

**An Importance-Performance Analysis of Delegates' Satisfaction with the Catering  
Component of Courses Offered by Continuing Education at the University of Pretoria**

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**Dissertation**

**M Consumer Science (Food Management)**

**Supervisor: Dr GE du Rand**

**30 April 2015**

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Component of Courses Offered by Continuing Education at the University of Pretoria**

by

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**Dissertation submitted in fulfilment of the requirements for the degree**

**M Consumer Science (Food Management)**

in the

**Faculty of Natural and Agricultural Sciences**

**Department of Consumer Science**

**University of Pretoria**

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**30 April 2015**

# Declaration

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I declare that the dissertation that I submit for the degree of M Consumer Science (Food Management) at the University of Pretoria is my own work and has not previously been submitted by me for a degree at this university or any other tertiary institution and that all reference materials contained herein have been duly acknowledged.

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AGATHE DEACON-ERASMUS

30 April 2015

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# Abstract

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## **An Importance Performance Assessment of Delegates' Satisfaction with the Catering Component of Courses offered by Continuing Education at University of Pretoria**

by

**AGATHE DEACON-ERASMUS**

**Supervisor: Dr GE du Rand**

**Department: Consumer Science**

**Degree: M Consumer Science: Food Management**

Using importance performance analysis (IPA), this study assesses the catering component of courses presented by Continuing Education at University of Pretoria (CE at UP). CE at UP is a teaching company that offers certificate courses to post-graduate individuals in diverse fields of study. The catering component of CE at UP is outsourced to on-campus foodservice providers. Very little research has been done on the services offered by this institution with regard to its catering component that highlights the significance of hospitality management as a field of expertise. CE at UP is concerned about its catering component as it consistently receives the lowest evaluation scores during standard course evaluations.

Data was collected by using an exploratory mixed methodology consisting of both qualitative and quantitative research techniques. The catering attributes for the IPA were obtained by conducting an unstructured one-to-one interview with the operations manager of CE at UP and focus groups with course delegates. The 357 questionnaires completed by course delegates were analysed using the IPA. Descriptive analysis, including simple frequencies, mean ratings and standard deviations, used data related to the respondents' demographic profiles and their catering attributes. Exploratory factor analysis with VARIMAX rotation was

also applied. The IPA procedure was applied and the mean ratings of the catering attributes were plotted on the IPA grid. Cross-hairs (vertical and horizontal axis) were calculated to separate the derived catering attributes into the four IPA quadrants. Cluster analysis was applied to determine the demographic profile of the course delegates.

For CE at UP to benefit, focusing more on these attributes will lead to better service provision: buffet variety, provision of parking facilities, catering for a variety of cultures, catering for special diets, beverage variety, and professional service. The IPA assessed which catering attributes were considered the most important, and how the company had performed on each of these. Interpreting the results from the IPA has enabled CE at UP to assess its current agreement with the foodservice provider and given the company more knowledge about how to manage the catering component more effectively. It has thus retained existing customers as well as securing new customers, which is good for its future business development. The delegates' experience of the catering component plays a vital role in overall customer satisfaction, which, in turn, influences the success and performance of CE at UP as a company.

***Key words:***

*Importance performance analysis, course delegates, catering attributes, customer satisfaction.*

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**Addendum B: Interview schedule**

**Addendum C: Participant consent form of focus groups**

**Addendum D: Focus group schedule**

**Addendum E: Pilot study for finalisation of questionnaire**

**Addendum F: Approval letter to General Manager of CE at UP**

**Addendum G: Letter of consent for questionnaire respondents**

**Addendum H: Questionnaire**

# CHAPTER 1

## THE STUDY IN PERSPECTIVE

This chapter addresses the study in perspective and includes the background to the research, the research problem and purpose of the research. It also includes the main concepts relevant to the study, the contribution of the research and the research objectives. The research design utilised and the assumptions, limitations and delimitations of the research are presented as well as the research process and outline of the report.

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### 1.1 INTRODUCTION

Using importance performance analysis (IPA), this study assesses the delegates' satisfaction with the catering component of courses offered by Continuing Education at University of Pretoria (CE at UP). CE at UP is a company responsible for the presentation of career-focused courses. Situated on-campus, it offers over 500 certificate courses to delegates from various professional backgrounds. Its core business is to offer short courses, workshops and seminars. The delegates generally have a higher education qualification and/or superior experience within their field of business interests, and attend these short courses to further their education. Very little research has been done on the services provided by similar higher education institutions that focus primarily on the catering component as is done in this study. The majority of CE at UP's catering needs (more than 80%) are outsourced to one foodservice provider that operates on-campus, hence this study concentrates on its modus operandi. The researcher only considers on-site catering although this foodservice provider also has a full service restaurant that offers food and related services to the general public.

Its catering component is particularly important to CE at UP. However, it is an area of concern as it generally receives the lowest score delegates allocate during standard course evaluations. CE at UP course delegates are asked to complete a standard evaluation form that appraises the following aspects of the course: the environment, the content and presentation, the material, the catering, the perception of the teaching institution, the level of future recommendation, overall satisfaction and the competence of the lecturer. The evaluation data collected from these forms shows that course delegates are the least satisfied with the catering component. A group of graduate students from the Department of Consumer Science conducted a quantitative pilot study regarding the delegates' overall satisfaction with the catering offered at the courses attended. The results of this study show that the delegates



are generally dissatisfied with the catering component, particularly with the lack of variety of the menu items, preparation methods and beverages. The project researchers, however, pre-selected the attributes used in this study, thus they do not necessarily represent the issues most important to the course delegates.

The IPA assesses which catering attributes are considered the most important, and how the company performs on each of them. Hence it is used in this study to measure the delegates' satisfaction with the catering component of CE at UP. Interpreting the results enables the company to gauge the nature and levels of customer satisfaction that will allow it to review their current agreement with the foodservice provider in order to manage their catering component more effectively and with more knowledge. From the business perspective, the catering component is a key contributor to the company's future growth as it should seek to retain existing customers as well as secure new customers. The experience the delegates have of the catering service when attending a course plays a vital role in overall customer satisfaction which, in turn, influences the success and performance of CE at UP as a company.

## **1.2 BACKGROUND TO THE RESEARCH**

Most companies today acknowledge that they have to meet the needs of their customers in order to keep them and to attract new customers (Hill, Brierley & MacDougall, 1999:1). Using IPA has become a popular managerial tool in this respect. It is often applied in hospitality and tourism industries to identify strengths and weaknesses of brands, products, services and retail establishments (Keyt, Yavas & Riecken, 1994).

Customer satisfaction can be defined as the customer's fulfilment response. It is a judgement that a product or service has provided the customer with a pleasurable level of consumption-related fulfilment (Oliver, 2010:8). For a long time research in the hospitality industry has focused on customer satisfaction, its aspects or elements as well as the influence it has on a company. Customer satisfaction measures are crucial for a company's success. They allow the manager to assess the success of the company over a period, and to make a comparison relative to other parties in the same industry. Most studies pertaining to customer satisfaction in the hospitality industry pay attention to two main groups, namely, the hotel industry and the restaurant industry (Bonn, Brand & Ohlin, 1994; Oppermann, 1998; Weber, 2000; Hinkin & Tracey, 2003). Certain researchers have also conducted customer satisfaction studies on major convention centres (Breiter & Milmans, 2006) and campus food services (Aigbedo & Parameswaran, 2004; Kim, Nee Ng & Kim, 2009). As customer satisfaction evolved numerous competing theories have been suggested for explaining it, such as dissonance theory, contrast

theory, the expectancy disconfirmation paradigm (EDP), comparison level theory, the value-percept theory, the importance performance model, attribution theory, equity theory, evaluation congruity theory and the person-situation-fit concept (Yüksel, 2008:65). In this study the importance performance theory (also known as importance performance analysis) is applied to measure the delegates' customer satisfaction with the catering component offered by CE at UP.

Importance performance analysis (IPA) was first introduced into the field of marketing by Martilla and James (1977) in the late 1970s. The aim of this theory was to serve as a simple framework for analysing product attributes. The IPA evaluates a set of attributes pertaining to a particular service or product based on how important each attribute is for the consumer. It also evaluates how the service or product performs relative to each attribute (Sampson & Showalter, 1999). Importance and performance items can be mapped without the requirement of sophisticated computer knowledge, and the technique seems to provide clear results in identifying where resources should be allocated (Yüksel, 2008:77). This theory, however, lost favour when more quantitative methods became practical to use especially with computerisation (Duke & Persia, 1995). Yüksel (2008:78) adds that this theory is still used to assess customer satisfaction in numerous studies in the tourism and hospitality sectors (Barksy, 1992; Barsky & Labagh, 1992; Kivela, 1998).

The importance performance theory has been applied in various industries to evaluate service quality (e.g., Ennew, Reed & Binks, 1993), in travel and tourism (e.g., Evans & Chon, 1989, Go & Zhang, 1997), leisure and recreation (e.g., Guadagnolo, 1985; Hollenhorst, Olsen & Fortney, 1992), education (e.g., Alberty & Mihalik, 1989; Ortinau, Bush, Bush & Twible, 1989), and health care marking (e.g., Hawes & Rao, 1985; Dolinsky & Caputo, 1991). In customer satisfaction research, various researchers have studied convention attendees' views of the services provided by a convention facility, but these are mostly limited to the hotel industry (Bonn, Brand & Ohlin, 1994; Oppermann, 1998; Weber, 2000; Hinkin & Tracey, 2003).

By applying the IPA in this study, the importance and performance of various catering attributes are assessed and the customer satisfaction of each catering attribute and CE at UP as an organisation are measured. The importance of its catering component for CE at UP has already been stressed, as well as concern about the high level of negative criticism it receives from delegates during course evaluations (Section 1.4). Although CE at UP is situated on the University of Pretoria campus, its clients are not students but paying course delegates. Thus the study area for this research, CE at UP, is not a convention centre, but a small to medium-sized company that specialises in offering courses to people who wish to further their

education. Very little customer satisfaction research has been done on the services provided by such a training institution.

By addressing the issues experienced at CE at UP as a case study, the researcher aims to contribute to the South African and international body of pragmatic social research. Assessing the importance and performance of the catering component will assist CE at UP with its overall growth essential for today's increasingly competitive business environment. The purpose of this study is therefore to assess the current satisfaction of the course delegates concerning the catering component of CE at UP, by using the IPA theory. The identified problem area is that of customer satisfaction which is researchable and has theoretical significance in the context of IPA. The inevitable problems of undertaking research, such as Mushtaq (2012) documents, are an appropriate level of research skills, available resources and time and monetary restrictions. These appear to be met.

### **1.3 RESEARCH PROBLEM**

The catering component that comprises the provision of food and beverages offered during short courses, workshops and seminars is the major consideration in this study. However, there is a gap in the knowledge about measuring customer satisfaction with regard to the catering component within CE at UP and similar teaching institutions. Catering is the action of providing food, refreshments and services to another person or company. In most cases, the preparation takes place at one venue and the food is served at another (Kahraman, Cebeci & Ruan, 2004). The catering component is, however, an area of concern for CE at UP as it generally receives the lowest score given by delegates during course evaluations (Figure 1.1). This highlights the need for a study to investigate the problem surrounding this situation and provide answers for CE at UP to enable them to address the issue.

The delegates' experience of the catering provided is an essential part of determining overall customer satisfaction which, in turn, influences the success and performance of CE at UP as a company. The researcher thus aims to determine the importance of the various attributes of the catering component, and their performance, to evaluate the delegates' level of satisfaction as customers of CE at UP. In order to better serve their customers and increase their market share by attracting and retaining more customers, CE at UP has to know which attributes of the catering component are important to the delegates and how their performance influences customer satisfaction.

The formulated two-part research question for this study is as follows:

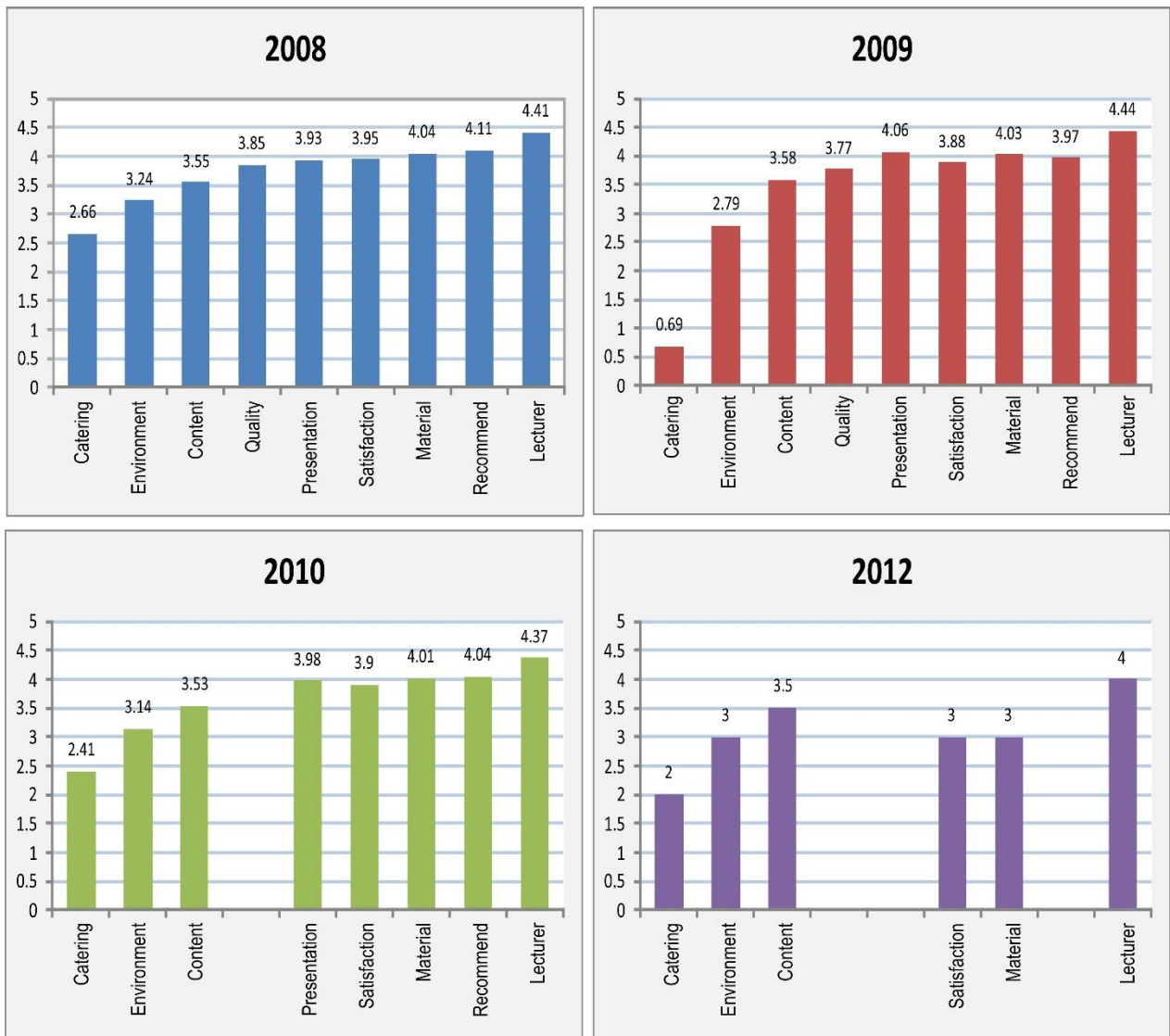
How important is each catering attribute and how well does each catering attribute perform during attendance of CE at UP courses?

A detailed discussion of the conceptualisation of the procedure to address the research problem is presented in Chapter 2 (Section 2.5). Theoretically it is derived from an adaptation of the traditional IPA model, and the framework contains all the elements that form part of this study.

#### **1.4 PURPOSE OF THE RESEARCH**

A need arose to determine the present situation regarding customer satisfaction with the catering provided at the courses CE at UP offers, because information could be gleaned from available delegate evaluations from previous years. From perusal of these it was deemed necessary to assess the importance and performance of CE at UP's catering attributes, especially when considering the link between customer satisfaction, customer loyalty and company profitability (Hill, Brierley & MacDougall, 1999:2).

After every course, CE at UP course delegates are asked to complete an evaluation form that evaluates the following aspects of the course: the environment, the content and presentation, the material, the catering, the quality perception of the teaching institution, the level of future recommendation, the overall satisfaction and the lecturer. The evaluation data collected from forms completed in 2008, 2009 and 2010, shows that course delegates are the least satisfied with the catering component (Figure 1.1). At the end of 2010, CE at UP changed their operational system and a full system integration was launched in early 2011. Unfortunately, the evaluation data could no longer be captured and recorded, as was previously done. The researcher was therefore unable to include the evaluation data for 2011. During the following year, CE at UP completed their system integration and was able to capture the evaluation data for 2012 (Figure 1.1) which shows that the catering component still receives the lowest overall score.



**FIGURE 1.1: SUMMARY OF EVALUATION DATA 2008 TO 2012**

Figure 1.1 illustrates the evaluation data captured from 2008 to 2010 and 2012. Among the aspects evaluated, the catering component receives the lowest overall score in 2008. In 2009 the data again shows that the catering component recorded the lowest overall score. This overall score is proportionally very low compared to the other aspects evaluated and is noticeably lower than the 2008 score. Still the data of 2010 shows that the catering component has the lowest overall score. The catering component had performed better in 2010 than in 2009 but still decreased from 2008. In 2012 the quality perception of the teaching institution and the level of future recommendation were no longer evaluated separately and fell under overall satisfaction. The data shows that the catering component still has the lowest overall score. The scores are quite similar to those of 2010 and do not show any noticeable improvement.

