	0.29
16	The booking system is prompt	4.33	3.26	1.07
17	Tour hours are convenient	4.00	3.31	0.69
18	The waiting time between the activities is reasonable	3.33	3.31	0.02
19	The wildlife and nature-based tour is authentic	4.33	4.07	0.26
20	The whole experience is enlightening and educational	4.33	3.89	0.44
21	The guided tour in the bush is informative and understandable	4.67	3.74	0.93
22	The whole tour is value for money	5.00	3.44	1.56
23	The content and length of the activities are appropriate for a day tour	4.17	3.53	0.64

B 7. Gap Analysis of Staff View of Quality Importance and Visitor Expectation (Aug.02)

	Features, displays and services	Staff view of importance of service quality and visitor's expectation		
No.	The SERVQUAL Questions	Staff importance	Visitor expectation	Difference in staff view (I-E)
1	The physical appearance of the trout and wildlife park	5.00	4.50	0.50
2	The physical appearance of the native bush	4.00	4.00	0.00
3	The physical appearance of the lion pride	4.50	4.17	0.33
4	The information provided about the facility e.g. brochures, advertisements and programme information	3.67	3.67	0.00
5	The friendliness and courtesy of the staff and their politeness to visitors	5.00	4.83	0.17
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	4.50	4.67	-0.17
7	The staff gives prompt service	5.00	4.83	0.17
8	Staff inspires trust in visitors	4.33	4.33	0.00
9	Visitors feel comfortable during their visit, e.g. enough space, good quality of walkways and free umbrellas	4.50	4.33	0.17
10	The pricing and range of refreshment in the coffee shop are reasonable	3.17	4.17	-1.00
11	The pricing and range of products in and souvenir shop are reasonable	3.83	4.00	-0.17
12	The park design is environmentally friendly and ecologically sound.	4.67	4.17	0.50
13	Toilets are provided and are clean	5.00	4.50	0.50
14	There is easy access for visitors with wheelchairs, prams and young children	4.17	3.67	0.50
15	Signs inside and outside the park are adequate	3.67	4.00	-0.33
16	The booking system is prompt	4.17	4.33	-0.16
17	Tour hours are convenient	3.67	4.00	-0.33
18	The waiting time between the activities is reasonable	3.33	3.33	0.00
19	The wildlife and nature-based tour is authentic	4.67	4.33	0.34
20	The whole experience is enlightening and educational	4.50	4.33	0.17
21	The guided tour in the bush is informative and understandable	4.50	4.67	-0.17
22	The whole tour is value for money	4.67	5.00	-0.33
23	The content and length of the activities are appropriate for a day tour	3.83	4.17	-0.34

B 8. Comparison of Customer Importance Rating

	Features, displays and services	Average Score of relative importance of features to the tour	
No.	The SERVQUAL Questions	Aug.02	Oct.02
1	The physical appearance of the trout and wildlife park	4.28	4.08
2	The physical appearance of the native bush	4.26	4.16
3	The physical appearance of the lion pride	3.96	3.88
4	The information provided about the facility e.g. brochures, advertisements and programme information	3.93	3.78
5	The friendliness and courtesy of the staff and their politeness to visitors	4.17	4.30
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	4.15	4.00
7	The staff gives prompt service	3.54	3.63
8	Staff inspires trust in visitors	3.43	3.64
9	Visitors feel comfortable during their visit, e.g. enough space, good quality of walkways and free umbrellas	3.83	4.03
10	The pricing and range of refreshment in the coffee shop are reasonable	2.93	3.41
11	The pricing and range of products in and souvenir shop are reasonable	2.83	3.42
12	The park design is environmentally friendly and ecologically sound.	3.93	4.00
13	Toilets are provided and are clean	3.98	3.73
14	There is easy access for visitors with wheelchairs, prams and young children	3.35	3.28
15	Signs inside and outside the park are adequate	3.41	3.68
16	The booking system is prompt	2.80	3.02
17	Tour hours are convenient	2.91	3.16
18	The waiting time between the activities is reasonable	2.96	3.24
19	The wildlife and nature-based tour is authentic	3.65	3.73
20	The whole experience is enlightening and educational	4.15	3.97
21	The guided tour in the bush is informative and understandable	4.02	4.03
22	The whole tour is value for money	3.83	3.84
23	The content and length of the activities are appropriate for a day tour	3.48	3.25

B 9. Gap Analysis of Customers' Perception and Expectation (Oct. 2002)

	Features, displays and services	Customers Expectations and Perceptions		
No.	The SERVQUAL Questions	Expectations	Perception	Diff(P-E)
1	The physical appearance of the trout and wildlife park	4.08	4.36	0.28
2	The physical appearance of the native bush	4.03	4.39	0.36
3	The physical appearance of the lion pride	3.83	3.66	-0.17
4	The information provided about the facility e.g. brochures, advertisements and programme information	4.02	4.02	0.00
5	The friendliness and courtesy of the staff and their politeness to visitors	4.32	4.35	0.03
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	4.11	4.17	0.06
7	The staff gives prompt service	3.94	3.98	0.04
8	Staff inspires trust in visitors	3.97	4.10	0.13
9	Visitors feel comfortable during their visit, e.g. enough space, good quality of walkways and free umbrellas	4.16	4.34	0.18
10	The pricing and range of refreshment in the coffee shop are reasonable	3.53	3.34	-0.19
11	The pricing and range of products in and souvenir shop are reasonable	3.60	3.65	0.05
12	The park design is environmentally friendly and ecologically sound.	4.16	4.26	0.10
13	Toilets are provided and are clean	3.87	4.36	0.49
14	There is easy access for visitors with wheelchair, prams and young children	3.65	4.03	0.38
15	Signs inside and outside the park are adequate	3.98	4.17	0.19
16	The booking system is prompt	3.60	3.76	0.16
17	Tour hours are convenient	3.63	3.80	0.17
18	The waiting time between the activities is reasonable	3.51	3.42	-0.09
19	The wildlife and nature-based tour is authentic	4.12	4.29	0.17
20	The whole experience is enlightening and educational	4.16	4.42	0.26
21	The guided tour in the bush is informative and understandable	4.02	4.05	0.03
22	The whole tour is value for money	3.86	3.91	0.05
23	The content and length of the activities are appropriate for a day tour	3.80	3.47	-0.33

B 10. Gap Analysis of Expectation of Service Quality (Oct. 2002)

	Features, displays and services	Staff and Customer Expectation of Service Quality		
No.	The SERVQUAL Questions	Staff Exp.	Customer Exp.	Difference (S-C)
1	The physical appearance of the trout and wildlife park	4.50	4.08	0.42
2	The physical appearance of the native bush	4.00	4.03	-0.03
3	The physical appearance of the lion pride	4.38	3.83	0.55
4	The information provided about the facility e.g. brochures, advertisements and programme information	3.88	4.02	-0.14
5	The friendliness and courtesy of the staff and their politeness to visitors	4.88	4.32	0.56
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	4.63	4.11	0.52
7	The staff gives prompt service	4.75	3.94	0.81
8	Staff inspires trust in visitors	4.38	3.97	0.41
9	Visitors feel comfortable during their visit, e.g. enough space, good quality of walkways and free umbrellas	4.38	4.16	0.22
10	The pricing and range of refreshment in the coffee shop are reasonable	4.13	3.53	0.60
11	The pricing and range of products in and souvenir shop are reasonable	4.00	3.60	0.40
12	The park design is environmentally friendly and ecologically sound.	4.25	4.16	0.09
13	Toilets are provided and are clean	4.63	3.87	0.76
14	There is easy access for visitors with wheelchairs, prams and young children	4.00	3.65	0.35
15	Signs inside and outside the park are adequate	4.25	3.98	0.40
16	The booking system is prompt	4.38	3.60	0.09
17	Tour hours are convenient	4.13	3.63	0.76
18	The waiting time between the activities is reasonable	3.63	3.51	0.35
19	The wildlife and nature-based tour is authentic	4.38	4.12	0.27
20	The whole experience is enlightening and educational	4.38	4.16	0.78
21	The guided tour in the bush is informative and understandable	4.75	4.02	0.50
22	The whole tour is value for money	5.00	3.86	0.12
23	The content and length of the activities are appropriate for a day tour	4.25	3.80	0.26

B 11. Gap Analysis of Staff View of Quality Importance and Visitor Expectation (Oct.02)

	Features, displays and services	Staff view of importance of service quality and visitor's expectation		
No.	The SERVQUAL Questions	Staff importance	Visitor expectation	Difference in staff view (I-E)
1	The physical appearance of the trout and wildlife park	5.00	4.50	0.50
2	The physical appearance of the native bush	3.88	4.00	-0.12
3	The physical appearance of the lion pride	4.63	4.38	0.25
4	The information provided about the facility e.g. brochures, advertisements and programme information	3.75	3.88	-0.13
5	The friendliness and courtesy of the staff and their politeness to visitors	5.00	4.88	0.12
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	4.63	4.63	0.00
7	The staff gives prompt service	5.00	4.75	0.25
8	Staff inspires trust in visitors	4.50	4.38	0.12
9	Visitors feel comfortable during their visit, e.g. enough space, good quality of walkways and free umbrellas	4.63	4.38	0.25
10	The pricing and range of refreshment in the coffee shop are reasonable	3.25	4.13	-0.88
11	The pricing and range of products in and souvenir shop are reasonable	3.88	4.00	-0.12
12	The park design is environmentally friendly and ecologically sound.	4.75	4.25	0.50
13	Toilets are provided and are clean	5.00	4.63	0.37
14	There is easy access for visitors with wheelchairs, prams and young children	4.38	4.00	0.38
15	Signs inside and outside the park are adequate	4.00	4.25	-0.25
16	The booking system is prompt	4.25	4.38	-0.13
17	Tour hours are convenient	4.00	4.13	-0.13
18	The waiting time between the activities is reasonable	3.50	3.63	-0.13
19	The wildlife and nature-based tour is authentic	4.75	4.38	0.37
20	The whole experience is enlightening and educational	4.63	4.38	0.25
21	The guided tour in the bush is informative and understandable	4.63	4.75	-0.12
22	The whole tour is value for money	4.75	5.00	-0.25
23	The content and length of the activities are appropriate for a day tour	4.13	4.25	-0.12

B 12. Staff Knowledge of Availability of Service Quality Standards and Procedures-Aug.2002

Service Dimension	Service quality standard and procedures	Don't know 1	No standards 2	Have Inf. Std. 3	Have For.Std. 4	Have Writ. Std. 5
1	The appearance of the physical facilities and information materials	0.00%	0.00%	66.67%	0.00%	33.33%
2	The knowledge and courtesy of the staff and their ability to convey confidence	0.00%	0.00%	16.67%	16.67%	66.67%
3	The peripheral facilities and service provided	0.00%	0.00%	33.33%	33.33%	33.33%
4	The signs, opening hours and easy access for wheelchairs	16.67%	0.00%	16.67%	33.33%	33.33%
5	The overall services provided by the park	0.00%	0.00%	0.00%	16.67%	83.33%

B 13. Staff Knowledge of Availability of Service Quality Standards and Procedures-Oct.2002

Service Dimension	Service quality standard and procedures	Don't know 1	No standards 2	Have Inf. Std. 3	Have For.Std. 4	Have Writ. Std. 5
1	The appearance of the physical facilities and information materials	0.00%	0.00%	50.00%	12.50%	37.50%
2	The knowledge and courtesy of the staff and their ability to convey confidence	0.00%	0.00%	12.50%	25.00%	62.50%
3	The peripheral facilities and service provided	0.00%	0.00%	25.00%	37.50%	37.50%
4	The signs, opening hours and easy access for wheelchairs	12.50%	0.00%	12.50%	37.50%	37.50%
5	The overall services provided by the park	0.00%	0.00%	0.00%	25.00%	75.00%