In this case study data comes from the application of a mixed research methodology consisting of both qualitative and quantitative research techniques. The sample is purposively chosen to include only course delegates who attend a short course on the premises of CE at UP where the catering is done by the specified foodservice provider, as previously explained (Section 1.1). The purpose of this study is to assess the importance and performance of the catering component to contribute to the overall knowledge about the delegates' customer satisfaction of CE at UP services. Determining which catering attributes are the most important to the delegates and how these attributes perform, should enable CE at UP to assess their current agreement with the foodservice provider and give them more information to assist in applying best practice in managing the catering component. If managed correctly, the catering component could contribute greatly to retaining existing customers as well as securing new customers for future business.

## 1.5 CONTRIBUTION OF THE RESEARCH

As suggested by the Learner Development Unit at Birmingham City University, a soundly executed research study can contribute a range of benefits, which the researcher views as applicable to this work. They suggest that it may resolve theoretical questions and develop better theoretical models in the researcher's field of study and investigation; may influence public policy; or may change the way people do their jobs in a particular field, or may change the way people live ([WWW – document – 2012/04/08] <http://www.ssdd.bcu.ac.uk/learner/writingguides/1.07.htm>).

In order of the research objective, the execution of this study will therefore contribute to the body of knowledge by:

- Providing an understanding of the catering component of CE at UP
- Provide insight into the profile of the course delegates (sample)
- Providing an understanding of the catering attributes identified by course delegates
- Providing insight into the importance and performance of the catering attributes
- Providing insight into the customer satisfaction of the course delegates with regard to the catering component
- Supporting CE at UP to manage the catering component better
- Demonstrating the usefulness of importance performance analysis in measuring customer satisfaction in this environment.

The findings from this research enables the researcher to fill the gap in existing knowledge in the field and relevant academic disciplines, and adds information about the catering component of CE at UP that could apply to other similar teaching institutions as well. The information gathered and interpreted could be used by CE at UP to improve its policies appertaining to and management of the catering component.

## **1.6 RESEARCH OBJECTIVES**

The researcher has identified five objectives in terms of the theoretical perspective adopted for the study, namely:

- To identify the catering attributes
- To describe the course delegates
- To determine the importance of each catering attribute when attending CE at UP courses
- To determine how well each catering attribute performed during attendance of CE at UP courses
- To interpret the IPA to measure customer satisfaction.

## **1.7 RESEARCH DESIGN**

The design of this study is that of case study research. This strategy focuses on understanding the dynamics present within a single setting (Eisenhardt, 1989). The single setting in this study refers to the offering of refreshments to delegates attending short courses at CE at UP at a specified time, prepared and presented by the company's appointed foodservice provider. The researcher should gather information in order to gain additional insight into the importance and performance of the catering attributes (De Vos, Strydom, Fouché & Delport, 2005:106). Purposive sampling to illustrate the feature that is of interest for a particular investigation was done, as recommended by De Vos *et al.*, (2005:328).

The sample comprises delegates who attend short courses presented by CE at UP on their premises and who have their teas and lunches provided by the appointed foodservice provider. A mixed or multiple research methodology was used, incorporating both qualitative and quantitative techniques. The researcher identified the catering attributes by conducting a semi-structured one-to-one interview with the operational manager of CE at UP. Two focus groups with five participants per group were conducted with delegates who had attended short



courses at CE at UP and who had had their teas and lunches served by the appointed foodservice provider, as per the sample criteria. By using the chosen catering attributes, the researcher developed and tested the questionnaire. These questionnaires were delivered personally to course delegates who had attended short courses at CE at UP during October and November 2011. A total of 380 questionnaires were distributed and in all, 357 questionnaires were collected (93,95 % response rate).

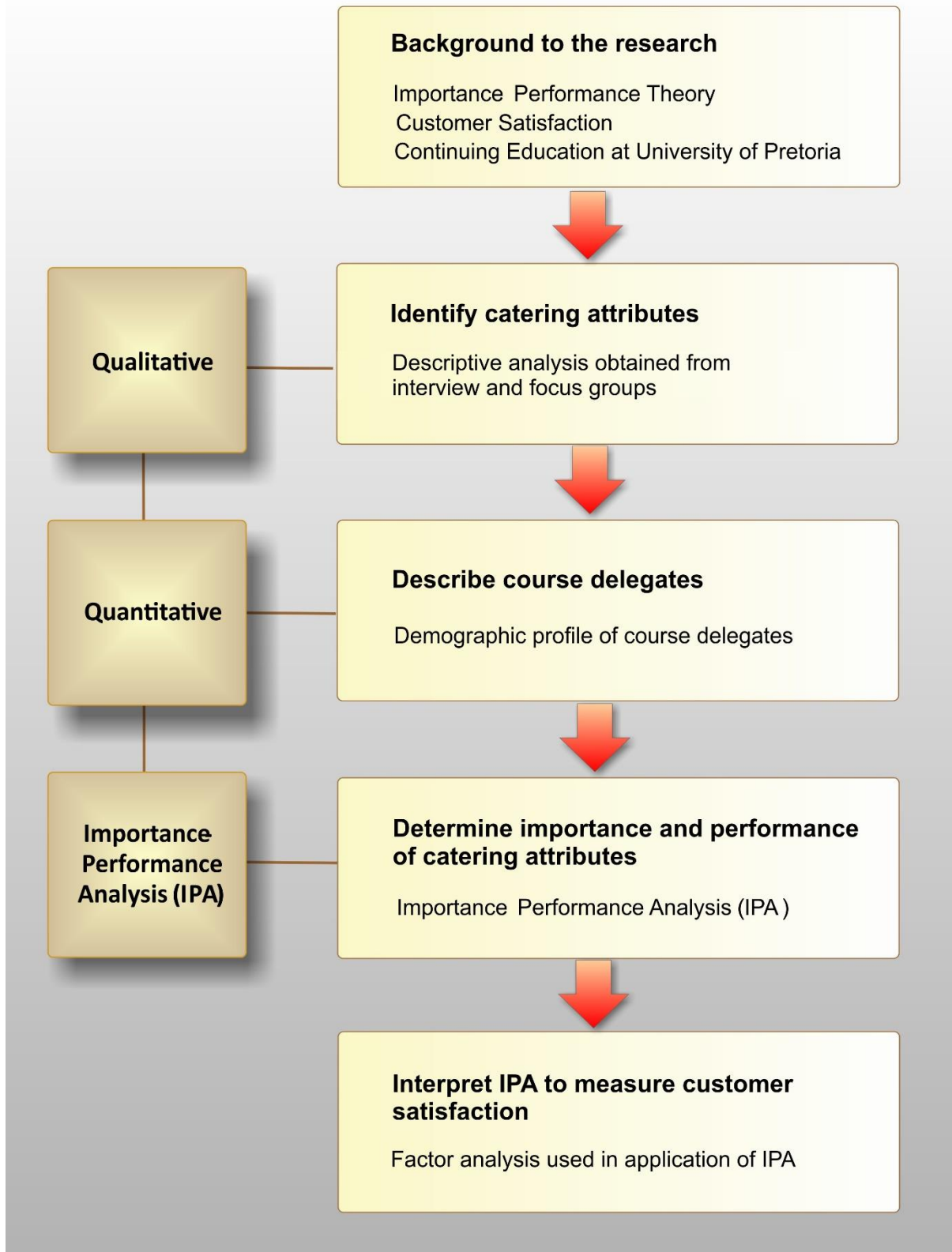
Descriptive analysis including simple frequencies, mean ratings and standard deviations from the data related to the respondents' demographic profiles and from the 25 catering attributes, summarised the data. The IPA procedure was applied and the mean ratings from the descriptive analysis on the catering attributes were plotted on the IPA grid. This was followed by applying exploratory factor analysis with VARIMAX rotation as described by Hu, Chen & Ou (2009). Three factors were retained, namely presentation and sensory, menu and cultural, and service. Cross-hairs, using the mean ratings of the importance and performance, were calculated to separate the derived catering attributes into the four quadrants of the IPA. When applied in the context of the IPA, cross-hairs refer to the placement of the vertical and horizontal axis on the grid. For each factor, the importance was depicted on the vertical axis and the performance on the horizontal axis.

Furthermore, the researcher applied cluster analysis (Hair, Anderson, Tatham & Black, 1995:16). The goal was to classify a sample of units into a small number of mutually exclusive groups based on the similarities among the units. Three groups (also called clusters) were identified. The clusters displayed three customer profiles according to demographic information of gender, age, qualification, ethnic group and country of residence.

## **1.8 RESEARCH PROCEDURE**

The research procedure comprises five stages (Figure 1.2). In the first stage, the background to the research is discussed under the main topics of the importance performance theory, customer satisfaction and CE at UP. The objective of the second stage (qualitative) is to identify the catering attributes. Data comes from an interview with the operational manager of CE at UP and focus groups that were held with CE at UP delegates. The objective of the third stage (quantitative) is to develop a demographic profile of the delegates attending courses at CE at UP. The objective of the fourth stage (quantitative) is to determine the importance and performance of each catering attribute. A questionnaire was developed and distributed to CE at UP delegates. The objective of the fifth stage is to interpret the IPA to measure customer satisfaction, which was done by using statistical analyses (factor analysis).





**FIGURE 1.2: THE RESEARCH PROCEDURE**

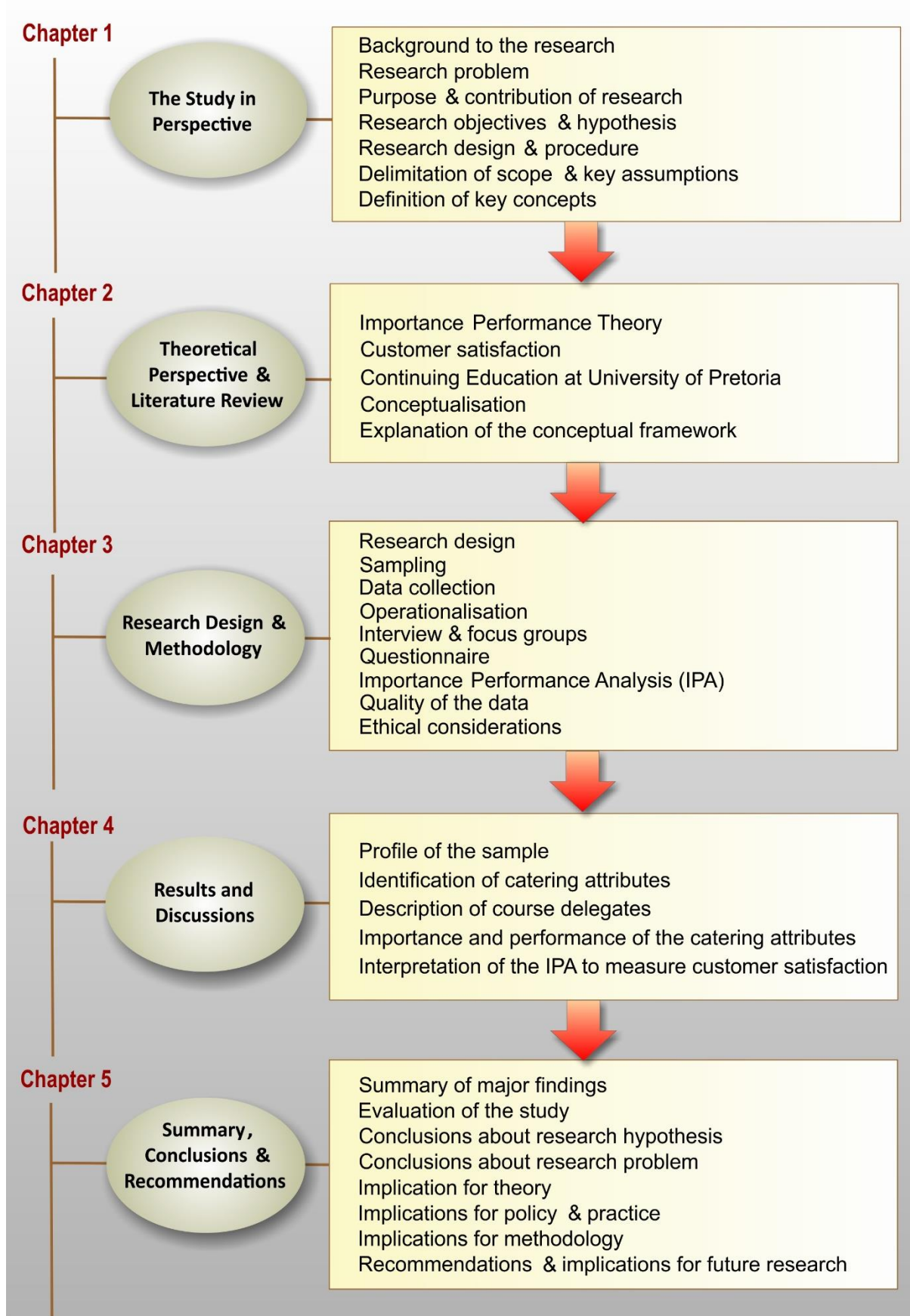
## **1.9 DELIMITATIONS OF SCOPE AND KEY ASSUMPTIONS**

This study was conducted in the training or academic industry. CE at UP is a training institution that outsources its catering needs to more than one foodservice provider situated on campus. The majority of these catering needs (more than 80%) are, however, outsourced to one foodservice provider. The researcher focuses on this particular foodservice provider as it is the one mostly used by CE at UP and is in close proximity to CE at UP. The results of this study therefore do not reflect the performance of any other on-campus foodservice provider

The scope or extent of the study is defined by the environment and the sample. The environment in which this study took place is the University of Pretoria campus. The sample that shaped this case study includes the operational manager of CE at UP, course delegates who attended the Advanced Programme in Event Management during the month of October 2010; and course delegates who attended the Short Course on Employee Assistance Programmes during the month of November 2010. Even though CE at UP's core business is that of presenting short courses, the catering component plays an essential part in an assessment of the overall satisfaction of the course delegates. The results of this study therefore do not reflect feedback from students on campus, but solely on the feedback from delegates attending short courses at CE at UP. The questionnaires are distributed to course delegates on the last day of attending short courses. They are not informed of this questionnaire before commencement of the course. The delegates are therefore unable to prepare for the questionnaire. The researcher assumes that the respondents give their first response and that the questionnaires are thus truthful and factual.

## **1.10 OUTLINE OF THE REPORT**

Figure 1.3 illustrates the outline of the entire report according to the content covered in each chapter. Chapter 1 introduces the study in perspective by discussing the background to the research, the research problem, the purpose and contribution of the research, the research objectives, the research design and procedure, delimitations of scope and key assumptions, and the definition of key concepts. Chapter 2 discusses the theoretical perspective and the literature review. The importance performance theory, customer satisfaction and CE at UP are discussed. The conceptualisation of the research is shown and the conceptual framework is discussed. In Chapter 3 the research design and methodology are discussed relating to the sampling procedure, data collection, operationalisation, the interview and focus groups, the questionnaire, the IPA, quality of the data and ethical considerations.



**FIGURE 1.3: THE OUTLINE OF THE REPORT**

The results and discussions are addressed in Chapter 4 by noting the profile of the sample, the identification of the catering attributes, the description of the course delegates, the importance and performance of the catering attributes, and the interpretation of the IPA to measure customer satisfaction. Chapter 5 discusses the summary, conclusions and recommendations of the research. A summary of the major findings are discussed followed by an evaluation of the study, conclusions about the research problem, the implication for theory, the implications for policy and practice, the implications for methodology, and recommendations and implications for future research.

### 1.11 DEFINITION OF KEY CONCEPTS

Certain concepts are defined to reflect the context in which they are used in this study.

**Catering attributes:** Attributes can be defined as descriptive features characterising a product or service (Kuo, Chen & Lin, 2010). Attributes should be determined to reflect characteristics of products or services so that customers can evaluate the attributes as precisely as possible (Jaccard, Brinberg & Ackerman, 1986). The catering attributes for this study were identified for use in the application of the IPA to measure delegates' satisfaction with the catering component of CE at UP.

**Importance performance analysis (IPA):** The IPA evaluates a set of attributes pertaining to a particular service, in this case the catering attributes of CE at UP, based on how important each attribute is for the consumer. It also evaluates how the service performs relative to each attribute (Sampson & Showalter, 1999).

**Customer satisfaction:** Customer satisfaction can be defined as the customer's fulfilment response. It is a judgment that a service has provided the customer with a pleasurable level of consumption-related fulfilment (Oliver, 2010:8).

**Catering component:** CE at UP outsources its catering needs (catering component) to more than one on-campus foodservice provider. The majority of these catering needs (more than 80%) are however, outsourced to one foodservice provider, which is the foodservice provider focused on for this study. The catering component is included in the course fees of a full day conference package offered to CE at UP delegates.

**Foodservice provider:** The foodservice provider outsourced by CE at UP is a commercial foodservice organisation that provides catering for a profit. It services students, university

personnel and course delegates attending CE at UP courses. Although the foodservice provider is a full service restaurant that also offers food and catering services to the general public, this study only focuses on the catering provided to course delegates attending short courses on the CE at UP premises and therefore the delegates have their teas and lunches on-site.

**Continuing Education at University of Pretoria (CE at UP):** CE at UP is a teaching institution that offers over 500 certificate courses to post-graduate individuals in diverse fields of study. CE at UP is a Trust of the University of Pretoria and their core business is to offer short courses, workshops and seminars.

**Course delegates:** The course delegates are individual consumers who purchase services for their own use (Schiffman & Kanuk, 2009:4).

**Short courses:** CE at UP considers short courses to be courses presented over a minimum period of one day and a maximum period of five days.

## 1.12 SUMMARY

Chapter 1 placed the study in perspective. The background to the problem was discussed followed by the discussion of the research problem and the purpose of the research. The contribution of the research and the research objectives were then addressed. Furthermore, the research design utilised and the assumptions, limitations, delimitations of the research were provided. The research process and outline of the report as a whole were addressed and also displayed by means of graphical representations.

The content of Chapter 2 will cover a concise theoretical overview of the literature pertaining to the main concepts of this particular study. The first component of this chapter covers the importance performance theory, which is the theoretical perspective and point of departure for this study. The second and third components of this chapter cover the fundamental aspects of customer satisfaction, followed by the essential information about the study group, CE at UP, and the catering component. The final component covers the conceptualisation of the theoretical framework.

# CHAPTER 2

## THEORETICAL PERSPECTIVE AND LITERATURE REVIEW

This chapter addresses the theoretical perspective of the topic being researched and reviews related literature. It includes discussion on importance performance analysis, customer satisfaction theories, the institution, Continuing Education at University of Pretoria (CE at UP), and its catering component.

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### 2.1 INTRODUCTION

The topic of this research deals with applying an importance performance assessment of the catering component that is part of the services offered by Continuing Education at University of Pretoria (CE at UP). This chapter covers an overview of the existing literature regarding the application of importance performance theory to measure customer satisfaction. It aims to clarify the relevant constructs that contribute to the research. The first section of this chapter covers an exposition of importance performance theory, which is the theoretical perspective and point of departure for this study. The second and third sections of this chapter cover the fundamental aspects of customer satisfaction and give essential information about the study group, CE at UP and its catering component respectively. The final section covers the conceptualisation of the theoretical framework, integrating the key constructs.

### 2.2 IMPORTANCE PERFORMANCE THEORY

In this section the theory of importance performance analysis (IPA) is explained. Importance performance theory is defined and the model of the theory is illustrated and discussed. The procedure of IPA is addressed with reference to the placement of grid lines, the development of the theory, attribute importance and the attribute set. IPA is applied in many different fields of study. The appropriateness of the theory for this study is assessed with reference to the application of IPA in the existing literature.

#### 2.2.1 Importance performance theory defined

IPA was first introduced to the field of marketing by Martilla and James (1977) in the late 1970s. The aim of this theory was to serve as a simple framework for analysing product attributes. Attributes can be defined as descriptive features characterising a product or service



(Kuo, Chen & Lin, 2010). Attributes should be determined to reflect the characteristics of products and/or services so that customers can evaluate them as precisely as possible (Jaccard, Brinberg & Ackerman, 1986). Appropriate attributes can be identified on the basis of relevant previous studies, findings from focus groups interviews and managerial judgements (Seo & Shanklin, 2005).

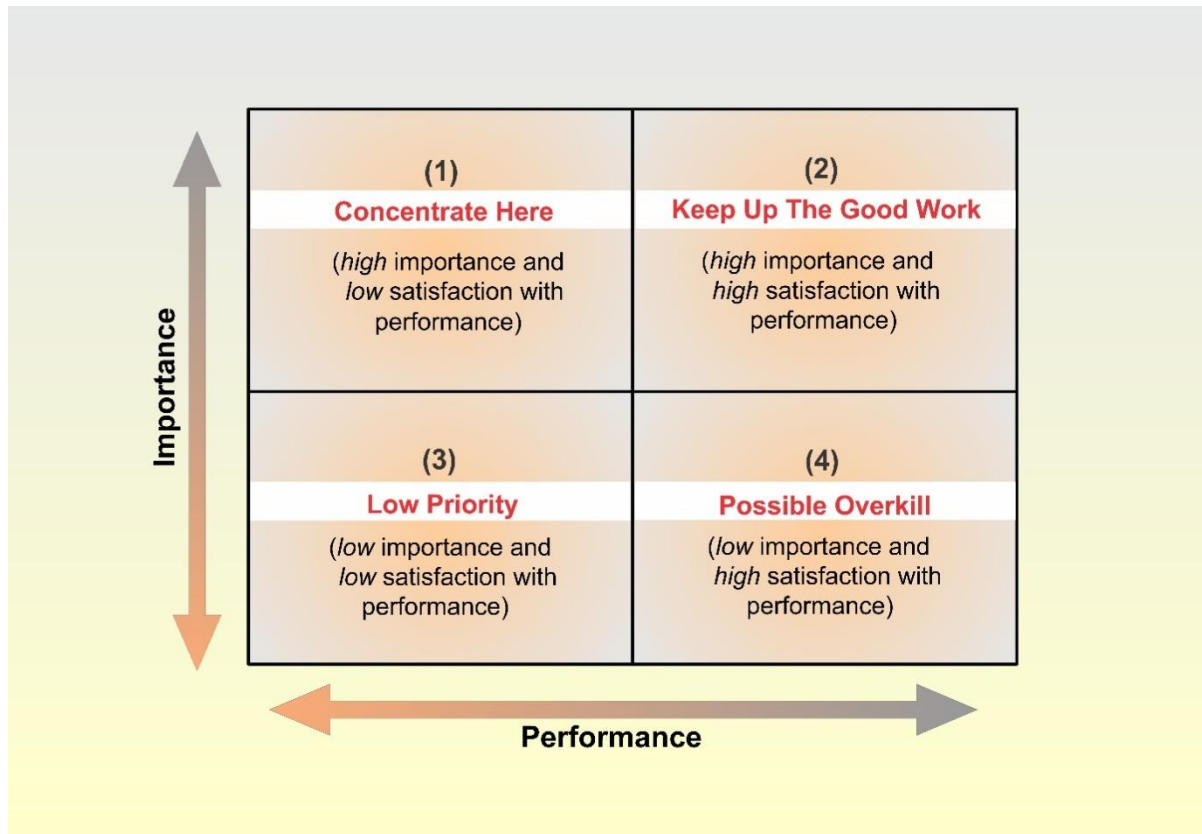
IPA use a two-dimensional grid based on customers' perceived importance of quality attributes and attribute performance. It is a method that produces recommendations for the management of customer satisfaction (Matzler, Bailom, Hinterhuber, Renzl, & Pichler, 2004). Martilla and James (1977) found that problems are often encountered when companies conduct attribute research and then transfer the research results to practical action. According to them, management has trouble understanding the practical significance of the research results, and therefore concluded that only one side of consumer acceptance questions was actually being examined, that is, either the importance of an attribute or its performance (Martilla & James, 1977). Therefore IPA hinges on the concept that customer satisfaction is a result of the preference for a product or service, and a decision regarding its performance.

Thus IPA evaluates a set of attributes pertaining to a particular service/product based on how important each attribute is to the consumer. It also evaluates how the service/product performs relative to each attribute (Sampson & Showalter, 1999). Customer satisfaction is therefore a function of both expectations related to certain important attributes, as well as judgement of the attribute's performance. The importance of service attributes decidedly affects the quality and the performance of the service. It shows that a positive performance of attributes of higher importance results in higher customer satisfaction (Martilla & James, 1977). Since its introduction, IPA has become a popular managerial tool used especially in hospitality and tourism industries to identify strengths and weaknesses of brands, products, services and retail establishments (Keyt, Yavas & Riecken, 1994; Oh, 2001).

### **2.2.2 Model of the importance performance theory**

IPA comprises four stages to explore the relationship between customer satisfaction and service attribute importance. The first stage is to determine which attributes to measure. Methods such as focus groups, unstructured personal interviews and managerial judgements are all useful techniques in determining the attributes to be measured. Once the researcher has identified the attributes, the second stage is to separate the importance and the performance measures. This can be done by means of a questionnaire that is divided into two sections to determine the importance and the performance of the selected attribute. Third,

after calculating the importance and performance means for each attribute they are plotted on vertical and horizontal axes of the importance performance grid. The fourth stage is to analyse the importance performance grid. The ratings captured in the third stage are illustrated on the four quadrants of the importance performance grid resulting in four different interpretations (Martilla & James, 1977). Figure 2.1 illustrates these interpretations.



**FIGURE 2.1: THE IMPORTANCE PERFORMANCE ANALYSIS** (Martilla & James, 1977)

Ainin and Hisham (2008:95) address the value of the four quadrants of IPA result by stating that “the four quadrant matrix helps organisations to identify the areas for improvement and actions for minimising the gap between importance and performance”. The *concentrate here* (1) quadrant depicts high importance of an attribute but low satisfaction with the performance of the attribute. The *keep up with the good work* (2) quadrant depicts high importance of an attribute and high satisfaction with the performance of the attribute. The *low priority* (3) quadrant portrays low importance of an attribute and low satisfaction with the performance of the attributes. The *possible overkill* (4) quadrant depicts low importance of an attribute and high satisfaction with the performance of the attribute (Martilla & James, 1977).



### **2.2.3 Placement of the importance performance grid lines**

An important aspect to consider when planning the application of IPA, is to determine the placement of the grid lines. The literature provides several insights. The placement of the grid lines defining the quadrants is flexible, allowing for variations. Each value is relative to the other values. It is, however, important to remember that in this study the results only represent the views of the sample as the information source, the CE at UP course delegates. The researcher therefore still has to consider the organisation's goals as well as the natural and cultural resource limitations (Mullins & Schultz Spetich, 1987). Azzopardi and Nash (2013) add that the choice of cross-hair points is subjective, and greatly depends on the research objective. The data-centred approach, suggested by Martilla and James (1977), is still one of the more popular methods for deciding where the axes should be placed. With this approach the mean values of observed importance and performance ratings determine the cross-hair point. Another method is the scale-centred approach where the mean values of the established scales (for example, the number 3 on a 5-point Likert scale) determine the cross-hair point. Some researchers prefer the transparency of the latter although the data-centred approach can be equally clear when interpreted correctly (Azzopardi & Nash, 2013).

### **2.2.4 Development of the importance performance theory**

Progressing from the original IPA first suggested by Martilla and James (1977), several researchers have adapted the importance performance framework to best suit the needs of their particular research (Kano, 1984; Gale, 1994; Johnston, 1995; Oliver, 1997; Vavra, 1997; Anderson & Mittal, 2000; Matzler & Sauerwein, 2002). There are two assumptions of importance performance theory. The first assumption is that attribute performance and attribute importance are two independent variables. The second assumption is that the relationship between attribute performance and overall performance is linear and symmetric (Matzler *et al.*, 2004). These researchers suggest using three-factor theory developed by Kano (1984) to revise IPA to improve its applicability in customer satisfaction research.

Kano's (1984) model states that there are three categories, each with a different impact on customer satisfaction. The first group are the basic factors, also called dissatisfiers. These factors are regarded as prerequisites and are unquestionably expected by customers. The second group is that of excitement factors, also called satisfiers. The delivery of these factors increase satisfaction and surprise customers positively. The third group is that of performance factors, which lead to satisfaction when performance is high and to dissatisfaction when performance is low. This theory therefore suggests that quality attributes have two important

characteristics; namely, that the importance of a basic or an excitement attribute depends on its performance, and that the relationship between attribute performance and overall satisfaction is asymmetrical (Kano, 1984). This raises the question concerning the appropriateness of IPA in customer satisfaction research, which Matzler *et al.* (2004) address by suggesting that attributes need to be classified having basic, excitement and performance factors. A change in attribute performance can be associated with a change in attribute importance, and should therefore be monitored by management (Matzler *et al.*, 2004).

### **2.2.5 Development of attribute importance**

Oh (2001) adds to existing opinions by stating that there are some conceptual and critical issues that should not be overlooked when adopting IPA widely. The conceptual issues are the absence of a clear definition of attribute importance, and subsequently the absence of a clear criterion concept relatable to attribute importance. There are several different definitions of importance associated with different measurement methods that should be considered. The one is importance derived from memory-based free elicitation, which reasons that attributes important to a purchase decision are believed to be salient. The other is goal-orientated search attributes. Consumers keenly search for these attributes when faced with a purchase decision (Oh, 2001). This shows that different implications may result when applying IPA to different importance concepts. This multi-dimensional facet of the importance concepts must therefore be closely controlled in order to minimise the risk, or weaken the validity and reliability of the importance measures (Oh, 2001). Determining a criterion concept related to importance has become a concern when utilising IPA. Although the use of a criterion concept is not normally used when applying IPA, Oliver (1997:53) suggests using consumer satisfaction is just that.

The critical issues cause frequent confusion to exist between importance and expectation, and the predictive validity of absolute versus relative importance measures (Oh, 2001). Martilla and James (1977:77) originally state that “consumer satisfaction is a function of both expectations related to certain importance attributes and judgement of attribute performance”. Researchers, however, often use the two concepts interchangeably when measuring and interpreting importance. The conceptual difference of these concepts should be considered when using them in the application of IPA (Oh, 2001). In most IPA studies, respondents are asked to rate the importance of one attribute at a time, which inflates the importance measures. This raises the question of the significance of the importance results within practical research. Relative importance measures are therefore said to be a more valid representation of attribute importance than absolute importance measures (Oh, 2001). The traditional IPA also results in attribute-specific importance means and attribute-specific performance means,

but this does not include overall performance and satisfaction (Oliver, 2010:31). Oliver (2010:54) suggests using derived versus stated importance. Derived importance relies on an actual assessment of how each attribute relates to satisfaction. The preferred technique is to regress the overall satisfaction score on each attribute rating. The derived importance estimate for each attribute can be either the correlation of attribute performance with satisfaction, or the multiple regression weight. This weight consists of both performance and satisfaction (Oliver, 2010:54).

There are several ways to derive importance measures, the most commonly used being direct and indirect measures. The appropriateness and outcome of each measure should be considered before applying one or the other to IPA. Direct measures are based on metric ratings, or Likert scale ratings, and the same system is used for deriving the performance measures. Indirect measures are derived from the performance ratings usually either by multivariate regression or conjoint analysis techniques (Abalo, Varela & Manzano, 2007). Although it is said that direct measures are a more reliable method of measuring importance, this method often results in consistently high ratings. This “crowding phenomenon” is mostly caused by the use of absolute rather than relative importance measures (Bacon, 2003).

Indirect measures often utilise linear regression coefficients obtained from multivariate regression of the attribute performance ratings over the overall performance rating, thus eliminating the importance scale. This method does not result in crowding, but may, however, prove to be non-linear and even result in negative values (Abalo *et al.*, 2007). Taking both methods into consideration, Abalo *et al.* (2007) suggest asking the respondents to rank attributes in order of importance. This enables the respondents to consider all the attributes collectively and results in a relative importance measure for each attribute. Oh (2001) adds that the potential relationships between importance and performance should be considered for the type of study being conducted. One apparent relationship is that importance is positively related to performance. This means that the more important the attribute is to the customer, the more favourably the attribute performance is perceived, which leads to higher satisfaction (Oh & Parks, 1997). If such relationships are not considered and addressed, the validity of IPA and the managerial suggestions rooting from its results may be under question (Oh, 2001).

## 2.2.6 Development of the attribute set

Practical issues, such as proper guidelines for the development of the attribute set, carefully researched classification of attributes and modifications to IPA grid, should be considered when developing the attribute set. Modification made through development may include adding additional cross-hairs to each quadrant or re-naming of the quadrant itself (Oh, 2001). An example of one such practical adaptation is that of Slack (1994). His research into attribute importance, performance and prioritisation, leads him to realise that the boundaries (or interpretations) of the priorities are not vertical and horizontal, but diagonal (Slack, 1994). An upward diagonal line is added to represent points where importance and performance ratings are equal. The IPA graph is divided into two major areas. These areas indicate that attributes with an importance rating greater than the corresponding performance rating, fall in the *concentrate here* area (Abalo *et al.*, 2007). With this modification, Slack (1994) finds a prioritisation trade-off between importance and performance, and suggests that importance and performance are correlated and therefore, statistical techniques requiring independence should not be used (Slack, 1994).

Mullins and Schultz Spetich (1987) caution researchers not to apply the IPA technique to market segments other than the one for which it was developed. They state that, when applying IPA to the profit-orientated segment, the main objectives are to determine a return on investment and customer loyalty. When applying IPA to the leisure sector, the objectives include customer satisfaction, the willingness to pay either with time and/or money, and the willingness to participate. Moreover, it is essential to consider the organisation's ability to convey the messages as set forth in the stated objectives, and the resources must be able to sustain the activity without irreparable damage being done to them (Mullins & Schultz Spetich, 1987).

The purpose of this study is to assess the delegates' satisfaction with the catering component of the courses CE at UP offers. To achieve this, the current level of customer satisfaction and the individual catering attributes have to be identified and assessed. The data collected enables evaluation of the catering attribute according to how the customer both rated its importance and perceived its performance. The IPA model allows for this together with an assessment of the overall customer satisfaction. This CE at UP needs to fully understand to please its client base. Taking all these considerations into account, and consulting academic leaders in the field, IPA was used and proved to be an appropriate choice. Following the initial theory put forward by Martilla and James (1977), the four quadrants of the IPA grid remained as termed: *concentrate here*, *keep up the good work*, *low priority* and *possible overkill*.

### 2.2.7 Application of importance performance theory

According to Rood and Dziadkowiec (2010) more than 50 tourism and hospitality studies using IPA were published between 1977 and 2007. Most often, self-administered survey instruments were used and, on average, 30 attributes were evaluated and placed on an importance performance grid to reflect the findings. Researchers used different methods to interpret the data, including creating a set of key indicators (Ennew, Reed & Binks, 1993), and calculating the standard error when examining customer satisfaction (Tarrant & Smith, 2002). Although many techniques have been developed to measure levels of service attribute performance, traditionally, in IPA, the expectations of customers were not included (Qu & Sit, 2007).