B 14. Visitor Expectation and Perception Weighted Gap Analysis (Aug.02)

No	Sample A	Sample B	A-B	Highest Gap	Lowest Gap	Average Gap
1	0.59	2.35	-1.76	2.35	0.59	1.47
2	1.12	3.35	-2.23	3.35	1.12	2.24
3	0.94	2.35	-1.41	2.35	0.94	1.65
4	0.41	2.59	-2.18	2.59	0.41	1.50
5	0.71	2.00	-1.29	2.00	0.71	1.36
6	0.18	1.06	-0.88	1.06	0.18	0.62
7	1.24	0.94	0.30	1.24	0.94	1.09
8	0.82	0.76	0.06	0.82	0.76	0.79
9	2.12	2.18	-0.06	2.18	2.12	2.15
10	0.12	0.88	-0.76	0.88	0.12	0.50
11	0.29	0.41	-0.12	0.41	0.29	0.35
12	1.82	1.71	0.11	1.82	1.71	1.77
13	2.82	3.18	-0.36	3.18	2.82	3.00
14	3.24	2.41	0.83	3.24	2.41	2.83
15	2.12	2.71	-0.59	2.71	2.12	2.42
16	1.65	1.00	0.65	1.65	1.00	1.33
17	1.41	1.59	-0.18	1.59	1.41	1.50
18	0.06	1.88	-1.82	1.88	0.06	0.97
19	1.53	1.76	-0.23	1.76	1.53	1.65
20	1.88	2.94	-1.06	2.94	1.88	2.41
21	0.41	2.41	-2.00	2.41	0.41	1.41
22	1.76	2.82	-1.06	2.82	1.76	2.29
23	0.94	0.71	0.23	0.94	0.71	0.83

B 15. Visitor Expectation and Perception Weighted Gap Analysis (Oct.02)

NO	Sample A	Sample B	A-B	Highest Gap	Lowest Gap	Average Gap
1	-0.73	3.38	-4.11	3.38	-0.73	1.33
2	-0.65	3.08	-3.73	3.08	-0.65	1.22
3	-1.62	0.38	-2.00	0.38	-1.62	-0.62
4	0.38	2.15	-1.77	2.15	0.38	1.27
5	-0.15	0.96	-1.11	0.96	-0.15	0.41
6	-1.04	1.35	-2.39	1.35	-1.04	0.16
7	-0.92	0.73	-1.65	0.73	-0.92	-0.10
8	-0.69	1.62	-2.31	1.62	-0.69	0.47
9	0.50	1.04	-0.54	1.04	0.50	0.77
10	-1.04	0.08	-1.12	0.08	-1.04	-0.48
11	-0.88	0.65	-1.53	0.65	-0.88	-0.12
12	-0.81	1.58	-2.39	1.58	-0.81	0.39
13	1.19	2.35	-1.16	2.35	1.19	1.77
14	0.27	1.85	-1.58	1.85	0.27	1.06
15	-0.19	1.54	-1.73	1.54	-0.19	0.68
16	-1.00	1.08	-2.08	1.08	-1.00	0.04
17	0.00	0.65	-0.65	0.65	0.00	0.33
18	-1.19	0.04	-1.23	0.04	-1.19	-0.58
19	-0.23	1.73	-1.96	1.73	-0.23	0.75
20	0.38	1.35	-0.97	1.35	0.38	0.87
21	0.00	0.00	0.00	0.00	0.00	0.00
22	-1.38	0.73	-2.11	0.73	-1.38	-0.33
23	-2.54	-0.31	-2.23	-0.31	-2.54	-1.43

B 16. Visitor Expectation and Perception Gaps by Ethnicity (Aug.02)

Visitor Expectation		Visitor Perceptions	
Group 1	Group 2	Group 1	Group 2
3.95	3.92	4.38	4.00
3.71	4.08	4.38	4.17
3.29	3.25	3.62	3.92
3.90	3.67	4.33	3.83
3.95	4.00	4.19	4.42
3.86	3.75	3.90	4.00
3.05	3.58	3.33	3.75
3.48	3.75	3.67	3.83
3.95	3.83	4.38	4.50
3.14	3.25	3.24	3.33
3.14	3.33	3.24	3.42
4.00	4.17	4.57	4.42
3.81	3.75	4.43	4.58
3.10	3.08	3.76	3.92
3.57	3.58	4.19	4.25
2.90	3.17	3.24	3.67
2.95	3.25	3.48	3.67
2.95	3.33	3.33	3.58
4.05	3.92	4.29	4.67
3.90	3.75	4.52	4.25
3.81	3.50	4.10	4.00
3.38	3.08	3.86	3.75
3.38	3.33	3.48	3.58
Note: G1-Asia; G2-NZ.			

B 17. Visitor Expectation and Perception Gaps by Ethnicity (Oct.02)

Visitor Expectation			Visitor Perceptions		
Group 1	Group 2	Group 3	Group 1	Group 2	Group 3
4.06	4.19	4.00	4.11	4.31	4.71
3.89	4.38	4.12	4.00	4.44	4.59
3.72	3.69	3.88	3.67	3.69	3.82
4.17	3.94	4.12	4.56	4.31	4.53
4.33	4.44	4.29	4.22	4.44	4.59
4.17	3.81	4.12	4.00	4.38	4.18
3.94	3.69	4.00	3.78	4.00	4.00
4.06	3.63	3.94	4.17	3.81	4.18
3.89	4.25	4.24	4.28	4.25	4.41
3.50	3.44	3.82	3.56	3.06	3.47
3.78	3.50	3.76	3.56	3.81	3.82
4.28	4.06	4.06	3.94	4.31	4.41
3.94	3.81	3.71	4.17	4.63	4.35
3.50	3.56	3.53	4.00	4.00	3.71
3.78	4.00	4.18	4.11	4.25	4.06
3.67	3.31	3.76	3.39	4.13	3.76
3.44	3.50	3.76	3.50	3.88	3.88
3.22	3.38	3.82	3.17	3.13	3.65
4.00	4.06	4.35	4.11	4.44	4.47
4.17	4.13	4.12	4.06	4.44	4.65
3.89	4.13	4.12	3.94	4.06	4.12
3.89	3.75	4.12	3.78	3.81	3.94
3.67	3.56	4.00	3.28	3.50	3.47
Note: G1-Australia; G2-Asia; G3-NZ.					

B 18. Comparison of Weighted Gaps for Two Visitor Surveys

Weighted Gaps -Aug. 2002		Weighted Gaps - Oct. 2002	
Whole Sample	Average of A & B	Whole Sample	Average of A & B
1.47	1.47	1.33	1.33
2.24	2.24	1.21	1.22
1.65	1.65	-0.62	-0.62
1.50	1.50	1.27	1.27
1.35	1.36	0.40	0.41
0.62	0.62	0.15	0.16
1.09	1.09	-0.10	-0.10
0.79	0.79	0.46	0.47
2.15	2.15	0.77	0.77
0.50	0.50	-0.48	-0.48
0.35	0.35	-0.12	-0.12
1.76	1.77	0.38	0.39
3.00	3.00	1.77	1.77
2.82	2.83	1.06	1.06
2.41	2.42	0.67	0.68
1.32	1.33	0.04	0.04
1.50	1.50	0.33	0.33
0.97	0.97	-0.58	-0.58
1.65	1.65	0.75	0.75
2.41	2.41	0.87	0.87
1.41	1.41	0.00	0.00
2.29	2.29	-0.33	-0.33
0.82	0.83	-1.42	-1.43

B 19. Average Visitor Importance Rating Split Sample Analysis (Aug. 02)

Sample A	Sample B	Highest Importance	Lowest Importance	Average
4.04	4.52	4.52	4.04	4.28
4.09	4.43	4.43	4.09	4.26
4.17	3.74	4.17	3.74	3.96
3.70	4.17	4.17	3.70	3.94
4.26	4.09	4.26	4.09	4.18
4.30	4.00	4.30	4.00	4.15
4.13	2.96	4.13	2.96	3.55
3.9	2.96	3.91	2.96	3.44
4.00	3.65	4.00	3.65	3.83
3.26	2.61	3.26	2.61	2.94
3.17	2.48	3.17	2.48	2.83
4.13	3.74	4.13	3.74	3.94
4.35	3.61	4.35	3.61	3.98
4.04	2.65	4.04	2.65	3.35
4.00	3.17	4.00	3.17	3.59
3.30	2.30	3.30	2.30	2.80
3.43	2.39	3.43	2.39	2.91
3.57	2.35	3.57	2.35	2.96
3.74	3.57	3.74	3.57	3.66
4.22	4.09	4.22	4.09	4.16
3.78	4.26	4.26	3.78	4.02
4.17	3.48	4.17	3.48	3.83
3.70	3.26	3.70	3.26	3.48

B 20. Average visitor importance rating split sample analysis (Oct. 02)

Sample A	Sample B	Highest Importance	Lowest Importance	Average
3.97	4.19	4.19	3.97	4.08
4.09	4.22	4.22	4.09	4.16
3.72	4.03	4.03	3.72	3.88
3.72	3.84	3.84	3.72	3.78
4.28	4.31	4.31	4.28	4.30
4.16	3.84	4.16	3.84	4.00
3.91	3.34	3.91	3.34	3.63
3.84	3.44	3.84	3.44	3.64
4.00	4.06	4.06	4.00	4.03
3.53	3.28	3.53	3.28	3.41
3.63	3.22	3.63	3.22	3.43
4.16	3.84	4.16	3.84	4.00
4.03	3.44	4.03	3.44	3.74
3.63	2.94	3.63	2.94	3.29
3.88	3.48	3.88	3.48	3.68
3.50	2.52	3.50	2.52	3.01
3.59	2.71	3.59	2.71	3.15
3.56	2.90	3.56	2.90	3.23
3.88	3.58	3.88	3.58	3.73
4.03	3.91	4.03	3.91	3.97
4.03	4.03	4.03	4.03	4.03
3.97	3.72	3.97	3.72	3.85
3.50	3.00	3.50	3.00	3.25

B 21. Visitor Profile

No of survey questions	% of visitor responses	
Country of origin	**August**	**October**
China	8.70%	1.56%
Germany	2.17%	3.13%
India	4.35%	4.69%
Korea	15.22%	7.81%
Taiwan	19.57%	7.81%
NZ	47.83%	39.06%
England	2.17%	3.13%
Australia	0.00%	1.56%
Canada	0.00%	1.56%
Chile	0.00%	3.13%
Czech Republic	0.00%	1.56%
Hong Kong	0.00%	1.56%
Ireland	0.00%	1.56%
Italy	0.00%	1.56%
Japan	0.00%	3.13%
Russia	0.00%	1.56%
South Africa	0.00%	3.13%
USA	0.00%	7.81%

Number of visits	**August**	**October**
First Time	78.26%	76.56%
2 – 3 times	20%	20.31%
4 – 6 times	0.00%	1.60%
More than 6 times	2.17%	1.60%

Visited with	**August**	**October**
Family	48%	53.13%
Friends	21.70%	21.88%
Alone	6.50%	14.06%
Organised group	21.70%	10.93%
Other	2.17%	0.00%

Reason for visit	**August**	**October**
Sightseeing	51.43%	48.04%
To learn	17.14%	12.75%
See an activity	18.57%	17.65%
Something to do	10%	21.57%
Other	2.86%	0.00%

Age Group	**August**	**October**
15-19	8.70%	6.25%
20-24	13.04%	17.19%
25-29	8.70%	12.50%
30-34	17.39%	10.94%