Investigating previous studies that used IPA shows that they lie in a range of industries, especially sectors of the hospitality industry. Methods of data collection and analysis proposed reflect that results are many and varied. The lessons learned from them provide valuable information and equip the researcher to use IPA optimally, and to offer a rationale for using its theory. IPA is applied to assess service quality in various industries, for example the work of Ennew *et al.* (1993); in travel and tourism (Evans & Chon, 1989, Go & Zhang, 1997) and leisure and recreation (Guadagnolo, 1985; Hollenhorst *et al.*, 1992); in education (Alberty & Mihalik, 1989; Ortinau *et al.*, 1989) and health care marketing (e.g., Hawes & Rao, 1985; Dolinsky & Caputo, 1991). Several have applied IPA in the broader hospitality industry, such as the convention centre industry (Breiter & Milman, 2006), the hotel industry (Chu & Choi, 2000), the restaurant industry (Hu *et al.*, 2009) and campus food services (Aigbedo & Parameswaran, 2004). Table 2.1 provides a summary of these studies.

**TABLE 2.1: SUMMARY OF SELECTED RESEARCH STUDIES APPLYING IMPORTANCE PERFORMANCE ANALYSIS**

Research area	Researchers	Background to the research	Data collection and analysis for IPA	Results from applying IPA
Hotel industry	Chu & Choi (2000)	“Examined business and leisure travelers’ perceived importance and performance of six hotel selection factors in the Hong Kong hotel industry” (Chu & Choi, 2000:363) based on work done by Knutson (1988), and LeBlanc and Nguyen (1996) LeBlanc and Nguyen (1996) studied five hotel factors that represent a hotel’s image to travelers – physical environment, corporate identity, service personnel, quality of services and accessibility Knutson (1988) revealed five factors both leisure and business travelers consider when selecting a hotel for the first time – clean and comfortable rooms, convenient location, prompt service, safe and secure environment and friendly personnel	Conducted focus groups to obtain 33 hotel attributes which was developed into a questionnaire Respondents were asked to rate the importance and performance of each attribute on a 7-point Likert scale Descriptive analysis including simple frequencies and mean ratings were computed and exploratory factor analysis with VARIMAX rotation was employed Six hotel selection factors were derived – service, quality, business facilities, value, room and front desk, food and recreation, and security	Value was perceived to have the highest importance and the lowest performance record– <i>concentrate here</i> quadrant of IPA grid
Campus food service	Aigbedo & Parameswaran (2004)	Used 20 of the most relevant questions of the 29 questions of DINESERV	The attributes within each question were developed into a questionnaire Respondents were asked to rate the importance and performance of each attribute on a 7-point Likert scale	Five main areas on which management should focus : (1) Properly cleaned dining areas (2) Prompt and quick service (3) Clean, neat and appropriately dressed staff members (4) Have employees shift to help each other maintain speed and quality of service during busy times (5) Quick correction of any problem with service brought to the managers attention
Major convention centre	Breiter & Milman (2006)	Until recently research into convention centres focused mostly on the meeting planners’ perspective (Vogt <i>et al.</i> , 1994; Hu & Hiemstra, 1996; Fenich, 2001; Weber, 2000, 2003) and the behaviour of tradeshow attendees (Tanner <i>et al.</i> , 2001) Breiter & Milman (2006) breach this gap by identifying attendees’ needs and service priorities when attending an exhibition at a large convention centre	Conducted four focus groups with exhibitors, attendees and show managers Self-administered questionnaires were distributed randomly at five different conventions hosting exhibitions (1) Participants were asked to rate the importance and performance of seven facility service attributes on a five-point rating scale (2) Participants were asked to rate the importance and performance of nineteen facility feature attributes	(1) Overall cleanliness of the convention centre, a well-maintained facility, and helpfulness of the personnel were the attributes that required the most attention (2) Directional signage, availability of close by and high quality accommodation, sufficient restrooms and reliable availability of cell phone signal were the attributes that required particular attention from management
Tourist destinations	Hu, Chen & Ou (2009)	Evaluated “the perceptions of local tourists concerning the importance and performance of their dining experience and restaurant selection factors at tourist destinations” in Taiwan (Hu <i>et al.</i> , 2009:207)	Identified 18 attributes based on a literature review Respondents were asked to rate the importance and performance of each attribute on a 6-point Likert scale Descriptive analysis including simple frequencies and mean ratings were calculated and five attributes were eliminated after a series of <i>t</i> -tests Cronbach’s alpha was calculated and exploratory factor analysis with VARIMAX rotation was employed on the remaining 13 attributes	Staff service, service speed, food quality, interior design, comfort, cleanliness, restaurant scent and food scent fell within <i>keep up the good work</i> and new experience, price, music and noise within <i>low priority</i> Only servicescape lighting fell within <i>possible overkill</i> and no attributes within <i>concentrate here</i>

## **2.3 CUSTOMER SATISFACTION**

In this section the theory of customer satisfaction is addressed. Customer satisfaction is defined and its components are discussed. This is followed by an elaboration on customer satisfaction theories. An overview of IPA as a tool to measure customer satisfaction, is provided. Numerous research studies have been conducted on the need for and measurement of customer satisfaction in different fields of study. The researcher elaborates on these by discussing the application of customer satisfaction theory in the existing literature.

### **2.3.1 Customer satisfaction defined**

The literature provides several definitions of customer satisfaction that can be described as the customer's fulfilment response. It is a judgement that a product or service has provided the customer with a pleasurable level of consumption-related fulfilment (Oliver, 2010:8). Customer satisfaction can also be defined as a phenomenon based on an outcome or a process (Vavra, 1997:4) or the customers' evaluation of a consumption experience (Klaus, 1985:17).

The lack of a consensus definition may cause several problems for customer satisfaction research (Giese & Cote, 2002). Peterson and Wilson (1992) however, determine that the most serious problem is the inability to interpret and compare empirical results. They suggest that customer satisfaction should be operationalised in accordance with the research objective in order to limit varying results (Peterson & Wilson, 1992). Giese and Cote (2002) therefore provide a three part definition, summarising customer satisfaction as a whole: customer satisfaction is a response aimed at a specific focus, and it occurs at a precise time (Giese & Cote, 2002). The response can either be emotional or cognitive. The focus of the response refers to the object (product or service) of the customers' satisfaction. The timing of the response is usually after consumption or post-purchase, but can also be after choice yet before consumption or pre-purchase (Giese & Cote, 2002).

### **2.3.2 Components of customer satisfaction**

Yi (1993) states that the various definitions of customer satisfaction show that there are many different levels or components to this term. Customers can be satisfied with a product, a purchase decision experience, a performance attribute, a consumption experience, a store or institution, or a pre-purchase experience (Yi, 1993). Most researchers agree that hospitality experiences in particular, consist of both products and services. The overall satisfaction



therefore relies with all components of the products and services that form the whole experience (Pizam & Ellis, 1999). Customer satisfaction, with regard to a service industry, simultaneously consists of the actual product, the behaviour of the relevant employees and the environment itself (Reuland, Coudrye & Fagel, 1985). Czepiel, Solomon, Suprenant and Gutman (1985:3), suggest that both elements (food and beverage) and performance-delivery elements (service) are functions of customer satisfaction that can be independently evaluated by the customer. The shared thought in all the explanations is therefore what the customer wants, which is prompt service by knowledgeable staff who value customers (Czepiel *et al.*, 1985:3).

Lovelock (1992:286) suggests a similar two-way division. He proposes two components, namely core components, which refer to food and beverages, and secondary components, which refer to all the remaining elements such as service and the environment. One of the most popular methods of explaining customer satisfaction is that of Parasuraman, Zeithaml and Berry (1988) who developed SERVQUAL. In service organisations, the assessment of the service quality happens during the delivery of the service and this assessment may lead to either satisfaction or dissatisfaction (Pizam & Ellis, 1999). SERVQUAL suggests five dimensions of service quality believed to result in customer satisfaction. The five dimensions are: reliability, responsiveness, assurance, empathy and tangibles such as the facilities, equipment and personnel (Parasuraman *et al.*, 1988).

### **2.3.3 Customer satisfaction theory**

As customer satisfaction evolved, numerous competing theories have been suggested for explaining customer satisfaction; these theories include the dissonance theory, value-percept theory, the importance performance model, attribution theory, equity theory, the evaluation congruity theory and the person-situation-fit concept (Yüksel, 2008:65). The following section will address some of these theories and models.

The dissonance theory suggests that a customer, who expected a high-value product or service and received a low-value product or service, would recognise the discrepancy and experience cognitive dissonance (Cardozzo, 1965). Many researchers criticise this theory for being an inadequate explanation of customer satisfaction. Yüksel (2008:67) however, adds that the theory “contributes to the understanding of the fact that expectations are not static in that they may change during a consumption experience”. Contrast theory suggests that when the actual performance of a product or service falls short of the consumer’s expectations, this



contrast will result in the consumer exaggerating the discrepancy. This theory is therefore the opposite of the dissonance theory (Yüksel, 2008:67).

Matzler *et al.* (2004) states that the dominant model in customer satisfaction research is based on the expectancy disconfirmation paradigm (EDP), developed by Oliver (1977, 1980). According to this model, satisfaction is formed through a cognitive comparison of perceived performance with pre-purchase expectations. Perceived performance can be greater than expectations, resulting in positive confirmation (satisfaction). Alternatively, the perceived performance can be lower than expectations, resulting in negative disconfirmation (dissatisfaction) (Matzler *et al.*, 2004). The EDP thus relies on the difference between the customer's expectations and the product's performance, indicating either a positive or a negative result between expectations and perceptions of performance (Oliver, 1977, 1980).

Since the EDP was criticised for ignoring other sources of expectations (La Tour & Peat, 1979), the comparison level theory arose and suggests that there is more than one basic determinant of comparison level for a product. This theory therefore includes consumers' prior experiences with similar products, situationally produced expectations, created through advertising, and the experience of other consumers who serve as references (Yüksel, 2008:77). Westbrook and Reilly (1983) developed value-percept theory further that was originally formulated by Locke (1967). They state that values are a better comparative standard than expectations when explaining customer satisfaction or dissatisfaction as in the case of EDP. Although they argue that what is expected from a product may or may not correspond with what is valued in a product, and vice versa, this theory did not receive as much support from researchers as EDP (Yüksel, 2008:77).

Attribution theory is known for being used in dissatisfaction or complaint behaviour models and was primarily developed by Weiner, Frieze, Kukla, Reed, Rest & Rosenbaum (1971). It suggests that consumers look for causes of product successes or failures and usually attribute these successes or failures to a three dimensional schemata (Weiner *et al.*, 1971; Pearce & Moscardo, 1984; Oliver & Desarbo, 1988; Folkes, 1988). The first schema is locus of causality which means that the consumer is dissatisfied with the purchase outcome, and this can be attributed to either internal or external role-players. Second, stability, which relates to stable or unstable causes of dissatisfaction and third, controllability, which suggests that both consumers and companies can either have chosen control over an outcome or be under certain controllable constraints. Researchers believe that this theory is more of an extension of the EDP as the attribution process is triggered primarily by the negative disconfirmation of expectations (Yüksel, 2008:78).

Equity theory suggests that satisfaction exists when consumers perceive their output and input ratio to being fair and equitable (Oliver & Swan, 1989). Although equity models are very different from other customer satisfaction models, they do share similarities with the comparison level theory, in suggesting that comparisons used by consumers in judging satisfaction may be based on more than just expectations. Although this theory primarily applies to social interactions (Oliver & Swan, 1989), researchers view this theory as an accepted alternative to conceptualise how comparisons work (Oliver & Desarbo, 1988).

Evaluative congruity theory suggests that satisfaction is a function of evaluative congruity. Evaluative congruity can be described as a cognitive matching process. This process involves the comparison of a perception to an evoked referent understanding to evaluate a certain stimulus or action (Sirgy, 1984). The theory identifies three congruity conditions, namely; negative incongruity, congruity and positive incongruity. This theory is a popular model to use when explaining the different conditions of satisfaction or dissatisfaction resulting from different combinations of expectations and performance outcomes (Chon, 1992; Chon, Christianson, & Cin-Lin, 1998). However, it may not be suitable to use when conducting research in consumption situations where customers do not have prior expectations, as is the case with unfamiliar products (Yüksel, 2008:82). The person-situation-fit concept, developed by Pearce and Moscardo (1984), suggests that consumers deliberately seek situations which they feel matches their personalities. This theory is mostly applied in tourist settings where individuals make a conscious choice to visit a specific tourist destination (Reisinger & Turner, 1997).

Another popular model is the three-factor theory proposed by Kano (1984) that distinguishes between different types of quality attributes by grouping quality attributes into three categories, each having a different effect on customer satisfaction. The three factors are: (1) basic factors that are the minimum requirements for satisfaction; (2) excitement factors which lead to satisfaction if performance is high but do not lead to dissatisfaction if performance is low; and (3) performance factors which lead to satisfaction if performance is high and to dissatisfaction if performance is low. The theory by Kano (1984) has been widely adapted in today's research (Gale, 1994; Johnston, 1995; Oliver, 1997; Vavra, 1997; Anderson & Mittal, 2000; Matzler & Squerwein, 2002). It shows that quality attributes have two distinct characteristics, namely, that importance of a basic or an excitement attribute depends on its performance and that subsequently, the relationship between attribute level performance and overall satisfaction is asymmetric (Matzler *et al.*, 2004).

### **2.3.4 The importance performance theory as a tool to measure customer satisfaction**

Although each organisation may have their own reason for measuring customer satisfaction, there are several common reasons. The organisation may wish to get close to the customer and understand its customers' decision-making process. The organisation may want to measure continuous improvement to enable the evaluation of internal processes. Customer driven improvement may be achieved by creating a comprehensive database as a source of innovations. Competitive strengths and weaknesses could be measured by determining customers' perceptions of competitive choices, and the data on customer satisfaction measurements could be linked to internal systems such as human resources, marketing and finance (Naumann, 1995:22). Juran (1992:7) states that "customer satisfaction is a result achieved when product (or service) features respond to customer needs". The extent to which customers' needs are satisfied must therefore be measured, especially when companies want to progress to higher quality levels. Higher quality levels may lead to increased customer satisfaction, increased market share and meeting competition. To achieve higher quality levels, companies must become more proactive with its customers by anticipating customer expectations. This can only be done by knowing the current level of customer satisfaction (Juran, 1992:7). Customer satisfaction also reinforces positive attitudes towards a product or company brand and therefore leads to return patronage (Pizam & Ellis, 1999).

The importance performance model recognises the impact of attribute importance. The main reasons for favouring attribute importance over the customers' expectations, is that customers consistently expect high levels of service (Brown, Churchill & Peter, 1993:406) and customer expectations can be manipulated externally (Davidow & Uttal, 1990). Barsky (1992) adds that importance attached to product or service attributes are based on cultural and personal standards and values. Originally proposed by Martilla and James (1977), the IPA suggests that customer satisfaction is based on the customers' perceptions of the performance and importance of the attributes. Importance and performance items can often be mapped without the requirement of sophisticated computer knowledge and still provide clear results that identify where resources should focus. Although this theory lost favour when more quantitative methods became practical with computerisation, it is still a widely used as a theory for measuring customer satisfaction has been adapted (Duke & Persia, 1996).

### **2.3.5 Application of customer satisfaction theory**

The importance of investigating previous customer satisfaction studies lies in the lessons learned from applying various customer satisfaction theories in different industries and sectors

of the hospitality industry. This information provides a foundation for the identification of the catering attributes as well as sound knowledge on customer satisfaction needed for the successful application of IPA.

The increased importance of quality in both service and production industries has led to an abundance of customer satisfaction studies conducted by social psychologists, marketing researchers and students of consumer behaviour (Pizam & Ellis, 1999). According to Peterson and Wilson (1992), more than 15 000 academic and trade articles have been published on the topic of customer satisfaction in the past two decades. The overview of existing research on customer satisfaction, shows that several studies have been conducted within the broader hospitality industry, including the restaurant industry (Dube, Renaghn & Miller, 1994:39; Ladhari, Brun & Morales, 2008; Andaleeb & Conway, 2006), the fast food industry (Pettijohn, Pettijohn & Luke, 1997; Stank, Goldsby & Vickery, 1999) as well as campus dining experiences (Almazna, Fafe & Lin, 1994; Kim, Nee Ng & Kim, 2009). The research methods and analyses used in these studies are reviewed along with the customer satisfaction attributes identified. This information as well as the final results of these studies are summarised in Table 2.2.

Considering the examples from the literature as shown in Table 2.2, it is evident that there are some similarities in the research methods and analyses used. Using SERVQUAL and DINESERV are seen to be popular methods of assessing the dimensions of customer satisfaction. Interviews and survey instruments are often used to rate the dimensions or categories of customer satisfaction as well as overall customer satisfaction. Considering the success of these studies, a similar approach is followed in this study by using both an interview and focus groups to identify the catering attributes. A questionnaire is also used to rate the importance and performance of CE at UP's catering component.

The attributes identified, and the final results and conclusions of the studies shown in Table 2.2 bear some similarities, which enables the identification of the catering attributes for the current study. The quality of food and of service are the two attributes most often identified as being most important when measuring customer satisfaction and the relationship between customer satisfaction and customer loyalty is often a conclusion drawn. The results also suggest considering the operational performance of the restaurant/company and the demographic characteristics of the customer when assessing the overall customer satisfaction. Taking these suggestions into account, relevant demographic characteristics of the sample were collected and analysed for possible customer profiles relating to customer satisfaction.