35-39	8.70%	18.75%
40-44	19.57%	20.31%
45-49	15.22%	6.25%
50-54	2.17%	4.69%
55-59	4.35%	1.56%
60+	2.17%	1.56%

Occupation	**August**	**October**
Farming	2.17%	3.13%
Unemployed	2.17%	1.56%
Others	4.35%	1.56%
Technical	6.52%	14.06%
Clerical	8.70%	7.81%
Retired	2.17%	1.56%
Management	10.87%	17.19%
Sales/service	15.22%	14.06%
Professional	23.91%	15.63%
Student	23.91%	23.44%

Education level	**August**	**October**
Primary	0.00%	0.00%
Secondary	28.26%	23.44%
Polytechnic	30.43%	34.38%
University	39.13%	42.19%
Others	2.17%	0.00%

Reason for visiting Rotorua	**August**	**October**
Other	6.52%	1.56%
Business	4.35%	9.38%
Holiday	76.09%	79.69%
Visiting friends or relations	13.04%	9.38%

Source of Information	**August**	**October**
Others	0.00%	0.00%
Web site	6.67%	3.39%
Road sign	8.33%	6.78%
Word of mouth	31.67%	18.64%
Information centre	23.33%	16.10%
Advertisement	10%	27.12%
Brochure	20%	27.97%

Gender	**August**	**October**
Male	63.04%	51.56%
Female	36.96%	48.44%

Appendix C: Pilot Case Study 3 --- The Buried Village
C 1. Buried Village Visitor Survey Questionnaire

Visitor Survey

Dear Sir/Madam,
My name is Claire Liu, a Ph.D. student at Massey University. This survey is part of my research requirements. My supervisors are Dr Robin Smith and Dr Don Barnes.

The purpose of this questionnaire is to measure expectations and satisfactions of visitors to the Buried Village. The information will help the company to identify customer needs.

The information provided will be treated in confidence and the individual source of information will be kept confidential to Massey University. Should you decide to take part in the survey, you will have to fill in one part prior to commencing the tour. When leaving the village, you need to fill out the rest of the questionnaires. This survey should take about 10 to 15 minutes to complete. You are not obliged to answer all the questions, and may refuse to provide details on any particular question. Please feel free to clarify with the staff any issues relating to this research.

Participation in this survey is voluntary and filling in the questionnaire implies your consent to take part in the survey. The results of the survey may be published but it will not be possible to identify any respondent from the published results.
A summary of the results will be available when the analysis has been completed by email should you wish it. If so please add your email address here:

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/53. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North, Tel: 06-3505249, email: S.V.Rumball@massey.ac.nz.

Thank you for your participation and support!

Student

Claire Liu
Massey University
New Zealand

Supervisors

Dr Robin Smith
Dept. of Management
Massey University
New Zealand

Dr Don Barnes
Massey University
New Zealand

Sponsor

Pam McGrath
Managing Director
Buried Village
Rotorua, New Zealand

Part 1: Visitor Profile

The following visitor information will be treated as confidential. Please make your choice by ticking the appropriate box or writing the other information requested in the spaces provided.

1. How many times have you been to this village?

- ☐ First time
- ☐ 2-3 times
- ☐ 4-6 times
- ☐ More than 6 times

2. With whom did you come here today?

- ☐ Alone
- ☐ Family
- ☐ Friends
- ☐ Organised group
- ☐ Others, please specify: _____

3. What is your main reason for this visit? (You can tick more than one)

- ☐ To see a particular activity
- ☐ To learn Maori history and culture
- ☐ Something to do
- ☐ Sightseeing
- ☐ Others, please specify: _____

4. What age group are you in?

- ☐ 15-19
- ☐ 20-24
- ☐ 25-29
- ☐ 30-34
- ☐ 35-39
- ☐ 40-44
- ☐ 45-49
- ☐ 50-54
- ☐ 55-59
- ☐ 60 & over

5. What is your occupational area?

- ❑ Farming
- ❑ Professional
- ❑ Management
- ❑ Student
- ❑ Clerical
- ❑ Sales/service
- ❑ Technical
- ❑ Retired
- ❑ Unemployed
- ❑ Others, please specify: _____

6. What is your education level?

- ❑ Primary
- ❑ Secondary
- ❑ Polytechnic
- ❑ University
- ❑ Others, please specify: _____

7. Where do you live? (Name of Country)

_____

8. What is your reason for visiting Rotorua*?*

- ❑ Visiting friends and relatives
- ❑ Holiday
- ❑ Business
- ❑ Others, please specify: _____

9. How did you find out about the Buried Village? (You can tick more than one)

- ❑ Brochure
- ❑ Advertisement
- ❑ Information centre
- ❑ Word of mouth
- ❑ Road sign
- ❑ Website
- ❑ Others, please specify: _____

10. Gender

- ❑ Male
- ❑ Female

Part 2: What were your expectations before your visit and how were these met during your visit to the village.

We would like to know what you expected from the facilities and services before your tour, and how well you feel that your expectations were met after your tour with the Buried Village.

Make your choice by circling the number, which best represents how you feel about the facilities and services provided by the company.

		To be filled in before the tour	To be filled in after your tour
	Features, Displays and Services	**My Expectation is** 1= Very low; 2= Low; 3= Neither; 4= High; 5= Very high	**My Impression of the standard was** 1= Very low; 2= Low; 3= Neither; 4= High; 5= Very high
1	The physical appearance of the museum	1 2 3 4 5	1 2 3 4 5
2	The physical appearance of the on-site displays	1 2 3 4 5	1 2 3 4 5
3	The physical appearance of the village setting	1 2 3 4 5	1 2 3 4 5
4	The information provided about the village e.g. brochures, advertisements and programme information	1 2 3 4 5	1 2 3 4 5
5	The friendliness and courtesy of the staff and their politeness to visitors	1 2 3 4 5	1 2 3 4 5
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	1 2 3 4 5	1 2 3 4 5
7	The staff gives prompt service	1 2 3 4 5	1 2 3 4 5
8	Staff inspires trust in visitors	1 2 3 4 5	1 2 3 4 5
9	Visitors feel comfortable during their visit, e.g. enough space, and good quality of walkways	1 2 3 4 5	1 2 3 4 5
10	The pricing and range of refreshment in the tea room are reasonable	1 2 3 4 5	1 2 3 4 5
11	The pricing and selection of products in and souvenir shop are reasonable	1 2 3 4 5	1 2 3 4 5
12	The path design is environmentally friendly and ecologically sound.	1 2 3 4 5	1 2 3 4 5

13	Toilets are provided and are clean	1 2 3 4 5	**1 2 3 4 5**
14	There is easy access for visitors with wheelchairs, prams and young children	1 2 3 4 5	**1 2 3 4 5**
15	Signs inside and outside the complex are adequate	1 2 3 4 5	**1 2 3 4 5**
16	The booking system is prompt	1 2 3 4 5	**1 2 3 4 5**
17	Tour hours are convenient	1 2 3 4 5	**1 2 3 4 5**
18	The buried village and nature-based tour is authentic	1 2 3 4 5	**1 2 3 4 5**
19	The whole experience is enlightening and educational	1 2 3 4 5	**1 2 3 4 5**
20	The guided tour is informative and understandable	1 2 3 4 5	**1 2 3 4 5**
21	The whole visit experience is value for money	1 2 3 4 5	**1 2 3 4 5**
22	The content and length of the activities are appropriate for a two-hour tour	1 2 3 4 5	**1 2 3 4 5**

Part 3: Level of Importance of features and services

*Please indicate how **relatively important** you think each of the following features, facilities and services is compared to the others for your tour experience. Make your choice by circling the appropriate number.*

	Features, Displays and Services	How relatively important are the following to your visit? 1= Not important 2= Some important 3= Important 4= Very important 5= Extremely important				
1	The physical appearance of the museum	1	2	3	4	5
2	The physical appearance of the on-site displays	1	2	3	4	5
3	The physical appearance of the village setting	1	2	3	4	5
4	The information provided about the village e.g. brochures, advertisements and programme information	1	2	3	4	5
5	The friendliness and courtesy of the staff and their politeness to visitors	1	2	3	4	5
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	1	2	3	4	5
7	The staff gives prompt service	1	2	3	4	5
8	Staff inspires trust in visitors	1	2	3	4	5
9	Visitors feel comfortable during their visit, e.g. enough space, safe, and good quality of walkways	1	2	3	4	5
10	The pricing and range of refreshment in the tea room are reasonable	1	2	3	4	5
11	The pricing and selection of products in and souvenir shop are reasonable	1	2	3	4	5
12	The path design is environmentally friendly and ecologically sound.	1	2	3	4	5
13	Toilets are provided and are clean	1	2	3	4	5
14	There is easy access for visitors with wheelchairs, prams and young children	1	2	3	4	5

15	Signs inside and outside the complex are adequate	1	2	3	4	5
16	The booking system is prompt	1	2	3	4	5
17	Tour hours are convenient	1	2	3	4	5
18	The buried village and nature-based tour is authentic	1	2	3	4	5
19	The whole experience is enlightening and educational	1	2	3	4	5
20	The guided tour is informative and understandable	1	2	3	4	5
21	The whole experience is value for money	1	2	3	4	5
22	The content and length of the activities are appropriate for a two-hour visit	1	2	3	4	5

Thank you for completing the questionnaire!

C 2. Buried Village Staff Survey Questionnaire

BURIED VILLAGE
Rotorua, New Zealand

Staff Survey

Dear Sir/Madam,

My name is Claire Liu, a Ph.D. student at Massey University. This survey is part of my research requirements. My supervisors are Dr Robin Smith and Dr Don Barnes.

The purpose of this questionnaire is to measure the staff expectations of the service provided at the Buried Village. The information will help the company to improve the business.

The information provided will be treated in confidence and the identity of those who respond to the questionnaire will not be known to the researcher.This survey should take about 10 to 15 minutes to complete. You are not obliged to answer all the questions, and may refuse to provide details on any particular question. Participation in this survey is voluntary and filling in the questionnaire implies your consent to take part in the survey. The results of the survey may be published but it will not be possible to identify any respondent from the published results. A summary of the results will be available when the analysis has been completed by email should you wish it. If so please add your email address here:

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/53. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North, Tel: 06-3505249, email: S.V.Rumball@massey.ac.nz.

Thank you for your participation and support!

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Dr Don Barnes
Massey University
New Zealand

Sponsor

Pam McGrath
Managing Director
Buried Village
Rotorua, New Zealand

Part 1: Level of Importance and Visitor Expectations ---Staff

We would like you to think about the kind of facilities and services that the Buried Village provides.
For each item listed below, please indicate how important you think each one is for the visitors and then please indicate what you would expect from the services provided by the company.

Make your choice by circling the number, which best represents how you feel about the facilities and services provided by the Buried Village.