**TABLE 2.2: SUMMARY OF CUSTOMER SATISFACTION RESEARCH**

Research Area	Researchers	Research Method	Research Analysis	Attributes Identified	Final Results & Conclusions
Small restaurants	Dube <i>et al.</i> (1994:39)	Submitted ratings of a pretest to an exploratory factor analysis with VARIMAX rotation	Developed several scenarios Respondents were asked how likely they would be to return to the restaurant in each scenario	Tangibles – facilities, equipment and personnel Reliability – ability to perform as promised Responsiveness – willingness to assist customers Assurance – knowledge and courtesy of employees Empathy – caring and customized attention	Business and pleasure diners (respondents) placed the greatest importance on food taste and attentive service Business diners did not find menu variety to be greatly important but rated waiting time as very important, while pleasure diners felt the opposite
Fast food restaurants	Pettijohn <i>et al.</i> (1997)	Used a store intercept data collection method to select respondents at participating fast food restaurants	Respondents were contacted by an interviewer and asked to complete a survey rating the importance of each customer satisfaction category on a 5-point rating scale Categories were selected based on available literature and interviews with a fast food restaurant manager	Results showed that food quality, cleanliness and perceived value are the three most important elements of the fast food restaurant	The elements are similar to those that lead to the development and growth of the fast food industry Indicating that companies may be wrongfully applying resources and costs to enlarged menu options or improved atmospheres
Fast food restaurants	Stank <i>et al.</i> (1999)	Focused on (1) Performance relative to operational elements that contribute to consistent quality, productivity and efficiency (2) Performance relative to relational performance elements which enhance the companies' familiarity to their customers	Administered a survey instrument to managers of fast food restaurants in the United States of America	Operational performance has a considerable impact on customer satisfaction and indirect loyalty	"The true benefit of establishing customer relationships emerges from the enhanced insight the supplier is able to gain regarding customer needs and wants" (Stank, <i>et al.</i> , 1999:429)
Full service restaurants	Andaleeb & Conway (2006)	Constructed a model of customer satisfaction based on the dimensions of SERVQUAL and through qualitative interviews	Tested the model through factor analysis and multiple regression	Customer satisfaction was mainly influenced by the responsiveness of the frontline employees, price and food quality (in that order) Physical design and appearance of the restaurant did not have a significant effect on customer satisfaction	Concluded that managers of full service restaurants should focus on service quality (responsiveness), price and food quality (reliability) for practical strategies enabling increased satisfaction
Full service restaurants	Ladhari <i>et al.</i> (2008)	Argued that the evaluation of customer satisfaction has two components Cognitive – the evaluation of the functional outcome of the service Affective – the evaluation of every aspect of the dining experience as a whole	Questionnaires were administered to undergraduate business students, asking the respondents to evaluate their last dining experience Calculated the correlation between the five DINESERV dimensions and 12 distinct emotions	Results revealed three sources of customers' satisfaction: (1) positive emotions (2) perceived service quality (3) negative emotions	Results showed that satisfaction has a significant and positive relationship with, and thus impact on, recommendation, customer loyalty and willingness to pay more
Campus dining experiences	Kim <i>et al.</i> (2009)	Followed the work done by Almazna <i>et al.</i> (1994) who identified 17 attributes which affects customer satisfaction in university foodservice operation – quality of food, cleanliness, convenient location, reasonable price, nutritious food, and speed of service Developed a questionnaire to identify customers' perception about the five DINESERV dimensions (food quality, atmosphere, service quality, convenience, and price and value)	Respondents were asked to rate their overall satisfaction and return intention	Food quality, followed by service quality, were the strongest predictors of customer satisfaction as well as revisit intention	Reasonable pricing and the customers' demographic characteristics, such as age groups and ethnicity, play an important role in the overall satisfaction of the customers

## 2.4 CONTINUING EDUCATION AT UNIVERSITY OF PRETORIA

In this section, CE at UP's core business is discussed, followed by an explanation of the course delegates, the sample used in this study. Subsequently this section deals with the catering component along with its sub-categories and the functions of the service provider and the service level agreement it has with CE at UP.

### 2.4.1 Core business

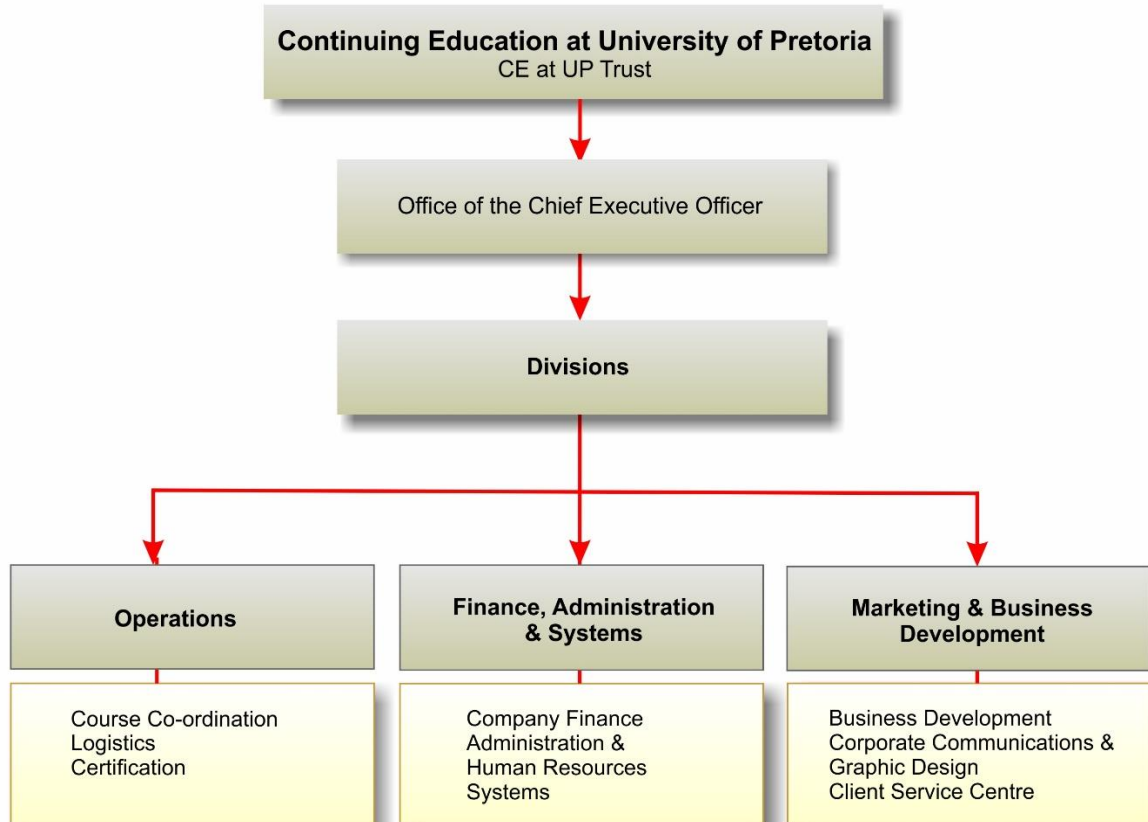
Continuing Education at University of Pretoria (CE at UP) opened its doors to the public in 2000 as a limited proprietary company and in 2008 it became a trust company of the University of Pretoria. It is an accredited provider of more than 500 short certificate courses across 20 industry fields. "The highly diverse and specialized range of short courses are continually revised and updated in keeping with the acceleration of knowledge and technology in the fast changing economic environment" (CE at UP, n.d). CE at UP also has a growing African footprint, and since 2007 has been practising specific monitoring and reporting of the interaction with countries on the rest of the African continent. A significant growth has been noted in participation of delegates from Africa, contributing to CE at UP's footprint in 22 African countries. The University of Pretoria is an accredited provider with the Higher Education Quality Committee (HEQC) of the Council of Higher Education (CHE) to offer higher education programmes. CE at UP has the mandate to issue all certificates for non-formal programmes of the University of Pretoria. The company structure can be seen in Figure 2.2 (CE at UP, n.d).

CE at UP offers scheduled courses and in-house training options. Scheduled courses are scheduled throughout the year and delegates may enrol as individuals or as company representatives to attend specific courses. The majority of the courses are presented on the CE at UP premises on-campus. In-house training options often require some customisation of a course for a particular client. These courses are generally offered at the client's offices or training venues and therefore may be national only or serve a broader African client base. (CE at UP, n.d). CE at UP's vision is "to be the leading training and career development partner of the public and commercial sectors in Africa" (CE at UP, n.d). The company's mission is "to offer the best possible training and development solutions to emerging and established professionals through career-focused courses in association with leading academics from the University of Pretoria". The company's values tie in with their vision and mission and include:

- Believing in adding value by presenting the best possible solution to clients
- Believing that loyalty provides sustainability for a secure future
- Believing in creating an environment for innovation



- Fostering a lateral leadership style
- Committing to the well-being of their people through training and development (CE at UP, n.d)



**FIGURE 2.2: CE AT UP COMPANY STRUCTURE** (Source: CE at UP, n.d)

### 2.4.2 Course delegates

There are two types of consumers, namely the personal consumer and the organisational consumer. The personal consumer purchases goods and services for their own use, for the household or for a friend. The end user is thus, in all instances, an individual. The organisational consumer purchases goods and services that are needed to run their organisation. This can include government agencies, profit and non-profit organisations, as well as institutions like schools and hospitals (Schiffman & Kanuk, 2009:4). In the case of this particular study, the focus is on the individual consumer. The delegates who attend short courses at CE at UP are from various professional backgrounds and can attend courses in the fields of Health Sciences, Engineering, Education, Project Management, the Natural Sciences, Theology, Humanities and many more. The CE at UP delegate generally has a

higher education and/or superior experience within their own field of business and attend these short course to further their education.

### **2.4.3 Catering component**

Hall, Sharples, Mitchell, Macionis, & Cambourne (2003:60) state “food has many roles to play for consumers”. Most importantly, food is functional and sustains life. Food also plays a dynamic role in our celebrations and can be a channel for socialising or an approach of communication. Food can also be a form of entertaining in the way that it creates a certain atmosphere and mood. Food is sensuous and sensual in some situations, and it is a way of experiencing new cultures and countries (Hall *et al.*, 2003:60). Although some roles may be less applicable to one company and more applicable to another, each catering or food intervention aims to fulfil some of these roles. CE at UP has to consider these roles when managing its catering component. Planning and confirming the catering arrangements for CE at UP is a function of the Operations Division within the company (Figure 2.2). The course coordinators determine the catering needs for every short course and are also responsible for quality checks. The coordinators dine with the delegates once a week to ensure that the prescribed service and food qualities are maintained for each group of delegates. The overall service level agreement (Section 2.4.6) with the service provider of the catering is negotiated and managed by CE at UP’s operational managers as well as the general manager.

The catering component consists of a full day conference package to CE at UP delegates and the cost is included in their course fees. The lunch provided is served in buffet style. Silvers (2004:307) describes buffet service as “a self-served food presentation offered on a table in trays, chafing dishes and other similar equipment, often with a server or carving station at the end of the line to help with the more expensive items”. She adds that this is a popular service method at hospitality functions, social gatherings and less formal events (Silvers, 2004:307), making it appropriate for CE at UP’s needs as a teaching institution. This form of self-service means that the delegates select their own food from the display or assembly area, and carry their plates to the dining area, which in this case, is located in the same room.

Buffets may be classified as three main types, namely, a full buffet, a finger buffet and a fork buffet according to the agreed menu and dining arrangement. If the foodservice provider offers a full three course meal to delegates it is a full buffet. The service is informal but professional, which is reflected as the menu choice, table layout and seating arrangements with quality tableware. The meal consists of cold foods, such as salads, and hot foods, such as meat, vegetables and starch dishes that are placed over electric or spirit réchauds to keep hot during



the service period (Sethi & Malhan, 2006:233). Service staff is stationed behind the buffet tables to portion out the main meals on plates and then to hand the plate to the delegate. This is usually done with the meat as it is the more expensive item. The delegates then self-serve the salads, sauces and other items according to taste and appetite (Sethi & Malhan, 2006:235). Apart from offering conference packages to CE at UP, the foodservice provider also offers catering services to individuals and companies on- and off-site.

#### **2.4.4 Sub-categories of the catering component**

By using structural equation modelling, Ryu, Lee and Kim (2010:200) found “that the quality of the physical environment, food and service were significant determinants of restaurant image” when studying the influence of some catering components on a restaurant’s image, the customer’s perception of the value of its service, the level of customer satisfaction and their behavioural intentions. They state that the quality of the physical environment, food, and overall restaurant image are significant predictors of customers’ perceived value. This reinforces the notion that customer perceived value is a significant determinant of customer satisfaction, and customer satisfaction is a significant predictor of behavioural intent. These results suggest that the quality of the catering components are most important for companies that wish to increase their market share. The attributes of the catering component in this study comprised six sub-categories concerning the food offered, namely, the sensory experience, its presentation, the environment, menu variety, cultural preferences and service quality.

##### **2.4.4.1 Sensory attributes**

Krishna (2010:1) writes that we are constantly satisfying at least one of our senses (taste, vision, sound, smell, and touch), whether it is by cooking, gardening or drinking our favourite coffee. In order to define sensory attributes, Krishna’s (2010:1) explanation is chosen for this study: “The word sensory means relating to sensation or the senses, and the word sensual is similar in meaning, relating to a gratification of the senses, as is the word sensuous.” Sensory attributes are therefore derived from customers’ senses or food sensations and these perceptions affect what customers like and what they will choose to buy (Krishna, 2010:1). This shows that sensory attributes may affect customers’ satisfaction either positively or negatively. Sensory attributes of foods and beverages can be broadly categorised as appearance, texture and flavour. Food is perceived initially either via the sense of vision, the sense of smell, or both of these senses simultaneously (Schroder, 2003:138). Customers often assess the initial quality of a food product by its colour and appearance, thus making these sensory attributes the primary indicators of perceived quality (Lawless & Heymann, 2010:234).

Lawless and Heymann (2010:234) adds that the colour of a food product can also affect the perception of other sensory attributes, such as aroma, taste, and flavour.

#### **2.4.4.2 Presentation of food**

The sensory attribute of appearance is based on the perceived shape, pattern, size and colour of both the foods and the environment in which the food is served (Schroder, 2003:140). Food presentation can therefore be described as the appearance of the food and the way in which it is presented. Customers expect to be impressed by the food presentation. Well-presented food is often perceived to be of a higher value to the customer. The three elements of food presentation are the type and size of the dish, portion size and garnish. Other factors include the layout, balance and dimensions/height of the plate or buffet layout (Arduser & Brown, 2006:406).

#### **2.4.4.3 Environment**

The property or environment of the dining place is important for both the customer and the foodservice provider. The appearance of the dining room includes factors such as lighting, colour, sound, the walls, temperature, smell, visibility and layout of the dining facility. Other environmental factors are size, décor and location of the dining place (Arduser & Brown, 2006:233).

#### **2.4.4.4 Menu variety**

Menu variety can be achieved by incorporating different sensory attributes such as texture and flavour. Texture is defined by Szczesniak (2002:215) as “the sensory and functional manifestation of the structural, mechanical and surface properties of foods detected through the senses of vision, hearing, touch and kinaesthetics”. This means that the texture of an object is perceived by the senses of sight (visual texture), touch (tactile texture) and sound (auditory texture). Depending on the object, either all three senses or even just one may be used to perceive texture (Lawless & Heymann, 2010:259). Unlike texture and appearance, flavour, derives from specific, chemically defined food components, generating either a positive or negative perception with the consumer (Schroder, 2003:146). Using fresh foods is therefore an essential part of creating a pleasurable menu.

The menu choice offered by a restaurant depends on a number of interrelated factors. These factors include the price the customer is willing to pay, the amount of time available for the meal experience, the level of the market in which the restaurant is situated (for example, fast food versus fine dining), and the types of customers frequently dining at the restaurant. There are also factors from the foodservice provider’s side that could affect the choice of menu; such

as, available production and service facilities, the skills of the staff, the quality and availability of ingredients and the potential profitability of the menu (Davis, Lockwood, Alcott & Pantelidis, 2012:30). The type and variety of the menu must therefore “be tailored around the requirements and expectations of the customer” (Davis *et al.*, 2012:35).

Foodservice providers can choose from many types of menus and the decision is mainly based on the type of foodservice operation and the needs of the customers. Such menus include static menus, single-use menus and cycle menus (Payne-Palacio & Theis, 2012:127). The foodservice provider used for this study offers a cycle menu to CE at UP’s delegates. Payne-Palacio and Theis (2012:127) defines a cycle menu as “a carefully planned set of menus that is rotated at definite time intervals”.

#### **2.4.4.5 Cultural preferences**

Fitzgerald (2002:11) writes that customers visiting “from other cultures arrive with behaviour patterns, expectations, needs and preferences based on their very different cultural conditions”. This implies that the quality of a service can only be measured by how well it meets the visiting customers’ expectations and needs. This, however, poses a challenge for restaurants and companies, such as CE at UP, that have to provide services to both domestic and international customers. A greater level of flexibility is required to meet such diverse needs. Another challenge is to retain the unique identity of the host culture while at the same time accommodating the visiting customers (Fitzgerald, 2002:11). Fitzgerald (2002:13) warns against making generalisations about cultural groups, stating that such generalisations will always have to adapt to factors such as: regional, religious, educational, and economic differences, the effects of modernisation and Westernisation, and “the fact that individuals remain individuals in even the most collectivist of societies”. Even so, differences do exist between various cultural groups (Fitzgerald, 2002:13) and different foods are preferred by different cultures. In some cultures, food is consumed as a form of sustenance, but in others some foods may be consumed for health reasons or beliefs of food safety. Various cultures consume or prefer certain foods as a direct result of their ethos or religion.

#### **2.4.4.6 Service**

Kotler & Armstrong (2012:6) state that service forms part of the marketing offerings employed to satisfy a customer’s wants or needs. The market offerings include services, products, experiences or a combination of all three. Focusing on the customer, Yüksel (2008:31) describes service as the maintenance of old customers, attracting new customers and, above all, getting repeat business from customers. In more recent years, Kotschevar and Luciani (2006:3) describe service as “more than taking orders, placing down food and beverages, and

clearing up after a meal. It is the act of providing customers with a wide range of meal-related benefits and experiences.” They regard the quality of service to be a vital source of either a successful foodservice operation or an abundance of customer complaints (Kotschevar & Luciani, 2006:2).