	Features, Displays and Services	**How important are the following to the visitors?** 1= Not important 2= Some important 3= Important 4= Very important 5= Extremely important	**What standard do you think the visitor will expect?** 1= Very low 2= Low 3= Neither 4= High 5= Very high
1	The physical appearance of the museum	1 2 3 4 5	1 2 3 4 5
2	The physical appearance of the on-site displays	1 2 3 4 5	1 2 3 4 5
3	The physical appearance of the village setting	1 2 3 4 5	1 2 3 4 5
4	The information provided about the village e.g. brochures, advertisements and programme information	1 2 3 4 5	1 2 3 4 5
5	The friendliness and courtesy of the staff and their politeness to visitors	1 2 3 4 5	1 2 3 4 5
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	1 2 3 4 5	1 2 3 4 5
7	The staff gives prompt service	1 2 3 4 5	1 2 3 4 5
8	Staff inspires trust in visitors	1 2 3 4 5	1 2 3 4 5

9	Visitors feel comfortable during their visit, e.g. enough space, and good quality of walkways	1 2 3 4 5	1 2 3 4 5
10	The pricing and range of refreshment in the tea room are reasonable	1 2 3 4 5	1 2 3 4 5
11	The pricing and selection of products in and souvenir shop are reasonable	1 2 3 4 5	1 2 3 4 5
12	The path design is environmentally friendly and ecologically sound.	1 2 3 4 5	1 2 3 4 5
13	Toilets are provided and are clean	1 2 3 4 5	1 2 3 4 5
14	There is easy access for visitors with wheelchairs, prams and young children	1 2 3 4 5	1 2 3 4 5
15	Signs inside and outside the complex are adequate	1 2 3 4 5	1 2 3 4 5
16	The booking system is prompt	1 2 3 4 5	1 2 3 4 5
17	Tour hours are convenient	1 2 3 4 5	1 2 3 4 5
18	The buried village and nature-based tour is authentic	1 2 3 4 5	1 2 3 4 5
19	The whole experience is enlightening and educational	1 2 3 4 5	1 2 3 4 5
20	The guided tour is informative and understandable	1 2 3 4 5	1 2 3 4 5
21	The whole experience is value for money	1 2 3 4 5	1 2 3 4 5
22	The content and length of the activities are appropriate for a 2-hour tour	1 2 3 4 5	1 2 3 4 5

Part 2: To identify the knowledge of the Buried Village Staff on the company's Performance Standards

This questionnaire is to identify your knowledge of performance standards at the Buried Village. Performance standards can be formal – written, explicit and communicated to staff. They can also be informal – verbal, implicit, and assumed to be understood by staff.

For each of the following features, please place a tick in the appropriate boxes to indicate your knowledge or understanding of the level of performance standards at the Buried Village.

	Standards	Don't know	No Standards Exist	Have Informal Standards	Have Formal Standards not Documented	Have Documented Standards
1	The appearance of the physical facilities and information materials					
2	The knowledge and courtesy of the staff and their ability to convey confidence					
3	The peripheral facilities and services provided by the village e.g. booking system, shop, and toilets					
4	The signs, opening hours and easy access for wheelchairs					
5	The tour programme and facilities provided by the Buried Village					

Thank you for completing the questionnaire!

We welcome any other comments or suggestions that you feel would help to improve the quality of the services.

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C 3. Gap Analysis of Customers' Expectation and Perception (Sept. 2002)

	Features, displays and services	Customers Expectations and Perceptions		
No.	The SERVQUAL Questions	Expectations	Perception	Diff(P-E)
1	The physical appearance of the museum	3.66	3.91	0.25
2	The physical appearance of the on-site displays	3.57	3.84	0.27
3	The physical appearance of the village setting	3.85	3.83	-0.02
4	The information provided about the village e.g.brochures, advertisements and programme information	3.66	3.85	0.19
5	The friendliness and courtesy of the staff and their politeness to visitors	3.97	4.12	0.15
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	3.87	4.02	0.15
7	The staff gives prompt service	3.83	4.09	0.26
8	Staff inspires trust in visitors	3.69	3.94	0.25
9	Visitors feel comfortable during their visit, e.g.enough space, and good quality of walkways	3.86	4.09	0.23
10	The pricing and range of refreshment in the tea room are reasonable	3.45	3.77	0.32
11	The pricing and selection of products in the souvenir shop are reasonable	3.45	3.66	0.21
12	The path design is environmentally friendly and ecologically sound.	3.72	4.06	0.34
13	Toilets are provided and are clean	3.86	3.88	0.02
14	There is easy access for visitors with wheelchairs, prams and young children	3.62	3.58	-0.04
15	Signs inside and outside the complex are adequate	3.76	4.10	0.34
16	The booking system is prompt	3.38	3.71	0.33
17	Tour hours are convenient	3.27	3.76	0.49
18	The buried village and nature-based tour is authentic	3.80	3.95	0.15
19	The whole experience is enlightening and educational	3.97	4.06	0.09
20	The guided tour is informative and understandable	3.83	4.28	0.45
21	The whole visit experience is value for money	3.71	3.89	0.18
22	The content and length of the activities are appropriate for a 2-hour tour	3.31	3.52	0.21

C 4. Gap Analysis of Expectation of Service Quality (Sept. 02)

	Features, displays and services	Staff and Customer Expectation of Service Quality		
No.	The SERVQUAL Questions	Staff Exp.	Customer Exp.	Difference (S-C)
1	The physical appearance of the museum	4.75	3.66	1.09
2	The physical appearance of the on-site displays	4.63	3.57	1.06
3	The physical appearance of the village setting	4.63	3.85	0.78
4	The information provided about the village e.g.brochures, advertisements and programme information	4.75	3.66	1.09
5	The friendliness and courtesy of the staff and their politeness to visitors	5.00	3.97	1.03
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	4.63	3.87	0.76
7	The staff gives prompt service	4.75	3.83	0.92
8	Staff inspires trust in visitors	4.50	3.69	0.81
9	Visitors feel comfortable during their visit, e.g.enough space, and good quality of walkways	4.38	3.86	0.52
10	The pricing and range of refreshment in the tea room are reasonable	4.25	3.45	0.80
11	The pricing and selection of products in the souvenir shop are reasonable	4.13	3.45	0.68
12	The path design is environmentally friendly and ecologically sound.	4.25	3.72	0.53
13	Toilets are provided and are clean	4.75	3.86	0.89
14	There is easy access for visitors with wheelchairs, prams and young children	4.38	3.62	0.76
15	Signs inside and outside the complex are adequate	4.50	3.76	0.74
16	The booking system is prompt	4.63	3.38	1.25
17	Tour hours are convenient	4.50	3.27	1.23
18	The buried village and nature-based tour is authentic	4.88	3.80	1.08
19	The whole experience is enlightening and educational	4.75	3.97	0.78
20	The guided tour is informative and understandable	4.75	3.83	0.92
21	The whole visit experience is value for money	4.75	3.71	1.04
22	The content and length of the activities are appropriate for a 2-hour tour	4.38	3.31	1.07

C 5. Gap Analysis of Staff View of Quality Importance and Visitor Expectation (Sept.02)

	Features, displays and services	Staff view of importance of service quality and visitor's expectation		
No.	The SERVQUAL Questions	Staff importance	Visitor expectation	Difference in staff view (I-E)
1	The physical appearance of the museum	4.88	4.75	0.13
2	The physical appearance of the on-site displays	4.75	4.63	0.12
3	The physical appearance of the village setting	4.88	4.63	0.25
4	The information provided about the village e.g.brochures, advertisements and programme information	4.75	4.75	0.00
5	The friendliness and courtesy of the staff and their politeness to visitors	4.88	5.00	-0.12
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	4.63	4.63	0.00
7	The staff gives prompt service	4.75	4.75	0.00
8	Staff inspires trust in visitors	4.50	4.50	0.00
9	Visitors feel comfortable during their visit, e.g.enough space, and good quality of walkways	4.38	4.38	0.00
10	The pricing and range of refreshment in the tea room are reasonable	4.38	4.25	0.13
11	The pricing and selection of products in the souvenir shop are reasonable	4.00	4.13	-0.13
12	The path design is environmentally friendly and ecologically sound.	4.00	4.25	-0.25
13	Toilets are provided and are clean	4.63	4.75	-0.12
14	There is easy access for visitors with wheelchairs, prams and young children	4.38	4.38	0.00
15	Signs inside and outside the complex are adequate	4.38	4.50	-0.12
16	The booking system is prompt	4.38	4.63	-0.25
17	Tour hours are convenient	4.25	4.50	-0.25
18	The buried village and nature-based tour is authentic	4.88	4.88	0.00
19	The whole experience is enlightening and educational	4.75	4.75	0.00
20	The guided tour is informative and understandable	4.63	4.75	-0.12
21	The whole visit experience is value for money	4.88	4.75	0.13
22	The content and length of the activities are appropriate for a 2-hour tour	4.13	4.38	-0.25

C 6. Comparison of Customer Importance Rating

	Features, displays and services	Average Score of relative importance of features to the tour	
No.	The SERVQUAL Questions	Sept.02	Dec.02
1	The physical appearance of the museum	3.68	4.53
2	The physical appearance of the on-site displays	3.85	4.10
3	The physical appearance of the village setting	3.88	3.25
4	The information provided about the village e.g.brochures, advertisements and programme information	4.05	3.95
5	The friendliness and courtesy of the staff and their politeness to visitors	4.36	3.37
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	4.33	4.13
7	The staff gives prompt service	4.09	3.33
8	Staff inspires trust in visitors	3.86	3.35
9	Visitors feel comfortable during their visit, e.g.enough space, and good quality of walkways	4.29	3.12
10	The pricing and range of refreshment in the tea room are reasonable	3.64	3.25
11	The pricing and selection of products in the souvenir shop are reasonable	3.39	2.13
12	The path design is environmentally friendly and ecologically sound.	4.06	3.77
13	Toilets are provided and are clean	4.23	3.33
14	There is easy access for visitors with wheelchairs, prams and young children	3.73	3.22
15	Signs inside and outside the complex are adequate	3.77	2.37
16	The booking system is prompt	3.35	2.23
17	Tour hours are convenient	3.38	3.08
18	The buried village and nature-based tour is authentic	4.06	4.60
19	The whole experience is enlightening and educational	3.95	4.65
20	The guided tour is informative and understandable	4.09	3.85
21	The whole visit experience is value for money	4.30	3.83
22	The content and length of the activities are appropriate for a 2-hour tour	3.43	2.28

C 7. Gap Analysis of Customers' Expectation and Perception (Dec. 2002)

	Features, displays and services	Customers Expectations and Perceptions		
No.	The SERVQUAL Questions	Expectations	Perception	Diff(P-E)
1	The physical appearance of the museum	3.70	4.00	0.30
2	The physical appearance of the on-site displays	3.62	3.90	0.28
3	The physical appearance of the village setting	3.80	3.62	-0.18
4	The information provided about the village e.g.brochures, advertisements and programme information	3.66	3.92	0.26
5	The friendliness and courtesy of the staff and their politeness to visitors	4.03	4.15	0.12
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	3.87	4.00	0.13
7	The staff gives prompt service	3.75	4.03	0.28
8	Staff inspires trust in visitors	3.61	3.88	0.27
9	Visitors feel comfortable during their visit, e.g.enough space, and good quality of walkways	4.00	4.22	0.22
10	The pricing and range of refreshment in the tea room are reasonable	3.40	3.70	0.30
11	The pricing and selection of products in the souvenir shop are reasonable	3.46	3.65	0.19
12	The path design is environmentally friendly and ecologically sound.	3.80	4.12	0.32
13	Toilets are provided and are clean	3.81	3.88	0.07
14	There is easy access for visitors with wheelchairs, prams and young children	3.66	3.57	-0.09
15	Signs inside and outside the complex are adequate	3.78	4.17	0.39
16	The booking system is prompt	3.31	3.63	0.32
17	Tour hours are convenient	3.23	3.68	0.45
18	The buried village and nature-based tour is authentic	4.00	4.18	0.18
19	The whole experience is enlightening and educational	4.07	4.15	0.08
20	The guided tour is informative and understandable	3.88	4.34	0.46
21	The whole visit experience is value for money	3.68	3.87	0.19
22	The content and length of the activities are appropriate for a 2-hour tour	3.22	3.45	0.23

C 8. Gap Analysis of Expectation of Service Quality (Sept./Dec. 02)