#### **2.4.5 Foodservice provider**

The foodservice industry is commonly described as providing either commercial or on-site foodservices. Commercial foodservices aim to sell food for profit whereas on-site foodservices (or non-commercial foodservices) sell food as a secondary activity. Commercial foodservices include several kinds of restaurants, such as limited service or menu, full service (casual and fine dining), hotels, country clubs, airports, cruise ships, zoos, museums, sports events and convenience stores. On-site foodservices are provided at hospitals, schools, colleges and universities and child care, senior care, military and correctional facilities, and for employee feeding (Gregoire, 2010:11). Commercial and on-site foodservices engage in one or more of the four basic styles of service. The simplest provision for foodservices is self-service, which includes cafeterias, machine-vended foods, buffet and drive-through pick-ups. Other styles of service are tray service, which may be centralised or decentralised; wait service which includes counter and table service; and portable meals which may be delivered off- or on-premises (Payne-Palacio & Theis, 2012:251).

CE at UP outsources its catering needs to more than one foodservice provider situated within the campus grounds. The majority of these catering needs (more than 80%) are however, outsourced to one foodservice provider. The particular foodservice provider in this research is the one CE at UP uses, which is close by. Placing this foodservice provider in any one category is a certain challenge. The foodservice provider itself lies within the commercial foodservice sector, as its main activity is to sell food on-campus to the public as well as to course delegates from CE at UP. Since CE at UP is a teaching institution and outsources its catering needs to the specific foodservice provider, it falls within the non-commercial foodservice sector. This case study focuses on CE at UP’s delegates and their satisfaction with CE at UP’s catering component, therefore incorporates both segments.

#### **2.4.6 Service level agreement**

A service level agreement can be described as a contract between a service provider and a customer. The service level agreement that CE at UP has with the foodservice provider contains details of the nature, quality and scope of the service to be provided and includes

the professional nature, expected quality, and identified scope of CE at UP's catering needs (CE at UP, n.d). Additionally the contract refers to the provision of catering requirements of a full day conference package for which delegates attending short courses at CE at UP pay a fee.

The full day conference package typically comprises:

- Early morning tea/coffee and rusks
- Mid-morning tea/coffee and sandwiches, scones or muffins
- Buffet lunch with two main courses and fruit juice (including Halaal and vegetarian dishes)
- Cleaning of lecture rooms and replenishing water and sweets
- Afternoon tea/coffee and biscuits.

The tea/coffee breaks are served in the atrium of the University of Pretoria's Graduate Centre which is the central area within the building, surrounded by the lecture rooms and flanked by CE at UP's reception area on one side, and the entrance to the foodservice provider's restaurant on the other side. The buffet lunch is served in the service provider's restaurant's dining room where delegates sit at rectangle tables accommodating up to ten people per table.

## **2.5 CONCEPTUALISATION**

The model of the conceptual framework is illustrated in Figure 2.3. Mouton and Marais (1990:136) suggest looking at the "three familiar structures of science" for a clearer understanding of a conceptual framework. These structures are typologies, models and theories. Bailey (1994:322) defines a model as a replica that differs from the real entity in some way. Models rarely include all the features of the structure being modelled and only focus on those items necessary for a specific research endeavour. Apart from their classification, models also have a heuristic function, which refers to a simplification of reality and one that guides researchers to focus on a specific theme. This is achieved by modelling a partial representation of a given phenomenon, and purposefully excluding or emphasising certain characteristics of that phenomenon (Webster's Third International Dictionary, 1961:1064).

## **2.6 AN EXPLANATION OF THE CONCEPTUAL FRAMEWORK**

The conceptual framework (Figure 2.3) illustrates the research steps taken and the procedures applied to complete each of its five objectives (Section 1.6). The objectives and the relevant procedures are explained in this section.

### **2.6.1 Identifying the catering attributes (Objective 1)**

The first objective is to identify the catering attributes relevant to this case study and the different techniques to achieve this as shown in the first line of the illustration (Figure 2.3). Qualitative techniques, namely, conducting an interview and focus groups, obtained descriptive analysis about the catering attributes that are used in the application of IPA in a later stage of the research.

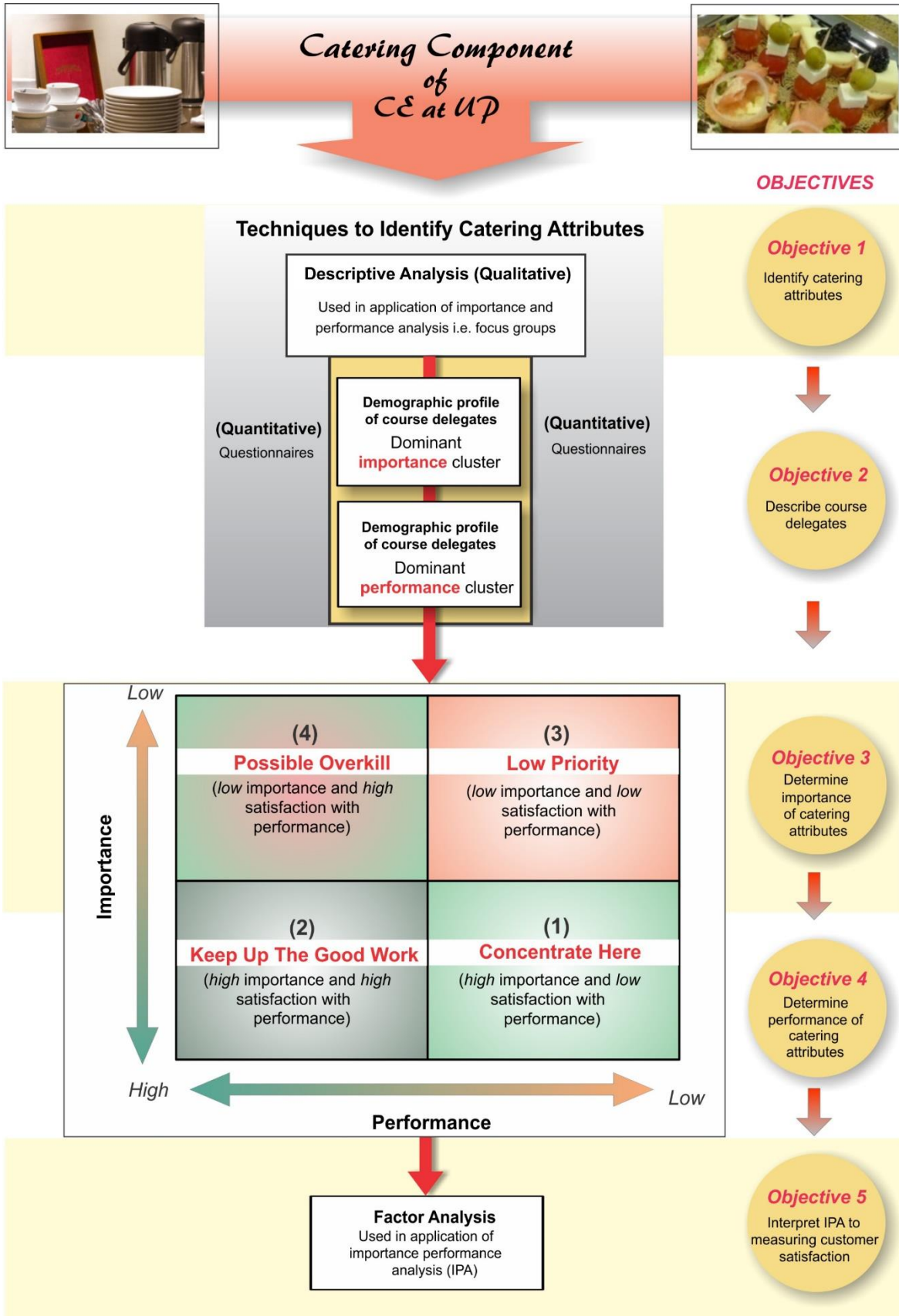
### **2.6.2 Describing the course delegates (Objective 2)**

The second objective is to describe the course delegates attending courses at CE at UP. The demographic data obtained from the quantitative technique, namely a questionnaire, was used to obtain demographic profiles of the course delegates. Using cluster analysis, a dominant importance cluster and a dominant performance cluster was found, which provided a description of the course delegates in terms of demographic information.

### **2.6.3 Determining the importance and performance of each catering attribute (Objectives 3 and 4)**

The third and fourth objectives were to determine the importance and performance of each catering attribute. This was done by using the descriptive analysis obtained for the first objective as well as from applying exploratory factor analysis. These techniques were applied to IPA to obtain information on the importance and performance of each catering attribute, according to the four quadrants of IPA, namely, *concentrate here* (1), *keep up the good work* (2), *low priority* (3), and *possible overkill* (4). For the descriptive analysis, mean ratings and standard deviations were calculated, using data related to the respondents' demographic profiles and on the 25 catering attributes as per the work of Chu & Choi (2000). This was followed by applying exploratory factor analysis with VARIMAX rotation as explained in Hu *et al.* (2009).





**FIGURE 2.3: THE CONCEPTUAL FRAMEWORK: THE IMPORTANCE PERFORMANCE THEORY (adapted from Martilla & James, 1977)**

## 2.6.4 Interpreting the importance performance analysis to measure customer satisfaction (Objective 5)

The final objective was to interpret IPA to measure delegates' satisfaction with the catering component of courses offered by CE at UP. By applying IPA and seeing where each catering attribute fell in terms of the four quadrants, the results of IPA application could be interpreted to assess and measure delegates' satisfaction with each of the catering attributes and thus their satisfaction as a whole. The importance performance grid used in this study differs from the original importance performance grid designed by Martilla and James (1977) as the scales used are not the same. These differences are shown in Table 2.3. The quadrants of the grid are therefore not placed identically to those of the original quadrants, however, this has not interfered with the interpretation of the importance performance grid. The current study used the number 1 to indicate extremely important and excellent values and the number 4 to represent not important and poor values.

**TABLE 2.3: DIFFERENCE IN SCALES**

<b>Martilla &amp; James (1977)</b>				
Importance Scale	Extremely important	Important	Slightly important	Not important
	4	3	2	1
Performance Scale	Excellent	Good	Fair	Poor
	4	3	2	1
<b>Current study</b>				
Importance Scale	Extremely important	Important	Slightly important	Not important
	1	2	3	4
Performance Scale	Excellent	Good	Fair	Poor
	1	2	3	4

## 2.7 SUMMARY

This chapter covered an overview of the existing literature regarding the application of the importance performance theory to measure customer satisfaction. The chapter aimed to clarify the relevant constructs in terms of their contribution to the research. The first section of this chapter covered importance performance theory, which is the theoretical perspective and point of departure for this study. The second and third sections covered the fundamental aspects of customer satisfaction, followed by the essential information about the study group, CE at UP and its catering component. The final section dealt with the conceptualisation of the theoretical framework and integrated the key constructs.



# CHAPTER 3

## RESEARCH DESIGN AND METHODOLOGY

This chapter addresses the research design and methodology of the study. It includes the research style, the sampling procedure and unit of analysis as well as the operationalisation process. The data collection is addressed for both Phase 1 and 2, followed by the discussion of the importance performance analysis. The quality of the data and the ethical considerations are addressed.

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### 3.1 INTRODUCTION

Using importance performance analysis, an assessment of the catering component of courses presented by CE at UP was undertaken. CE at UP is a teaching institution that offers certificate courses to post-graduate individuals in diverse fields of study. Its catering component is outsourced to foodservice providers situated on campus. The catering component is an area of concern as it received the lowest score during former evaluations (Section 1.4). The performance and importance of each catering attribute was determined and discussed. From the assessment of its catering component, the company would be able to make appropriate and necessary managerial decisions in order to retain and expand its customer base.

This chapter focuses on the research design that was used for this study. The research style is discussed, providing an overview of the case study approach and the mixed method design. The sampling procedure and unit of analysis is discussed and a description and illustration of the operationalisation by means of a table follows. Data collection is addressed for both Phase 1 and 2. Phase 1 focuses on the identification of the catering attributes, by means of an interview and focus groups, and Phase 2 on the questionnaire. This is followed by the discussion of the IPA, including the exploratory factor analysis. The quality of the data and the ethical considerations are addressed.

### 3.2 RESEARCH DESIGN

Research design is described as the “blueprint” of a planned investigation (Mouton, 2001:55), thus contains the plans for the collection and analysis of the research information. The research design is addressed by discussing the chosen research style and methodology, and elaborating on the case study approach and mixed method design.

### 3.2.1 Research style and methodology

A gap in the knowledge with regard to customer satisfaction measures within CE at UP and similar teaching institutions is identified in the literature consulted. The lack of empirical evidence prompts the researcher to use IPA to measure delegates' satisfaction with the catering component of CE at UP. The research approach is both exploratory and descriptive. Exploratory research is mainly conducted to gain insight and more information on a particular situation, usually of a new area of study (Fouché & De Vos in De Vos *et al.*, 2005:106). Although customer satisfaction is not a new area of study, the goal of this study is to gain additional insight into the satisfaction of the course delegates within this particular setting. Descriptive research refers to research focusing on the specific details of a situation in order to answer the questions of "why" and "how" (Fouché & De Vos in De Vos *et al.*, 2005:106). The research aims to answer the following questions: how important is each catering attribute and how well did each catering attribute perform?; and why are the delegates satisfied or dissatisfied with the catering component? The aim, with this exploratory and descriptive investigation, is therefore to measure the importance and performance of the catering attributes and thereby measuring the delegates' satisfaction with the catering component of CE at UP.

The research procedure follows a mixed methodology within a case study approach. A case study research style is chosen to explain the present situation of delegates' satisfaction with the catering component of CE at UP. This research style enables the answering of the questions of "how" and "why" (Yin, 2009:4). The study is both qualitative (Phase 1) and quantitative (Phase 2) in nature. Qualitative research is often referred to as "soft" data since it involves the collection and analysis of meanings or descriptions of situations, concepts or human feelings (Walliman, 2005:270). Quantitative research is often referred to as "hard" data as it involves the counting or statistical measuring of concepts (Walliman, 2005:270). Creswell and Clark (2011:2) state that mixed methodology concerns the collecting, analysing and mixing of qualitative and quantitative data within a single study or multiple phases of a program of study. Using this method enhances the study and facilitates triangulation, which allows for more in-depth and confident results and conclusions.

Two qualitative measuring instruments are used in Phase 1, namely an interview and two focus groups. In Phase 2 a questionnaire is used as the quantitative measuring instrument. This study was completed within a cross-sectional time frame on the premises of CE at UP in Pretoria, South Africa. Phase 1 was carried out during September to November 2010 and Phase 2 during October to November 2011. The findings reflect the opinions of people who

attended short courses at CE at UP during a specific period. Data collection consists of primary data from an interview, focus groups and a questionnaire; and secondary data from a thorough review of relevant literature (Sections 2.2 and 2.3).

### 3.2.2 Case study approach

Yin (2009:18) provides one of the most popular definitions in today's literature, stating that "a case study is an empirical inquiry that investigates a contemporary phenomenon in-depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident". The literature provides many views on the types of case studies (Stake, 1995; Mark, 1996; Yin, 2009). As Baxter and Jack (2008) suggest, these views are illustrated in table format, representing descriptions from various researchers (Table 3.1).

**TABLE 3.1: TYPES OF CASE STUDIES**

Type	Description
<b>Explanatory</b>	Used when the researcher aims to explain complex links between real-life phenomena (Yin, 2009:5)
<b>Exploratory</b>	Used when the researcher aims to explore conditions in which the phenomenon does not have a single set of outcomes (Yin, 2009:5)
<b>Descriptive</b>	Used when the researcher aims to "describe an intervention or phenomenon and the real-life context in which it occurred" (Yin, 2009:5)
<b>Collective</b>	Used when the researcher aims to make comparisons in and between cases in order to prolong theories; the focus is therefore on a group of cases (Mark, 1996:219)
<b>Intrinsic</b>	Focus on an individual case and not an extensive issue (Mark 1996:219); the purpose is therefore not to understand an abstract concept, but purely to understand the case itself (Stake, 1995 in Baxter & Jack, 2008:547)
<b>Instrumental</b>	Enables the "gaining of knowledge" by simply elaborating on a theory (Mark 1996:219); Stake (1995 in Baxter & Jack, 2008:547) adds that "it provides insight into an issue or helps to refine a theory"

Considering the definition and types of case studies, an exploratory case study method is used to better understand delegates' satisfaction with the catering component of CE at UP, and is regarded as an existing real-life phenomenon. This understanding, however, includes many related conditions such as the catering attributes and their importance and performance measures implying undecided boundaries. The case study approach answers the research questions of "how" (how important is each catering attribute and how well did each catering attribute perform?) and "why" (why are the delegates satisfied or dissatisfied with the catering component?), ideas Yin (2009:3) suggests.

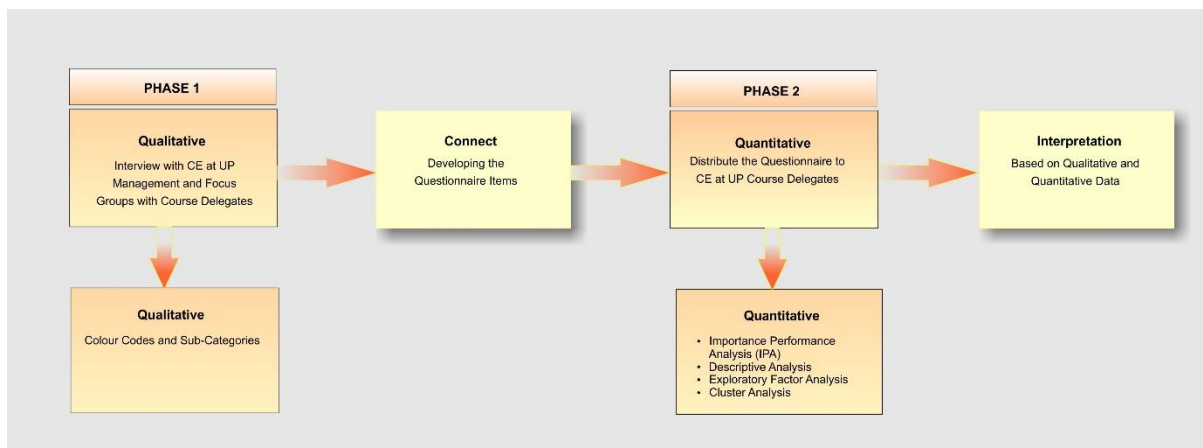
The literature also provides some concerns about using the case study approach (Yin, 2009:14). The first concern is the lack of systematic handling of data and/or systematic reporting of the results. Systematic procedures are therefore followed to guard against biased views influencing the final results and conclusions. The second concern is the scientific generalisation of a case study. Yin (2009:15) points out that generalisation to theoretical propositions and not to a population is important, thus this study expands and generalises theories, IPA theory in particular. The third concern is that case studies may take too long to complete and result in masses of documents. Considering that modern data collection can be done over the telephone or the internet, the time spent on, and amount of, fieldwork can be vastly decreased (Yin, 2009:14). Establishing time frames enables the management and control of the time spent on fieldwork and the number of associated documents.

### **3.2.3 Mixed method design**

According to De Vos (2005:357) “a combined-method study can be described as one in which the researcher uses multiple methods of data collection and analysis”. The research information comes from using the “between-method” approach that uses both quantitative and qualitative data collection methods. Avoiding the problem of insufficient data by sourcing only one set of data, the mixed method as applied enhances the results of the quantitative phase of the study since the qualitative phase of the study was conducted first. As Creswell & Clark (2011:8) note this enables obtaining more in-depth and precise information during the qualitative phase which can be used to develop the questionnaire for the quantitative phase. This was done in this study in an attempt to provide more accurate results regarding the delegate’s satisfaction.

The purpose of using mixed methods is to identify the catering attributes contributing to course delegates’ satisfaction with CE at UP’s catering component. The qualitative results from focus groups and quantitative results from questionnaires that measured the importance and performance of the catering attributes were analysed. The goal of the qualitative phase of the study is to identify the catering attributes that contribute to course delegates’ satisfaction with CE at UP’s catering component. Information comes from conducting an interview with the operations manager of CE at UP and two focus groups with participants who had attended short courses offered by CE at UP and held on their premises. The goal of the quantitative phase of the study is to use IPA to determine the importance and performance of the pre-identified catering attributes to measure the delegates’ satisfaction through using the collection of 357 questionnaires from respondents who had attended CE at UP’s short courses on their premises.

The timing and mixing of both sets of data are very important aspects of the methodology of this research. When deciding how to sequence the quantitative and qualitative data collection and analysis, the timing can either be concurrent or sequential. If the purpose of the research is to triangulate or synthesise the findings from both sets of data, then the data is collected and analysed simultaneously and the timing is thus concurrent. If, however, the purpose of the research is to explain quantitative results or to develop a survey instrument from the qualitative data, then the data collection and analysis is sequential and conducted in separate phases (Maree, 2007:269). Developing a survey instrument from qualitative data depicts an exploratory research design where the qualitative data is first collected and analysed before the quantitative data. The mixing of the two sets of data can occur during the data collection, the data analysis and/or the interpretation of the results. When using an exploratory research design, the mixing will occur at the qualitative data analysis stage and additionally at the interpretation of the results obtained from the entire study (Maree, 2007:269). Such was the procedure for the timing and mixing of data for this particular study. As illustrated in Figure 3.1 the application of an exploratory mixed method approach is part of the research design procedure applied in this study.



**FIGURE 3.1: THE RESEARCH DESIGN PROCEDURE: EXPLORATORY MIXED METHOD** (adapted from Maree, 2007:265)

Figure 3.1 illustrates the study's research design procedure for an exploratory mixed method, as adapted from Maree (2007:265). Phase 1 is the qualitative phase consisting of an interview with the operations manager of CE at UP and two focus groups with delegates attending short courses at CE at UP. It was implemented by transcribing the interview and focus group discussions and colour coding the content for analysis to emphasise categories, themes and patterns regarding prominent catering attributes. From these catering attributes, sub-categories were identified according to which the catering attributes were arranged for further

analysis in Phase 2. The questionnaire was then developed by using the catering attributes identified in Phase 1. Phase 2 is the quantitative phase which consists of the distribution of questionnaires to delegates attending short courses at CE at UP. IPA is applied, using descriptive analysis and exploratory factor analysis, to analyse the data collected from 357 completed questionnaires. Cluster analysis is applied to the demographic information obtained from the completed questionnaires to describe the delegates attending courses at CE at UP. The final conclusions and recommendations are based on an interpretation of both the qualitative and quantitative data.

Use of both quantitative and qualitative research methods produced two complementary data sets and strengthened the study through triangulation. Triangulation refers to the combination of data sources, research methods, investigators, and theoretical perspectives to resolve one research problem and leads to richer and potentially more valid interpretations (Decrop, 1999). Decrop (1999:158) states that “it limits personal and methodological biases and enhances a study’s generalisability”. To achieve data triangulation, different types of material were collected. In the qualitative phase, voice recordings were made and transcribed and relevant literature from journal articles and textbooks were used. Field notes were also written during and immediately after the interview and focus groups. In the quantitative phase, the questionnaire provided data that was used for the application of IPA. Combining these qualitative and quantitative techniques assisted in achieving method triangulation and strengthened the validity of the results of IPA. By working as a team with the study leader, facilitator and statisticians, each assisting with the interpretation of the data sets, investigator triangulation was achieved. Only one theoretical perspective, the importance performance theory, is used and theoretical triangulation is therefore not achieved (Decrop, 1999). However, by triangulating the data sources, research methods and investigators, the results of the IPA are corroborated.

### **3.3 SAMPLING PROCEDURE**

The sampling procedure involves the consideration and identification of the population, the sample and the sampling method. A population refers to a group of people, events or organisations with certain characteristics that relate to the purpose of the study. A sample refers to a small portion of the population with certain characteristics that are selected because of certain boundaries prescribed by the researcher (Strydom in De Vos *et al.*, 2005:193). These boundaries are the sample frame and are described within the context of the unit of analysis (Section 3.4). To quote Strydom (in De Vos *et al.*, 2005:194) “we study the sample in an effort to understand the population from which it was drawn.” Sampling is therefore the

process of selecting a sample from the population. The population for this study comprises all the delegates attending courses with CE at UP and the sample consists only of those delegates who met the requirements, referred to as boundaries, as prescribed in the sample frame (Section 3.4). The rationale for the sampling procedure took feasibility into account as the study had to be completed within a given period. The purpose of the research does not require the study of the entire population. By sampling the people with the desired characteristics, it is possible to invest more time, money and effort in a concentrated manner with a smaller number of participants and respondents for both research phases. This generates better quality research with more in-depth results (Strydom in De Vos *et al.*, 2005:194).

Due to the case study design of the research, it relies on the participation of specific delegates who can assist in providing insight into the catering component of CE at UP. Since purposive sampling, a non-probability sampling method illustrates the features and process of delegates' satisfaction with the catering component it is used for this particular study, hence adopting Strydom's (in De Vos *et al.*, 2005:198) recommendation. Morse (1991:127) states that purposive sampling occurs when "the researcher selects a participant according to the needs of the study". This implies the deliberate searching for participants relative to the study's feature of interest, which, in this case study, is the catering component of CE at UP and the delegates' satisfaction with the service offered. Using purposive sampling enables the collection of the desired information from the chosen participants and respondents, to specifically fill the gap in the detailed knowledge of customer satisfaction measures within CE at UP as an teaching institution and other institutions with similar functions.

In Phase 1, the operations manager of CE at UP represents the sample for the semi-structured one-to-one interview. The operations manager oversees all the operational teams including programme managers, course coordinators and trainee coordinators. It is her responsibility to be the overarching quality controller of all the operational aspects of the presentation of short courses at CE at UP. This includes negotiating agreements and maintaining relationships with the main service providers of CE at UP. For the first focus group, the delegates attending the Advanced Programme in Events Management (course number P001424) were sampled for participation. This course was first registered with CE at UP in 2008 and has an average of 12 delegates attending it every time it is presented. Between 6 and 10 participants is a good number for focus groups (Greeff in De Vos *et al.*, 2005:298). The delegates who attended this course are events managers who have previously successfully completed the introductory Events Management Course (course number P001423) or have relevant experience in the industry. The course is structured over eight modules and is presented over five weeks with



two contact days per month (CE at UP, n.d). For the second focus group, the delegates attending the Short Course on Employee Assistance Programmes (EAP's) (course number P000005) were sampled as participants. This course was registered with CE at UP in 2005 and has an average of 20 delegates attending it when being presented. The delegates who attend this course are generally individuals with a formal qualification in EAP or have several years of experience as an EAP practitioner. The course is presented over five working days, ending with an examination or final assessment on the last day (CE at UP, n.d).

In Phase 2, the questionnaires were distributed to all the delegates who attended short courses at CE at UP during the months of October and November 2011, as described in the sample frame (Section 3.4). The months of October and November are some of CE at UP's busiest months and these months provide the best opportunity to sample an estimated 250 to 350 participants (Figure 3.2).

The size of a sample is often debated in literature. The general guidelines are that if the population is relatively large, the sample should comprise a sensibly small percentage of the population. If the population is relatively small, the sample should comprise a sensibly large percentage of the population (Strydom in De Vos *et al.*, 2005:194). After consulting the available literature as well as the statisticians, the sample size was estimated to be between 6 and 10 participants for the focus groups and between 250 and 350 respondents for the completion of the questionnaires. The representativeness of the sample was also considered, meaning that the sample had roughly the same characteristics as the selected population (Strydom in De Vos *et al.*, 2005:194). Ten delegates participated in the focus groups and 357 questionnaires were collected.

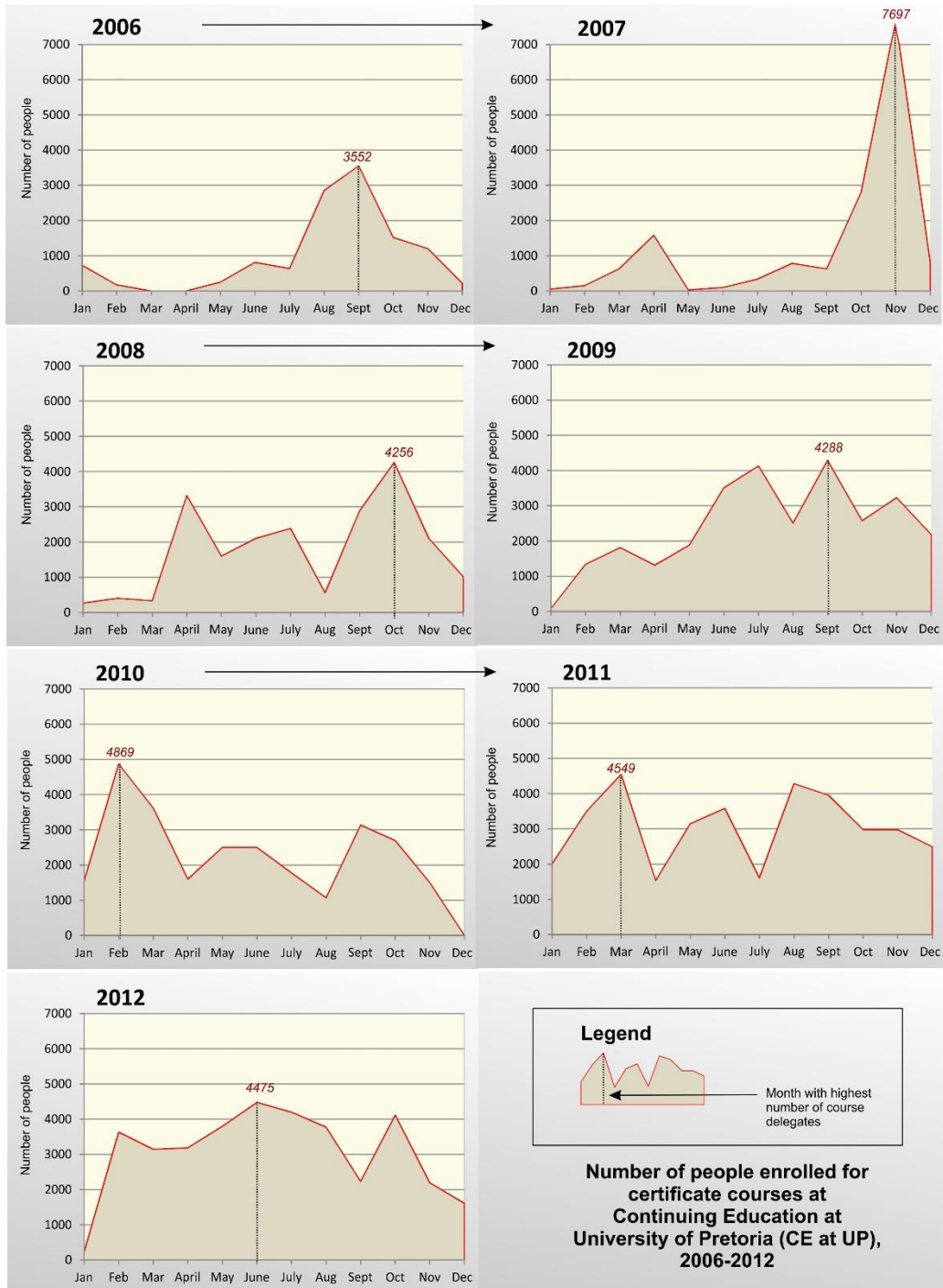
### **3.4 UNIT OF ANALYSIS**

The unit of analysis (case) refers to the people who meet the requirements for inclusion in the sample. These requirements are addressed within the sample frame as follows:

- People who have attended short courses (1 to 5 days duration)
- At the premises of CE at UP (Graduate Centre, Main Campus, University of Pretoria)
- Were present during / and consumed the teas and lunches the specific foodservice provider offered.

This sample frame identifies participants irrespective of their gender, nationality, age, qualification, ethnic group or residential location. Collecting information on their demographic characteristics came about during Phase 2 through completion of the questionnaire.





**FIGURE 3.2: NUMBER OF DELEGATES REGISTERED PER MONTH FOR THE PERIOD 2006 TO 2012 (Source: CE at UP, n.d)**

### 3.5 MEASURING INSTRUMENTS

The objective of Phase 1 is to identify the catering attributes to be used in the quantitative phase (Phase 2). Two qualitative measuring instruments are used in Phase 1. A semi-structured one-to-one interview (Addendum B) was conducted with the operations manager of CE at UP. Two focus groups (Addendum D) were held with participants identified from the sampling procedure.

In Phase 2 a popular quantitative measuring instrument, a questionnaire (Addendum H), was compiled for distribution to the sampled participants. For the collection of information in Phase 1, the questionnaire developed uses a 4-point Likert type rating scale to measure the importance and performance of the catering attributes to measure the delegates' satisfaction with CE at UP's catering component. The questionnaire consists of the following three segments:

#### **Demographic Information**

Questions 1–7 pertain to the demographic information relating to the age, gender and ethnic group of the respondents. Respondents are asked to tick (x) the appropriate box and / or specify the required information where necessary.

#### **Importance**

Questions 8–32 pertain to the importance of the 25 catering attributes within the short course environment. Respondents are asked to tick (x) the box that best describes their opinion on the rating scale of (1) extremely important, (2) important, (3) slightly important, (4) not important. With this section the participants indicate which catering attributes they deem as important or not important when attending short courses at CE at UP.

#### **Performance**

Questions 33–57 pertain to the performance of the same 25 catering attributes within the short course environment. Respondents are asked to tick (x) the box that best describes their opinion on the rating scale of (1) excellent, (2) good, (3) fair, (4) poor. With this section the participants indicated which catering attributes they feel CE at UP performs well on or does not perform well on.

### 3.6 DATA COLLECTION

Both qualitative and quantitative data collection methods are used. Qualitative data collection methods include participant observation, interviewing and focus groups, document study and secondary analysis. In Phase 1, qualitative data comes from interviewing and focus groups.

Interviewing is an interactive method that allows the researcher to deduct meaning from a conversation. Due to the nature of the research design, a semi-structured one-to-one interview was conducted with the operations manager of CE at UP. Focus groups are a form of interviewing that draw on exploration, discovery, context, depth and interpretation (Greeff in De Vos *et al.*, 2005:287). Two focus groups were conducted with delegates sampled according to the sample frame. These methods are discussed in detail in Section 3.8.

Quantitative data collection methods include questionnaires, checklists, indexes and scales. A questionnaire can be defined as “a set of questions on a form which is completed by the respondent in respect of a research project” (New Dictionary of Social Work, 1995:51). Questionnaires, that were developed using the data collected in Phase 1, are used to collect the quantitative data in Phase 2. The development, procedure and analysis of the questionnaire are discussed in detail in Section 3.9.

### **3.7 OPERATIONALISATION**

Table 3.2 illustrates the operationalisation of this study. The six columns indicate the research objectives, concepts, dimensions, indicators, measurements and analysis types. The five research objectives are listed and examined according to the relevant concepts, dimensions, indicators, measurements and analysis types.