	Features, displays and services	Staff and Customer Expectation of Service Quality		
No.	The SERVQUAL Questions	Staff Exp.	Customer Exp.	Difference (S-C)
1	The physical appearance of the museum	4.75	3.70	1.05
2	The physical appearance of the on-site displays	4.63	3.62	1.01
3	The physical appearance of the village setting	4.63	3.80	0.83
4	The information provided about the village e.g.brochures, advertisements and programme information	4.75	3.66	1.09
5	The friendliness and courtesy of the staff and their politeness to visitors	5.00	4.03	0.97
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	4.63	3.87	0.76
7	The staff gives prompt service	4.75	3.75	1.00
8	Staff inspires trust in visitors	4.50	3.61	0.89
9	Visitors feel comfortable during their visit, e.g.enough space, and good quality of walkways	4.38	4.00	0.38
10	The pricing and range of refreshment in the tea room are reasonable	4.25	3.40	0.85
11	The pricing and selection of products in the souvenir shop are reasonable	4.13	3.46	0.67
12	The path design is environmentally friendly and ecologically sound.	4.25	3.80	0.45
13	Toilets are provided and are clean	4.75	3.81	0.94
14	There is easy access for visitors with wheelchairs, prams and young children	4.38	3.66	0.72
15	Signs inside and outside the complex are adequate	4.50	3.78	0.72
16	The booking system is prompt	4.63	3.31	1.32
17	Tour hours are convenient	4.50	3.23	1.27
18	The buried village and nature-based tour is authentic	4.88	4.00	0.88
19	The whole experience is enlightening and educational	4.75	4.07	0.68
20	The guided tour is informative and understandable	4.75	3.88	0.87
21	The whole visit experience is value for money	4.75	3.68	1.07
22	The content and length of the activities are appropriate for a 2-hour tour	4.38	3.22	1.16

C 9. Staff Knowledge of Availability of Service Quality Standards and Procedures (Sept. 02)

Service Dimension	Service quality standard and procedures	Don't know 1	No standards 2	Have Inf. Std. 3	Have For.Std. 4	Have Writ. Std. 5
1	The appearance of the physical facilities and information materials	0.00%	0.00%	25.00%	62.50%	12.50%
2	The knowledge and courtesy of the staff and their ability to convey confidence	0.00%	0.00%	37.50%	62.50%	0.00%
3	The peripheral facilities and service provided	0.00%	0.00%	12.50%	75.00%	12.50%
4	The signs, opening hours and easy access for wheelchairs	0.00%	0.00%	0.00%	75.00%	25.00%
5	The overall services provided by the attraction	0.00%	0.00%	25.00%	62.50%	12.50%

C 10. Visitor Expectation and Perception Weighted Gap Analysis (Sept. 02)

No	Sample A	Sample B	A-B	Highest Gap	Lowest Gap	Average Gap
1	0.36	2.43	-2.07	2.43	0.36	1.40
2	-0.36	2.07	-2.43	2.07	-0.36	0.86
3	-1.21	0.07	-1.28	0.07	-1.21	-0.57
4	0.07	-0.14	0.21	0.07	-0.14	-0.04
5	-0.86	-0.93	0.07	-0.86	-0.93	-0.90
6	0.00	0.29	-0.29	0.29	0.00	0.15
7	-0.71	1.21	-1.92	1.21	-0.71	0.25
8	-1.07	2.43	-3.50	2.43	-1.07	0.68
9	0.36	2.36	-2.00	2.36	0.36	1.36
10	0.43	1.86	-1.43	1.86	0.43	1.15
11	0.64	1.21	-0.57	1.21	0.64	0.93
12	1.71	1.00	0.71	1.71	1.00	1.36
13	-0.64	0.57	-1.21	0.57	-0.64	-0.04
14	0.14	0.21	-0.07	0.21	0.14	0.18
15	1.36	1.43	-0.07	1.43	1.36	1.40
16	1.64	0.64	1.00	1.64	0.64	1.14
17	3.07	1.93	1.14	3.07	1.93	2.50
18	0.93	-0.29	1.22	0.93	-0.29	0.32
19	0.14	0.14	0.00	0.14	0.14	0.14
20	1.07	1.93	-0.86	1.93	1.07	1.50
21	-0.57	2.00	-2.57	2.00	-0.57	0.72
22	1.64	1.50	0.14	1.64	1.50	1.57

C 11. Visitor Expectation and Perception Weighted Gap Analysis (Dec. 02)

No	Sample A	Sample B	A-B	Highest Gap	Lowest Gap	Average Gap
1	2.76	-0.63	3.39	2.76	-0.63	1.07
2	1.68	0.08	1.60	1.68	0.08	0.88
3	-0.72	-0.71	-0.01	-0.71	-0.72	-0.72
4	2.32	-1.08	3.40	2.32	-1.08	0.62
5	1.40	-0.46	1.86	1.40	-0.46	0.47
6	0.56	0.58	-0.02	0.58	0.56	0.57
7	0.96	1.04	-0.08	1.04	0.96	1.00
8	0.68	1.33	-0.65	1.33	0.68	1.01
9	0.08	1.00	-0.92	1.00	0.08	0.54
10	0.40	0.58	-0.18	0.58	0.40	0.49
11	0.64	0.54	0.10	0.64	0.54	0.59
12	1.16	0.96	0.20	1.16	0.96	1.06
13	0.56	-0.67	1.23	0.56	-0.67	-0.06
14	1.00	-1.08	2.08	1.00	-1.08	-0.04
15	1.28	0.63	0.65	1.28	0.63	0.96
16	2.00	0.08	1.92	2.00	0.08	1.04
17	2.36	0.92	1.44	2.36	0.92	1.64
18	1.56	-0.21	1.77	1.56	-0.21	0.68
19	1.24	-1.25	2.49	1.24	-1.25	-0.01
20	1.12	2.83	-1.71	2.83	1.12	1.98
21	-0.28	2.00	-2.28	2.00	-0.28	0.86
22	2.12	-0.08	2.20	2.12	-0.08	1.02

C 12. Visitor Expectation and Perception Gap Analysis by Ethnicity (Sept. 02)

Visitor expectation				Visitor perception			
Exp-G1	Exp-G2	Exp-G3	Exp-G4	Per-G1	Per-G2	Per-G3	Per-G4
4.25	3.10	3.82	4.00	4.25	3.60	4.18	4.50
4.25	2.90	3.55	4.00	4.25	3.80	3.27	3.50
4.50	3.60	4.00	4.50	4.50	3.90	3.27	3.50
4.25	3.60	4.00	4.00	4.25	3.70	3.82	4.50
4.25	3.90	4.18	4.00	4.25	3.70	3.82	4.50
4.50	3.50	4.09	3.50	4.25	3.70	3.91	4.50
4.50	3.20	4.18	4.00	4.75	3.60	3.73	4.50
4.25	3.20	3.82	4.00	4.50	3.80	3.55	3.50
4.25	3.70	3.73	3.50	4.75	4.10	3.91	4.00
4.25	3.00	3.55	4.00	4.50	3.80	3.45	3.50
4.25	3.10	3.45	3.50	4.25	3.50	3.64	3.50
4.50	3.60	3.64	3.50	4.75	4.10	3.91	4.00
4.50	3.90	3.73	4.00	4.75	4.10	3.45	4.00
4.50	3.30	3.45	4.00	4.75	3.50	3.27	4.00
4.50	3.80	3.73	4.00	4.75	4.20	3.91	4.50
4.00	3.50	3.27	3.00	4.00	3.60	3.64	4.00
3.75	3.20	3.00	3.00	4.25	3.70	3.64	4.50
4.25	3.70	3.73	4.00	4.50	3.80	3.55	4.00
4.50	3.70	4.00	4.00	4.50	4.10	3.36	4.50
4.50	3.70	3.64	4.50	4.50	4.20	4.18	4.50
4.50	3.40	3.45	4.50	4.75	4.10	3.27	3.50
4.25	3.10	3.18	3.50	4.25	3.40	3.55	4.00
Note: G1 - Australia; G2 - Asia; G3 - NZ; G4-North Hemisphere							

C 13. Visitor Expectation and Perception Gap Analysis by Ethnicity (Dec. 02)

Visitor expectation				Visitor perception			
Exp-G1	Exp-G2	Exp-G3	Exp-G4	Per-G1	Per-G2	Per-G3	Per-G4
3.86	3.50	3.65	3.76	4.29	4.50	3.88	3.76
3.57	3.38	3.47	3.71	3.71	4.13	3.76	3.82
3.86	4.13	3.59	3.71	3.71	3.75	3.35	3.65
3.57	3.63	3.65	3.59	4.14	3.88	3.82	3.76
4.00	3.88	3.94	4.18	4.14	3.88	3.94	4.24
3.71	3.88	3.94	3.71	4.00	3.63	3.94	4.06
3.57	3.63	4.00	3.47	3.86	3.63	3.94	4.24
3.43	3.25	3.71	3.47	3.29	4.00	4.12	3.65
4.00	4.13	4.00	3.88	3.86	4.38	4.29	4.24
3.14	3.75	3.41	3.29	3.57	4.00	3.47	3.82
3.43	3.50	3.47	3.29	3.86	3.75	3.65	3.59
3.57	3.88	3.88	3.65	4.29	3.88	3.88	4.18
3.71	3.88	3.71	3.82	3.71	3.63	3.82	3.76
3.57	3.63	3.88	3.47	3.43	3.75	3.53	3.65
3.71	3.63	4.00	3.59	4.29	4.13	4.12	4.18
2.86	3.50	3.29	3.18	4.00	3.38	3.47	3.59
3.43	3.13	3.12	3.00	3.71	3.63	3.71	3.53
3.71	3.75	3.94	3.94	3.71	3.75	4.41	4.06
3.71	4.25	4.00	4.00	3.86	4.38	3.88	4.18
4.00	3.38	3.82	4.06	4.29	4.75	4.18	4.29
3.43	3.50	3.88	3.47	3.71	3.88	3.71	3.88
2.43	3.13	3.18	3.18	3.29	3.38	3.47	3.24
Note: G1 - Australia; G2 - Asia; G3 - NZ; G4-North Hemisphere							

C 14. Comparison of Weighted Gaps for Two Visitor Surveys

Weighted gaps -Sept. 2002		Weighted gaps - Dec. 2002	
Whole Sample	Average of Sample A & B	Whole Sample	Average of Sample A & B
1.39	1.40	1.02	1.07
0.86	0.86	1.00	0.88
-0.57	-0.57	-0.65	-0.72
-0.04	-0.04	0.88	0.62
-0.89	-0.90	0.45	0.47
0.14	0.15	0.53	0.57
0.25	0.25	0.98	1.00
0.68	0.68	0.92	1.01
1.36	1.36	0.55	0.54
1.14	1.15	0.49	0.49
0.93	0.93	0.53	0.59
1.36	1.36	0.90	1.06
-0.04	-0.04	-0.02	-0.06
0.18	0.18	-0.08	-0.04
1.39	1.40	1.00	0.96
1.14	1.14	1.06	1.04
2.50	2.50	1.71	1.64
0.32	0.32	0.80	0.68
0.14	0.14	0.02	-0.01
1.50	1.50	1.84	1.98
0.71	0.72	0.71	0.86
1.57	1.57	1.02	1.02

C 15. Average Visitor Importance Rating Split Sample Analysis (Sept. 02)

No	Sample A	Sample B	Highest Importance	Lowest Importance	Average
1	4.09	3.27	4.09	3.27	3.68
2	4.21	3.48	4.21	3.48	3.85
3	4.18	3.58	4.18	3.58	3.88
4	4.15	3.94	4.15	3.94	4.05
5	4.64	4.09	4.64	4.09	4.37
6	4.58	4.09	4.58	4.09	4.34
7	4.30	3.88	4.30	3.88	4.09
8	4.06	3.67	4.06	3.67	3.87
9	4.36	4.21	4.36	4.21	4.29
10	4.03	3.24	4.03	3.24	3.64
11	3.85	2.94	3.85	2.94	3.40
12	4.36	3.76	4.36	3.76	4.06
13	4.58	3.88	4.58	3.88	4.23
14	4.00	3.45	4.00	3.45	3.73
15	3.94	3.61	3.94	3.61	3.78
16	3.55	3.16	3.55	3.16	3.36
17	3.78	3.00	3.78	3.00	3.39
18	4.58	3.55	4.58	3.55	4.07
19	4.42	3.48	4.42	3.48	3.95
20	4.41	3.79	4.41	3.79	4.10
21	4.76	3.85	4.76	3.85	4.31
22	3.91	2.97	3.91	2.97	3.44

C 16. Average Visitor Importance Rating Split Sample Analysis (Dec. 02)

No	Sample A	Sample B	Highest Importance	Lowest Importance	Average
1	4.07	5.00	5.00	4.07	4.54
2	4.10	4.10	4.10	4.10	4.10
3	3.57	2.93	3.57	2.93	3.25
4	3.97	3.93	3.97	3.93	3.95
5	3.93	2.80	3.93	2.80	3.37
6	4.10	4.17	4.17	4.10	4.14
7	3.57	3.10	3.57	3.10	3.34
8	3.47	3.23	3.47	3.23	3.35
9	3.70	2.53	3.70	2.53	3.12
10	2.80	1.70	2.80	1.70	2.25
11	3.73	1.53	3.73	1.53	2.63
12	3.83	3.70	3.83	3.70	3.77
13	3.63	3.03	3.63	3.03	3.33
14	3.53	2.90	3.53	2.90	3.22
15	3.27	1.47	3.27	1.47	2.37
16	3.97	1.50	3.97	1.50	2.74
17	3.27	2.90	3.27	2.90	3.09
18	4.20	5.00	5.00	4.20	4.60
19	4.30	5.00	5.00	4.30	4.65
20	3.90	3.80	3.90	3.80	3.85
21	3.90	3.77	3.90	3.77	3.84
22	2.83	1.73	2.83	1.73	2.28

C 17. Visitor Profiles

No of survey questions	% of visitor responses	
Question 1	**Sept.02**	**Dec.02**
1st time	68.18	65.00
2-3 times	22.73	33.33
4-6 times	1.52	1.67
More than 6 times	7.58	0.00
Question 2		
Alone	1.52	16.67
Family	50.00	51.67
Friends	21.21	18.33
Organised group	25.76	13.33
Others	1.52	0.00
Question 3		
To see a particular activity	8.33	16.85
To learn something	27.38	37.08
Something to do	16.67	7.87
Sightseeing	35.71	38.20
Others	11.90	0.00
Question 4		
15-19	7.58	3.33
20-24	36.36	6.67
25-29	7.58	11.67
30-34	1.52	6.67
35-39	6.06	11.67
40-44	9.09	13.33
45-49	7.58	8.33
50-54	12.12	11.67
55-59	4.55	11.67
60 & above	7.58	15.00
Question 5		
Farming	1.52	5.00
Professional	21.21	16.67
Management	6.06	8.33
Student	43.94	15.00
Clerical	6.06	8.33
Sales/service	6.06	15.00
Technical	6.06	5.00
Retired	6.06	20.00
Unemployed	0.00	3.33
Others	3.03	3.33

Question 6		
Primary	0.00	0.00
Secondary	27.27	35.00
Polytechnic	33.33	20.00
University	39.39	45.00
Others	0.00	0.00
Question 7		
Australia	13.64	11.67
China	24.24	3.33
England	3.03	15.00
Ireland	1.52	0.00
Korea	4.55	6.67
New Zealand	43.94	36.67
Russia	1.52	0.00
Scotland	3.03	0.00
Switzerland	1.52	0.00
Taiwan	3.03	5.00
USA	0.00	8.33
Italy	0.00	3.33
Germany	0.00	10.00
Question 8		
Visiting friends and relatives	0.00	11.67
Holidays	71.21	71.67
Business	1.52	10.00
Others(study trip)	27.27	6.67
Question 9		
Brochure	19.05	36.19
Advertisement	11.90	19.05
Information centre	17.86	15.24
Word of mouth	36.90	20.00
Road sign	5.95	4.76
Web site	1.19	1.90
Others	7.14	2.86
Question 10		
Male	45.45	51.67
Female	54.55	48.33

Appendix D: The Principal Case Study --- Tamaki Tours (2005)

D 1. Visitor Profile

No of visits	Frequency	Percent
1st time	1728	96.70%
2-3 times	53	2.97%
4-6 times	2	0.11%
More than 6 times	4	0.22%

Travel group	**Frequency**	**Percent**
Alone	130	7.27%
Family	689	38.56%
Friends	418	23.39%
Organised group	550	30.78%
Others		

Reasons for this visit	**Frequency**	**Percent**
To see a particular activity	594	22.36%
To learning something	1183	44.54%
Something to do	167	6.29%
Sightseeing	690	25.98%
Others	22	0.83%

Age groups	**Frequency**	**Percent**
15-19	110	6.16%
20-24	395	22.10%
25-29	276	15.44%
30-34	131	7.33%
35-39	63	3.53%
40-44	78	4.36%
45-49	74	4.14%
50-54	135	7.55%
55-59	154	8.62%
60 & above	371	20.76%

Occupational area	**Frequency**	**Percent**
Farming	34	1.90%
Professional	494	27.64%
Management	166	9.29%
Student	304	17.01%
Clerical	89	4.98%
Sales/service	128	7.16%
Technical	114	6.38%
Retired	358	20.03%
Unemployed	76	4.25%
Others	24	1.34%

Educational level	Frequency	Percent
Primary	15	0.84%
Secondary	453	25.35%
Polytechnic	232	12.98%
Tertiary(university)	1084	60.66%
Others	3	0.17%

Name of country	Frequency	Percent
Afghanistan	2	0.11%
Andorra	2	0.11%
Australia	206	11.53%
Austria	5	0.28%
Belgium	7	0.39%
Brazil	2	0.11%
Canada	102	5.71%
Chile	1	0.06%
China	8	0.45%
Costa Rica	5	0.28%
Czechoslovakia	1	0.06%
Denmark	45	2.52%
Finland	3	0.17%
France	6	0.34%
Germany	53	2.97%
Holland	65	3.64%
Hungary	1	0.06%
India	6	0.34%
Ireland	64	3.58%
Israel	8	0.45%
Italy	3	0.17%
Japan	7	0.39%
Korea	9	0.50%
Malaysia	1	0.06%
Malta	1	0.06%
New Caledonia	1	0.06%
New Zealand	173	9.68%
Norway	11	0.62%
Poland	1	0.06%
Scotland	31	1.73%
Singapore	5	0.28%
Slovenia	2	0.11%
South Africa	4	0.22%
Spain	7	0.39%
Sweden	65	3.64%
Switzerland	29	1.62%
Taiwan	9	0.50%
UK	637	35.65%
United Arab Emirates	1	0.06%

USA	188	10.52%
Venezuela	1	0.06%
Wales	9	0.50%

Purpose of visiting Rotorua	**Frequency**	**Percent**
Visiting friends and relatives	77	4.31%
Holidays	1620	90.65%
Business	49	2.74%
Others	41	2.29%

Source of information	**Frequency**	**Percent**
Brochure	441	21.47%
Advertisement	125	6.09%
Information centre	242	11.78%
Word of mouth	499	24.29%
Road sign	8	0.39%
Web site	62	3.02%
Others	677	32.96%

Gender	**Frequency**	**Percent**
Male	763	42.70%
Female	1024	57.30%

D 2. Gap Analysis of Customers' Perception and Expectation (Jan.-March 2005)

No.	The SERVQUAL Questions	Expectations	Perception	Diff(P-E)
1	The physical appearance of the city booking office	3.563	4.049	0.486
2	The physical appearance of the Maori village	4.024	4.522	0.498
3	The physical appearance of the wharekai (the food house)	3.951	4.180	0.229
4	The information provided about the facility e.g. brochures, adverts and programs information	3.860	4.018	0.158
5	The friendliness and courtesy of the staff and that they are polite to visitors	4.327	4.670	0.343
6	The staff has the knowledge to respond to visitor's requests and gives understandable replies to questions	4.265	4.483	0.218
7	The staff gives prompt service	4.046	4.449	0.403
8	Staff inspires trust in visitors	4.028	4.344	0.316
9	Visitors feel comfortable during their visit e.g. enough seats, heating, lighting, space between the seats	4.087	4.314	0.227
10	The pricing and range of refreshments in the bar are reasonable	3.579	3.777	0.198
11	The quality in presentation of the food provided by the wharekai (the food house) are adequate	4.022	4.316	0.294
12	The pricing and range of products in the tribal market place are reasonable	3.560	3.637	0.077
13	Toilets are provided and are clean	4.138	4.036	-0.102
14	There is easy access for visitors with wheelchairs, prams and young children	3.680	3.836	0.156
15	Signs inside and outside the village are adequate	3.800	3.868	0.068
16	The booking system is prompt	3.861	4.010	0.149
17	Tour hours are convenient	3.904	4.118	0.214
18	The waiting time between the activities is reasonable	3.861	4.125	0.264
19	The introduction to the Maori culture on the bus is enlightening	4.046	4.374	0.328
20	The whole experience is enlightening, entertaining and educational	4.344	4.552	0.208
21	The cultural performance is authentic, informative and understandable	4.333	4.444	0.111
22	The whole tour is value for money	4.119	4.216	0.097
23	The content and length of the activities are appropriate	4.035	4.261	0.226

D 3. Customer Importance Ratings (2005)

No.	The SERVQUAL Questions	Average Score of relative importance of features to the tour
1	The physical appearance of the city booking office	2.743
2	The physical appearance of the Maori village	4.031
3	The physical appearance of the wharekai (the food house)	3.996
4	The information provided about the facility e.g. brochures, adverts and programs information	3.653
5	The friendliness and courtesy of the staff and that they are polite to visitors	4.354
6	The staff has the knowledge to respond to visitor's requests and gives understandable replies to questions	4.324
7	The staff gives prompt service	4.080
8	Staff inspires trust in visitors	4.039
9	Visitors feel comfortable during their visit e.g. enough seats, heating, lighting, space between the seats	4.218
10	The pricing and range of refreshments in the bar are reasonable	3.763
11	The quality in presentation of the food provided by the wharekai (the food house) are adequate	4.185
12	The pricing and range of products in the tribal market place are reasonable	3.647
13	Toilets are provided and are clean	4.233
14	There is easy access for visitors with wheelchairs, prams and young children	3.769
15	Signs inside and outside the village are adequate	3.592
16	The booking system is prompt	3.628
17	Tour hours are convenient	3.691
18	The waiting time between the activities is reasonable	3.791
19	The introduction to the Maori culture on the bus is enlightening	4.060
20	The whole experience is enlightening, entertaining and educational	4.477
21	The cultural performance is authentic, informative and understandable	4.527
22	The whole tour is value for money	4.359
23	The content and length of the activities are appropriate	4.124

D 4. Gap Analysis of Staff View of Importance of Quality and Visitor Expectation

	Features, displays and services	Staff view of importance of quality and visitor's expectation		
No	The SERVQUAL Questions	Staff importance	Visitor expectation	Difference in staff view (I-E)
1	The physical appearance of the city booking office	4.433	4.267	0.166
2	The physical appearance of the Maori village	4.567	4.500	0.067
3	The physical appearance of the wharekai (the food house)	4.767	4.567	0.200
4	The information provided about the facility e.g. brochures, adverts and programs information	4.300	4.433	-0.133
5	The friendliness and courtesy of the staff and that they are polite to visitors	4.900	4.800	0.100
6	The staff has the knowledge to respond to visitor's requests and gives understandable replies to questions	4.633	4.600	0.033
7	The staff gives prompt service	4.633	4.633	0.000
8	Staff inspires trust in visitors	4.333	4.400	-0.067
9	Visitors feel comfortable during their visit e.g. enough seats, heating, lighting, space between the seats	4.400	4.367	0.033
10	The pricing and range of refreshments in the bar are reasonable	3.900	4.133	-0.233
11	The quality in presentation of the food provided by the wharekai (the food house) are adequate	4.600	4.600	0.000
12	The pricing and range of products in the tribal market place are reasonable	3.833	3.933	-0.100
13	Toilets are provided and are clean	4.800	4.667	0.133
14	There is easy access for visitors with wheelchairs, prams and young children	4.467	4.300	0.167
15	Signs inside and outside the village are adequate	4.167	4.100	0.067
16	The booking system is prompt	4.533	4.367	0.166
17	Tour hours are convenient	4.200	4.167	0.033
18	The waiting time between the activities is reasonable	4.200	4.267	-0.067
19	The introduction to the Maori culture on the bus is enlightening	4.333	4.400	-0.067
20	The whole experience is enlightening, entertaining and educational	4.733	4.700	0.033
21	The cultural performance is authentic, informative and understandable	4.633	4.533	0.100
22	The whole tour is value for money	4.633	4.633	0.000
23	The content and length of the activities are appropriate	4.533	4.400	0.133

D 5. Gap Analysis of Expectation of Service Quality

	Features, displays and services	Staff and Customer Expectation of Service Quality		
No.	The SERVQUAL Questions	Staff Exp.	Customer Exp.	Difference (S-C)
1	The physical appearance of the trout and wildlife park	4.267	3.563	0.704
2	The physical appearance of the native bush	4.500	4.024	0.476
3	The physical appearance of the lion pride	4.567	3.951	0.616
4	The information provided about the facility e.g. brochures, advertisements and programme information	4.433	3.860	0.573
5	The friendliness and courtesy of the staff and their politeness to visitors	4.800	4.327	0.473
6	The staff has the knowledge to respond to visitors' requests and gives understandable replies to questions	4.600	4.265	0.335
7	The staff gives prompt service	4.633	4.046	0.587
8	Staff inspires trust in visitors	4.400	4.028	0.372
9	Visitors feel comfortable during their visit, e.g. enough space, good quality of walkways and free umbrellas	4.367	4.087	0.280
10	The pricing and range of refreshment in the coffee shop are reasonable	4.133	3.579	0.554
11	The pricing and range of products in and souvenir shop are reasonable	4.600	4.022	0.578
12	The park design is environmentally friendly and ecologically sound.	3.933	3.560	0.373
13	Toilets are provided and are clean	4.667	4.138	0.529
14	There is easy access for visitors with wheelchairs, prams and young children	4.300	3.680	0.620
15	Signs inside and outside the park are adequate	4.100	3.800	0.300
16	The booking system is prompt	4.367	3.861	0.506
17	Tour hours are convenient	4.167	3.904	0.263
18	The waiting time between the activities is reasonable	4.267	3.861	0.406
19	The wildlife and nature-based tour is authentic	4.400	4.046	0.354
20	The whole experience is enlightening and educational	4.700	4.344	0.356
21	The guided tour in the bush is informative and understandable	4.533	4.333	0.200
22	The whole tour is value for money	4.633	4.119	0.514
23	The content and length of the activities are appropriate for a day tour	4.400	4.035	0.365

D 6. Frequency Distribution of Expectation and Perception Scores (n=1787)

	Very Low		Low		Neither		High		Very high	
Question	Raw count	%	Raw count	%	Raw count	%	Raw count	%	Raw count	%
e1	6	0.34%	81	4.53%	769	43.03%	763	42.70%	168	9.40%
p1	2	0.11%	16	0.90%	319	17.85%	1005	56.24%	445	24.90%
e2	1	0.06%	25	1.40%	283	15.84%	1100	61.56%	378	21.15%
p2	2	0.11%	11	0.62%	73	4.09%	668	37.38%	1033	57.81%
e3	1	0.06%	32	1.79%	379	21.21%	1016	56.86%	359	20.09%
p3	6	0.34%	36	2.01%	249	13.93%	836	46.78%	660	36.93%
e4	2	0.11%	40	2.24%	470	26.30%	970	54.28%	305	17.07%
p4	3	0.17%	37	2.07%	359	20.09%	883	49.41%	468	26.19%
e5	1	0.06%	5	0.28%	133	7.44%	917	51.32%	731	40.91%
p5	1	0.06%	7	0.39%	36	2.01%	493	27.59%	1250	69.95%
e6	1	0.06%	9	0.50%	176	9.85%	931	52.10%	670	37.49%
p6	1	0.06%	5	0.28%	112	6.27%	681	38.11%	987	55.23%
e7	2	0.11%	14	0.78%	303	16.96%	1048	58.65%	420	23.50%
p7	0	0.00%	5	0.28%	136	7.61%	697	39.00%	949	53.11%
e8	1	0.06%	16	0.90%	357	19.98%	971	54.34%	442	24.73%
p8	1	0.06%	7	0.39%	207	11.58%	734	41.07%	838	46.89%
e9	1	0.06%	43	2.41%	267	14.94%	964	53.95%	512	28.65%
p9	3	0.17%	44	2.46%	175	9.79%	732	40.96%	833	46.61%
e10	27	1.51%	173	9.68%	588	32.90%	737	41.24%	262	14.66%
p10	9	0.50%	78	4.36%	566	31.67%	784	43.87%	350	19.59%
e11	3	0.17%	47	2.63%	328	18.35%	938	52.49%	471	26.36%
p11	5	0.28%	24	1.34%	225	12.59%	680	38.05%	853	47.73%
e12	25	1.40%	187	10.46%	565	31.62%	783	43.82%	227	12.70%
p12	22	1.23%	119	6.66%	633	35.42%	725	40.57%	287	16.06%
e13	3	0.17%	52	2.91%	261	14.61%	851	47.62%	620	34.70%
p13	4	0.22%	41	2.29%	376	21.04%	832	46.56%	534	29.88%
e14	13	0.73%	67	3.75%	700	39.17%	705	39.45%	302	16.90%
p14	10	0.56%	36	2.01%	532	29.77%	867	48.52%	341	19.08%
e15	7	0.39%	37	2.07%	527	29.49%	952	53.27%	264	14.77%
p15	7	0.39%	49	2.74%	476	26.64%	895	50.08%	360	20.15%
e16	7	0.39%	39	2.18%	490	27.42%	911	50.98%	340	19.03%
p16	6	0.34%	29	1.62%	386	21.60%	886	49.58%	480	26.86%
e17	4	0.22%	25	1.40%	452	25.29%	964	53.95%	342	19.14%
p17	1	0.06%	22	1.23%	278	15.56%	950	53.16%	536	29.99%
e18	4	0.22%	49	2.74%	442	24.73%	989	55.34%	303	16.96%
p18	8	0.45%	52	2.91%	268	15.00%	839	46.95%	620	34.70%
e19	3	0.17%	31	1.73%	311	17.40%	978	54.73%	464	25.97%
p19	7	0.39%	29	1.62%	157	8.79%	690	38.61%	904	50.59%
e20	1	0.06%	11	0.62%	145	8.11%	845	47.29%	785	43.93%
p20	3	0.17%	15	0.84%	97	5.43%	549	30.72%	1123	62.84%
e21	1	0.06%	17	0.95%	166	9.29%	805	45.05%	798	44.66%
p21	2	0.11%	26	1.45%	153	8.56%	602	33.69%	1004	56.18%
e22	3	0.17%	51	2.85%	284	15.89%	841	47.06%	608	34.02%
p22	10	0.56%	48	2.69%	269	15.05%	679	38.00%	781	43.70%
e23	1	0.06%	17	0.95%	329	18.41%	1011	56.58%	429	24.01%
p23	6	0.34%	39	2.18%	214	11.98%	752	42.08%	776	43.42%

D 7. Chi-square test for expectations by Gender (examples)

Q19					
		Observed Frequencies:			
	Level of Expectation				
Results	C1	C2	C3	C4	Total
Male	8	112	418	224	762
Female	26	199	560	240	1025
Total	34	311	978	464	1787
		Expected Frequencies:			
	Level of Expectation				
Results	C1	C2	C3	C4	Total
Male	14.498	132.614	417.032	197.856	762
Female	19.502	178.386	560.968	266.144	1025
Total	34	311	978	464	1787
Level of Significance	0.05				
Number of Rows	2				
Number of Columns	4				
Degrees of Freedom	3				
Critical Value	7.814728				
Chi-Square Test Statistic	16.6911				
p-Value	0.000818				
Reject the null hypothesis					

Q20					
		Observed Frequencies:			
	Level of Expectation				
Results	C1	C2	C3	C4	Total
Male	5	61	363	333	762
Female	7	84	482	452	1025
Total	12	145	845	785	1787
		Expected Frequencies:			
	Level of Expectation				
Results	C1	C2	C3	C4	Total
Male	5.117	61.830	360.319	334.734	762
Female	6.883	83.170	484.681	450.266	1025
Total	12	145	845	785	1787
Level of Significance	0.05				
Number of Rows	2				
Number of Columns	4				
Degrees of Freedom	3				
Critical Value	7.814728				
Chi-Square Test Statistic	0.074523				
p-Value	0.994709				
Do not reject the null hypothesis					

D 8. Chi-square test for expectations by ethnic groups (examples)

q5						
Observed Frequencies:			Level of Expectation			
		Results	C1	C2	C3	Total
		Asia	8	37	24	69
		Australia	16	99	78	193
		Canada	5	47	50	102
		New Zealand	8	86	79	173
		UK	44	328	265	637
		USA	20	89	79	188
		Other Europe	37	223	152	412
		Total	138	909	727	1774
Expected Frequencies:			Level of Expectation			
		Results	C1	C2	C3	Total
		Asia	5.37	35.36	28.28	69
		Australia	15.01	98.89	79.09	193
		Canada	7.93	52.26	41.80	102
		New Zealand	13.46	88.65	70.90	173
		UK	49.55	326.40	261.05	637
		USA	14.62	96.33	77.04	188
		Other Europe	32.05	211.11	168.84	412
		Total	138	909	727	1774
Level of Significance	0.05					
Number of Rows	7					
Number of Columns	3					
Degrees of Freedom	12					
Critical Value	21.02607					
Chi-Square Test Statistic	14.92448					
p-Value	0.245592					
Do not reject the null hypothesis						

q13

Observed Frequencies:

Results	Level of Expectation C1	C2	C3	C4	Total
Asia	3	16	36	14	69
Australia	3	21	78	91	193
Canada	3	11	48	40	102
New Zealand	2	16	85	70	173
UK	20	92	319	206	637
USA	6	33	76	73	188
Other Europe	18	70	201	123	412
Total	55	259	843	617	1774

Expected Frequencies:

Results	Level of Expectation C1	C2	C3	C4	Total
Asia	2.14	10.07	32.79	24.00	69
Australia	5.98	28.18	91.71	67.13	193
Canada	3.16	14.89	48.47	35.48	102
New Zealand	5.36	25.26	82.21	60.17	173
UK	19.75	93.00	302.70	221.55	637
USA	5.83	27.45	89.34	65.39	188
Other Europe	12.77	60.15	195.78	143.29	412
Total	55	259	843	617	1774

Level of Significance	0.05
Number of Rows	7
Number of Columns	4
Degrees of Freedom	18
Critical Value	28.8693
Chi-Square Test Statistic	43.73392
p-Value	0.00063
Reject the null hypothesis	

D 9. Chi-square test for expectations by educational level (examples)

q15

Observed Frequencies:

Results	Level of expectaiton C1	C2	C3	C4	Total
Secondary	11	115	255	90	471
Polytechnic	2	67	125	38	232
University	31	345	572	136	1084
Total	44	527	952	264	1787

Expected Frequencies:

Results	Level of expectaiton C1	C2	C3	C4	Total
Secondary	11.60	138.90	250.92	69.58	471
Polytechnic	5.71	68.42	123.59	34.27	232
University	26.69	319.68	577.49	160.14	1084
Total	44	527	952	264	1787

Level of Significance	
Number of Rows	0.05
Number of Columns	3
Degrees of Freedom	4
Critical Value	6
Chi-Square Test Statistic	12.59159
p-Value	19.45727
Reject the null hypothesis	0.003457

q20

Observed Frequencies:

Results	Level of expectation C1	C2	C3	C4	Total
Secondary	5	44	223	199	471
Polytechnic	0	15	117	100	232
University	7	86	505	486	1084
Total	12	145	845	785	1787

Expected Frequencies:

Results	Level of expectation C1	C2	C3	C4	Total
Secondary	3.16	38.22	222.72	206.90	471
Polytechnic	1.56	18.82	109.70	101.91	232
University	7.28	87.96	512.58	476.18	1084
Total	12	145	845	785	1787

Level of Significance	0.05
Number of Rows	3
Number of Columns	4
Degrees of Freedom	6
Critical Value	12.59159
Chi-Square Test Statistic	5.469214
p-Value	0.485185

Do not reject the null hypothesis

D 10. Chi-square test for perceptions by driver (examples)

q17

Observed Frequencies

Results	Level of Perception C1	C2	C3	C4	Total
Driver 1	1	27	111	71	210
Driver 2	2	25	97	63	187
Driver 3	1	25	94	50	170
Driver 4	3	37	103	57	200
Driver 5	3	50	182	96	331
Driver 6	9	63	198	111	381
Driver 7	4	51	165	88	308
Total	23	278	950	536	1787

Expected Frequencies:

Results	Level of Perception C1	C2	C3	C4	Total
Driver 1	2.70	32.67	111.64	62.99	210
Driver 2	2.41	29.09	99.41	56.09	187
Driver 3	2.19	26.45	90.37	50.99	170
Driver 4	2.57	31.11	106.32	59.99	200
Driver 5	4.26	51.49	175.97	99.28	331
Driver 6	4.90	59.27	202.55	114.28	381
Driver 7	3.96	47.91	163.74	92.38	308
Total	23	278	950	536	1787

Level of Significance	0.05
Number of Rows	7
Number of Columns	4
Degrees of Freedom	18
Critical Value	28.8693
Chi-Square Test Statistic	11.95965
p-Value	0.849314

Do not reject the null hypothesis

q18

Observed Frequencies:

	Level of Perception				
Results	C1	C2	C3	C4	Total
Driver 1	2	35	99	74	210
Driver 2	6	21	94	66	187
Driver 3	2	22	85	61	170
Driver 4	1	42	87	70	200
Driver 5	8	38	160	125	331
Driver 6	23	66	178	114	381
Driver 7	18	44	136	110	308
Total	60	268	839	620	1787

Expected Frequencies:

	Level of Perception				
Results	C1	C2	C3	C4	Total
Driver 1	7.05	31.49	98.60	72.86	210
Driver 2	6.28	28.04	87.80	64.88	187
Driver 3	5.71	25.50	79.82	58.98	170
Driver 4	6.72	29.99	93.90	69.39	200
Driver 5	11.11	49.64	155.41	114.84	331
Driver 6	12.79	57.14	178.88	132.19	381
Driver 7	10.34	46.19	144.61	106.86	308
Total	60	268	839	620	1787

Level of Significance	0.05
Number of Rows	7
Number of Columns	4
Degrees of Freedom	18
Critical Value	28.8693
Chi-Square Test Statistic	42.78622
p-Value	0.000858
Reject the null hypothesis	

D 11. Critical Values of Chi-square

df	0.995	0.99	0.975	0.95	0.90	0.10	0.05	0.025	0.01	0.005
1	0.000	0.000	0.001	0.004	0.016	2.706	3.841	5.024	6.635	7.879
2	0.010	0.020	0.051	0.103	0.211	4.605	5.991	7.378	9.210	10.597
3	0.072	0.115	0.216	0.352	0.584	6.251	7.815	9.348	11.345	12.838
4	0.207	0.297	0.484	0.711	1.064	7.779	9.488	11.143	13.277	14.860
5	0.412	0.554	0.831	1.145	1.610	9.236	11.070	12.833	15.086	16.750
6	0.676	0.872	1.237	1.635	2.204	10.645	12.592	14.449	16.812	18.548
7	0.989	1.239	1.690	2.167	2.833	12.017	14.067	16.013	18.475	20.278
8	1.344	1.646	2.180	2.733	3.490	13.362	15.507	17.535	20.090	21.955
9	1.735	2.088	2.700	3.325	4.168	14.684	16.919	19.023	21.666	23.589
10	2.156	2.558	3.247	3.940	4.865	15.987	18.307	20.483	23.209	25.188
11	2.603	3.053	3.816	4.575	5.578	17.275	19.675	21.920	24.725	26.757
12	3.074	3.571	4.404	5.226	6.304	18.549	21.026	23.337	26.217	28.300
13	3.565	4.107	5.009	5.892	7.042	19.812	22.362	24.736	27.688	29.819
14	4.075	4.660	5.629	6.571	7.790	21.064	23.685	26.119	29.141	31.319
15	4.601	5.229	6.262	7.261	8.547	22.307	24.996	27.488	30.578	32.801
16	5.142	5.812	6.908	7.962	9.312	23.542	26.296	28.845	32.000	34.267
17	5.697	6.408	7.564	8.672	10.085	24.769	27.587	30.191	33.409	35.718
18	6.265	7.015	8.231	9.390	10.865	25.989	28.869	31.526	34.805	37.156
19	6.844	7.633	8.907	10.117	11.651	27.204	30.144	32.852	36.191	38.582
20	7.434	8.260	9.591	10.851	12.443	28.412	31.410	34.170	37.566	39.997
21	8.034	8.897	10.283	11.591	13.240	29.615	32.671	35.479	38.932	41.401
22	8.643	9.542	10.982	12.338	14.041	30.813	33.924	36.781	40.289	42.796

Appendix E: Letters

E 1. A Letter of Approval from the Manager of Tamaki Tours, Rotorua

the cultural experience the world is talking about

TAMAKI
MAORI VILLAGE
ROTORUA NEW ZEALAND
PO Box 1492
Rotorua
New Zealand
Phone 00 64 7 346 2823
Fax 00 64 7 347 2913
Email: tamaki@wave.co.nz
Website: www.maoriculture.co.nz

6 January 1999

Claire Liu
c/- Robin Smith
Massey University
PALMERSTON NORTH

PERMISSION LETTER

I am writing to give permission for Ms Claire Liu from Massey University to use Tamaki Tours, Rotorua for her PhD research project on The Development of Quality Management Assessment and Improvement Tools and Techniques Appropriate to the Tourist Industry.

Permission is given for staff and visitors to be surveyed subject to the resulting information being kept in strictest confidence.

I look forward to receiving your completed report.

Yours sincerely

pp: K~ Wata.

Mike Tamaki
MANAGING DIRECTOR

E 2. A Letter of Approval from the Massey University Regional Human Ethics Committee

Massey University Regional Human Ethics Committee: Palmerston North (HEC: PN)
Old Main Building, Turitea Fax: 64 6 350 5622 http://www.massey.ac.nz/~muhec

Professor Sylvia V Rumball, Chair
Telephone: 64 6 350 5249
Email: S.V.Rumball@massey.ac.nz

Miss Karen A Kahukoti, Secretary
Telephone: 64 6 350 5573
Email: K.A.Kahukoti@massey.ac.nz

Massey University

Private Bag 11 222,
Palmerston North,
New Zealand
Telephone: 64 6 356 9099

5 August 2002

Ms Claire Liu
c/- Pacific International Hotel Management School
Henwood Road
Bell Block
NEW PLYMOUTH

Dear Claire

Re: HEC: PN Protocol – 02/53
The development of quality management assessment and improvement tools and techniques appropriate to the tourist industry

Thank you for your correspondence and the amended protocol.

The amendments you have made and explanations you have given now meet the requirements of the Massey University Human Ethics Committee and the ethics of your protocol are approved.

Any departure from the approved protocol will require the researcher to return this project to the Massey University Regional Human Ethics Committee: Palmerston North for further consideration and approval.

A reminder to include the following statement on all public documents "This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Protocol 02/53. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Regional Human Ethics Committee: Palmerston North, telephone 06 350 5249, email S.V.Rumball@massey.ac.nz."

Yours sincerely

Sylvia Rumball.

Professor Sylvia V Rumball, Chair
Massey University Regional Human Ethics Committee: Palmerston North

cc Dr Robin Smith
Management
TURITEA PN214

E 3. A Letter of Approval from the manager of Paradise Valley Wildlife Park

PARADISE VALLEY SPRINGS

N.Z. Trout & Wildlife Park
Rotorua - New Zealand

John Hamlett owner/director Stuart Hamlett owner/director
Paradise Valley Road, P.O. Box 8024, Rotorua, New Zealand.
Telephone 64-7-348-9667, Fax 64-7-349-3359
Email: paradisev@xtra.co.nz
wwwparadisev.co.nz

11 June 2002

Ethics Committee
C/- Robin Smith
Massey University
PALMERSTON NORTH

LETTER OF APPROVAL

This letter approves Claire Liu of Massey University to undertake a research project at Paradise Valley Springs Rotorua. Conditions are that no commercially sensitive information will be supplied from Management or staff at Paradise Valley Springs. Also no survey information obtained may be published in any form without the approval of Stuart or John Hamlett, owners of Paradise Valley Springs.

Good luck with the survey.

Yours sincerely

S. Hamlett

Stuart Hamlett
Owner/Manager
Paradise Valley Springs

E 4. A Letter of Approval from the manager of the Buried Village, Rotorua

BURIED VILLAGE
Rotorua, New Zealand

August 20 2002.

Claire Liu
C/-Robin Smith
Massey University
Palmerston North

I am happy to approve a request for the Buried Village Rotorua to be involved in a PhD research project being undertaken by Ms Claire Liu from Massey University.

Ms Liu has our permission to survey staff and visitors, at a mutually decided time, for her research into The Development of Quality Management Assessment and Improvement Tools and Techniques Appropriate to the Tourist Industry.

Please note that this permission is granted on the condition that the resulting information is kept in strictest confidence and that commercial information will not be provided.

I would like to wish you all the best for your research. Please do not hesitate to contact me for any assistance you may require.

Yours sincerely,

Pam McGrath
Manager

NEW ZEALAND TOURISM AWARDS 2001/2002 TOURISM INNOVATOR AWARD

R.D.5 Rotorua, New Zealand. Telephone/Facsimile 64 7 362 8287.
Email: discover@buriedvillage.co.nz Web site: http://www.buriedvillage.co.nz