### **3.8 PHASE 1: THE INTERVIEW**

Phase 1 concentrates on identifying the attributes used for IPA being based on two qualitative techniques. One of the techniques is a semi-structured one-to-one interview (Addendum B) conducted with the operations manager of CE at UP. The interview was organised around the catering component of CE at UP, which was the particular area of interest for this study. It still allows for flexibility in scope and depth (Greeff in De Vos *et al.*, 2005:292).

**TABLE 3.2: OPERATIONALISATION**

Research Objective	Concept	Dimension	Indicator	Measurement	Analysis Type
To identify the catering attributes	Catering attributes	Sensory	Fresh ingredients Good taste Correct food temperature Taste variety Colour variety	Questionnaire (Addendum H): See questions on catering attributes (Questions 8-12 & 33-37)	Transcription and analysis of interview (Addendum B) and focus group discussions (Addendum D)
		Presentation	Clean utensils Dishes in which the food is served Portion control	Questionnaire (Addendum H): See questions on catering attributes (Questions 13-15 & 38-40)	
		Environment	Social dining room layout Background music Parking Location Cleanliness	Questionnaire (Addendum H): See questions on catering attributes (Questions 16-20 & 41-45)	
		Menu Variety	Cater for special diets Beverage variety Healthy food options Buffet variety	Questionnaire (Addendum H): See questions on catering attributes (Questions 21-24 & 46-49)	
		Cultural Preferences	Catering for special diets served separately Cater for variety of cultures Three course meal Larger portions	Questionnaire (Addendum H): See questions on catering attributes (Questions 25-28 & 50-53)	
		Service	Trained staff Professional service Friendly staff Timeous service	Questionnaire (Addendum H): See questions on catering attributes (Questions 29-32 & 54-57)	
To describe the delegates attending short courses at CE at UP	Course delegates	Demographic information	Gender Age Highest qualification Ethnic group Residential area	Questionnaire (Addendum H): See questions on demographic information (Questions 1-7)	Application of cluster analysis
To determine the importance of each catering attribute when attending CE at UP course	Catering attributes	Importance		Questionnaire (Addendum H): See questions and ranking of attributes (Questions 8-32)	Using descriptive analysis and exploratory factor analysis in the application of the IPA
To determine how each catering attribute performed during attendance of CE at UP course	Catering attributes	Performance		Questionnaire (Addendum H): See questions and ranking of attributes (Questions 33-57)	Using descriptive analysis and exploratory factor analysis in the application of the IPA
To interpret the IPA to measure customer satisfaction	Customer satisfaction	Four quadrants of the IPA	Concentrate here Keep up the good work Low priority Possible overkill		Interpretation of the IPA

### **3.8.1 Description and purpose of the interview**

The interview with the operations manager was conducted in the marketing boardroom of CE at UP in the Graduate Centre on 10 September 2010. The semi-structured one-to-one interview allowed the participant to share more closely, and encouraged more flexibility. A set of pre-determined questions were prepared on an interview schedule (Addendum B) to guide the interview. The interview schedule is a questionnaire to guide the interview and assists the researcher to focus on the information required. The questions at all times are open-ended. As this method is very active in nature, and the participant can get very involved with the discussion, an acceptable amount of deviation from the schedule is controlled and managed. The interview aimed to gain a detailed representation of the participant's beliefs and perception of the catering component of CE at UP, as Greeff (in De Vos *et al.*, 2005:296) thinks it should be. The interview covered the operations manager's feedback on the current Service Level Agreement between CE at UP and the foodservice provider; CE at UP's expectations of the foodservice provider; the nature of the relationship between CE at UP and the foodservice provider; and the role of CE at UP in managing the catering component. The participant was also asked to list and rate important attributes for a positive catering experience and give suggestions to the foodservice provider from a management perspective.

### **3.8.2 Motivation for the use of an interview**

One-to-one interviews are labelled as the predominant mode of data collection in qualitative research. It is a very useful way of getting large amounts of data quickly and is an effective way of obtaining depth in data (Greeff in De Vos *et al.*, 2005:287). The interview with the operations manager of CE at UP, was conducted based on the interest of her views regarding the catering component of CE at UP, the delegates' satisfaction with it, and the relationship with the foodservice provider. The involvement of personal interaction, which necessitates cooperation, can be a limitation of the interview method. Participants might be unwilling to share or the researcher may ask questions that do not evoke the anticipated responses from participants (Greeff in De Vos *et al.*, 2005:287). During this interview however, the operations manager was very forthcoming and cooperative, and valuable information was gained from the interview.

### 3.8.3 Procedure of the interview

The interview procedure started with a letter to the operations manager to obtain her consent for participating in the interview (Addendum A). The letter explained the purpose and procedure of the study as well as the voluntary nature and confidentiality of the participation. The letter also explained the use of a voice recorder and asked the operations manager for her informed consent in this regard. In order to determine the overall issue to be addressed during the interview, a focused literature study was conducted to better understand the construct, namely the catering component. The interview schedule (Addendum B) covers a broad range of questions as identified beforehand. At the beginning of the interview, the voice recorder was switched on and the operations manager was once again reminded that the interview was being recorded. Questions were held neutral and jargon and ambiguous questions were avoided to eliminate confusion. Open-ended questions asked allowed for more unrestricted answers from the operations manager. The questions however, were focused in order to gain information for the purpose of the study. Following Greeff's (in De Vos *et al.*, 2005:296) suggestion, the questions were arranged in the most appropriate sequence, according to the most logical order, and the more sensitive questions were placed last.

### 3.8.4 Interview themes

For the interview, the following themes were prepared and discussed:

- The current Service Level Agreement between CE at UP and the foodservice provider
- CE at UP's expectations of the foodservice provider
- The nature of the relationship between CE at UP and the foodservice provider
- The role of CE at UP in managing the catering component
- Listing and rating important attributes for a positive catering experience
- Suggestions to the foodservice provider.

## 3.9 PHASE 1: THE FOCUS GROUPS

Phase 1 concentrates on identifying the attributes that are to be used in the IPA and it is based on two qualitative techniques. One of the techniques comprises two focus groups (Addendum D). Focus groups can be defined as group interviews that aim to understand how people feel about a particular topic. Participants were selected based on having certain common characteristics as outlined in the sample frame (Greeff in De Vos *et al.*, 2005:299).

### **3.9.1 Description and purpose of the focus groups**

The focus group discussions aim to provide an environment in which all members of the group can discuss the area of investigation with one another. The group members are involved as participants in discussing the catering component of CE at UP. Participants are allowed to agree or disagree with each other and ask each other questions, providing for a broad discussion as well as an in-depth discussion along with the researcher. The role of the researcher is to act as a moderator to introduce new elements of the area of interest, probe for deeper understanding of statements and gain explanations for differences in opinions (Boddy, 2005). A focus group schedule (Addendum D) is used to guide the focus groups in respect of the process and important aspects to remember. The focus group schedule also contains a list of pre-determined catering attributes identified from the relevant literature which assisted the researcher in probing participants for further elaboration on questions. The purpose of the data collection methods in Phase 1, was therefore to elaborate on the catering attributes and identify the catering attributes of importance to the purpose of the study. The final catering attributes identified (Section 4.3.3) after the completion of Phase 1, are used in the application of the IPA in Phase 2.

### **3.9.2 Motivation for the use of focus groups**

The focus groups Phase 1 in this mixed method study provide necessary information for the development of the questionnaire for Phase 2 and validate the constructs (catering attributes) used prior to obtaining the quantitative measures (questionnaire). This technique allows for the investigation of a multitude of perceptions from participants, in the defined area of interest or situation (Greeff in De Vos *et al.*, 2005:300), which, in this case, is the catering component of CE at UP. The focus groups depend on interaction within each group to create a comprehensive database and to assist the researcher in understanding the delegates' views of the catering attributes and the catering component itself. Focus groups require researchers who are skilled in conducting group sessions. Bias may be a problem when only the active participants' expressions are voiced (Greeff in De Vos *et al.*, 2005:299). The groups, however, did consist of willing and able participants who all shared their thoughts and experiences openly. The study leader provided the necessary coaching before the focus groups and meaningful discussions with valuable outcomes were achieved.

### 3.9.3 Venue for the focus groups

The first focus group with the delegates who had attended the Advanced Programme in Event Management was held on 28 October 2010 in the seminar room of the Tourism House on the Main Campus of the University of Pretoria. The venue was set up in a boardroom style where the participants and the researcher sat around a table to converse in an intimate and relaxed setting. The second focus group with the delegates who attended the Short Course on Employee Assistance Programmes was on 18 November 2010 in Room 1-18 in the Economics and Management Sciences Building also on the Main Campus. The room is a theatre style room which does not allow for much intimacy, but the participants sat in a group in the front rows where they could comfortably join the researcher in the discussion.

### 3.9.4 Procedure of the focus groups

An informed consent form (Addendum C) was prepared for both focus groups. Informed consent is necessary from a research point of view as gathering accurate and complete information is essential. The purpose of informed consent is to inform potential subjects or their legal representatives about the nature of the information required. This document should detail the goal of the investigation, the procedures that will be followed during the entire investigation, the possible advantages, disadvantages and dangers to which participants may be exposed, as well as the credibility of the researcher (Strydom in De Vos *et al.*, 2005:59). To gain informed consent from the participants they should know:

- That they are participating in research
- The purpose of the research
- The procedure of the research
- The voluntary nature of participation
- That the information shared during participation is confidential (Groenewald, 2004).

During the planning of the focus groups, the purpose and outcomes of the research project are constantly considered. The general manager of CE at UP and the University of Pretoria's Ethical Committee granted permission to conduct the focus groups. A timeline for the entire research project was set and the procedure to select the participants for the focus groups was determined. The questions to be asked during the focus groups were written in the focus group schedule (Addendum D), and a recruitment plan was developed to invite delegates to participate. This involved discussion with the relevant lecturers and possible participants to arrange and schedule the focus group events. Participants were selected according to the sample frame. The location, dates and times for each session were set. The analysis plan was



designed along with the facilitator and study leader. The role of the facilitator was clearly defined and the final questions were determined. Arrangements for the location and equipment were finalised. After each focus group, the field notes and voice recordings were organised and studied. Conclusions were drawn and the final catering attributes were identified for use in the application of the IPA in accord with the relevant advice from Greeff (in De Vos *et al.*, 2005:303).

### **3.9.5 Focus group themes**

For the focus groups, the following themes were prepared and discussed:

- The delegates' feelings towards the catering component – whether they view it to be an important component when attending short courses or not
- The delegates' expectations of the catering component when attending short courses
- The delegates' experience of the catering component when attending previous short courses
- What catering attributes the delegates view as important in the creation of a positive catering experience.

### **3.10 DATA ANALYSIS AND INTERPRETATION OF THE INFORMATION FROM THE INTERVIEW AND FOCUS GROUPS**

For the semi-structured one-to-one interview, extensive field notes were used, along with the voice recordings of all communication. After the interview with the operations manager the researcher immediately wrote about her impressions what she heard, saw, experienced and thought, during the interview. The field notes included both empirical observations and interpretations. Guidelines suggested from the literature were used to accurately compile the written field notes. The researcher got straight to the task of recording the information gleaned and did not talk about her observations until this was done. A quiet place to write was chosen and adequate time was set aside to complete the notes. The events were sequenced in the order they occurred and allowed the events and conversations to flow in a coherent manner for optimal understanding (Greeff in De Vos *et al.*, 2005:298).

An assistant facilitator was employed to take detailed field notes during the focus groups. These field notes included aspects such as, the seating arrangements, the order in which participants spoke, non-verbal behaviours, striking themes that stood out and she highlighted the conversations. For both the interview and the focus groups, the researcher asked the participants' permission to record their conversations on a voice recorder and each one

agreed. The voice recorder was used to record the entire interview and focus groups after which the tapes were transcribed for closer analysis, following advice from the literature (Greeff in De Vos *et al.*, 2005:298). The content of the transcribed tapes and field notes were analysed by means of colour coding, emphasising categories, themes and patterns regarding prominent catering attributes. From these catering attributes, sub-categories were identified, according to which the catering attributes were arranged for further analysis in Phase 2 (Section 4.3.3).

The literature provides a guideline for the process of qualitative data analysis (Strydom & Delpont in De Vos *et al.*, 2005:334). The recording of data was carefully planned and was appropriate to the setting and the participants and all methods of recording carried the participants' consent. The data collection and preliminary analyses necessitated a twofold approach to build a coherent interpretation of the data and ensure that data collection and analysis coincided. First, the data was analysed on-site during data collection (field notes), and secondly again off-site after a period of data collection allowing time for the transcription of voice recordings. Once off-site, the data was managed by taking inventory of all the data that had been collected. The field notes, tapes and transcripts were documented to make sure that the data was complete and backup copies of each were filed. In order to explore the entire database, all the data collected from Phase 1 were carefully studied again, and additional memos were written in the margins of field notes and transcripts. Strydom and Delpont (in De Vos *et al.*, 2005:334) recommends this procedure.

Categories, themes and patterns were then generated. The purpose of this was to make sense of the data by taking the qualitative information apart and look for categories, themes or dimensions of information. The categories that developed were internally consistent but distinct from one another. Although this process was quite comprehensive, it could not be assumed that the analysis of the information from the focus group was the same as that of the transcribed individual interview. The focus group analysis combined many different elements of qualitative research and added the intricacy of group interaction. The aim of the analysis of the focus groups was therefore to look for trends and patterns that reappeared within a single focus group or between the two focus groups (Strydom & Delpont in De Vos *et al.*, 2005:337). Colour coding was used to identify catering attributes that formed patterns throughout the data. Six different sub-categories of attributes pertaining to the catering component were identified from the preceding literature review, namely: 1) Sensory aspects (such as taste and aroma); 2) Presentation (how the food is served), 3) Environment (where the food is served); 4) Menu variety; 5) Cultural preferences; and 6) Service. These categories were used to identify the final catering attributes that were used in the development of the questionnaire

(Phase 2). The data was presented in tabular form as a summary (Strydom & Delpont in De Vos *et al.*, 2005:338) of the catering attributes extracted from the data analyses. The results of this step are given in Chapter 4 (Section 4.3.3).

### **3.11 PHASE 2: THE QUESTIONNAIRE**

A questionnaire can be defined as a set of questions on a form which are completed by the respondents in respect of a research project (Delpont in De Vos *et al.*, 2005:166). Walliman (2005:281) states that a questionnaire enables the researcher to organise questions and get replies without having personal contact with the respondents. It is therefore a very flexible method of data collection for qualitative and quantitative information. Questionnaires can be delivered to the respondents in two separate ways, personally and by post. For the purpose of this study the questionnaires (Addendum H) were delivered personally to the respondents. The advantages of personally delivering the questionnaires were that the researcher could assist the respondents with difficult questions, convince and remind them to complete the questionnaires fully. In this manner the researcher was more likely to retrieve all the questionnaires that were handed out (Walliman, 2005:282).

#### **3.11.1 Description and purpose of the questionnaire**

Delpont (in De Vos *et al.*, 2005:167) states that there are five types of questionnaires. A mailed questionnaire, which is sent off by mail in the hope that the respondent will complete and return it, however, this method usually has a very low response rate. Telephonic questionnaires can be done through a person-to-person interview over the phone and has a high response rate as respondents do not easily refuse to take the call if feel competent to answer the questions. With self-administered questionnaires the researcher hands the questionnaire to the respondent but stays in the background in case problems are experienced. The procedure with questionnaires delivered by hand is quite similar except that the researcher does not remain with the respondents and only collects the questionnaires after completion. As mentioned, this is the method used for this particular study. Questionnaires may also be administered to groups although each individual still has to complete their own questionnaire. This method often decreases the cost and time spent on administering questionnaires (Delpont in De Vos *et al.*, 2005:167).

Mullins and Schultz Spetich (1987) state that by adding additional questions to the questionnaire, either open- or closed-ended, more information can be gained, such as demographic characteristics and group level characteristics. Information about past

experiences can also be used to create graphs of different groups for comparison (Mullins & Schultz Spetich, 1987). Questions regarding the respondents' demographic characteristics are therefore included in the questionnaire this study's participants completed. However, the main purpose is to apply IPA and assess the importance and performance of each catering attribute as identified in Phase 1.

### **3.11.2 Development of the questionnaire**

The principles of questionnaire construction suggested by Delport (in De Vos *et al.*, 2005:170) were followed. Before deciding on the nature of the questionnaire, there had to be clarity on exactly what information was to be obtained. Information to answer the following two questions was required: 1) How important is each foodservice attribute when attending CE at UP courses? and 2) How well did each foodservice attribute perform during attendance of CE at UP courses? A covering letter (Addendum G) that introduced the study and explained the questionnaire to the respondents accompanied the questionnaire (Addendum H). Clear and accurate directions and instructions were given on how to answer each question. The format of the questionnaire was clear, neat and easy to follow, and each question was numbered. Each question contained only one thought and was relevant to the purpose of the questionnaire as Delport (in De Vos *et al.*, 2005:170) advises.

In order to test the suitability and achievability of the questionnaire, a pilot test was conducted (Addendum E). Sample questionnaires, including a list of additional questions related to the user-friendliness of the questionnaire were distributed to five course coordinators at CE at UP who often dined at the specified foodservice provider along with the course delegates. Several features of the pilot study were taken into account. The study of the available and relevant literature assisted in the planning and the execution of the study. Books, journals, dissertations and theses were all consulted as suitable literature sources. The advice and suggestions from experienced experts in the particular field of study, from the Consumer Science Department at the University of Pretoria, were accommodated and this led to successful development of the questionnaire. The feasibility of the distribution, completion and collection of the questionnaires was borne in mind by looking at the practical situation where these actions would take place. The pilot study tested the appropriateness and potential success of the measuring instrument (Strydom in De Vos *et al.*, 2005:206). The answers and suggestions given by the pilot participants were taken into account and the questionnaires were only presented to the full sample after some necessary modifications were made.

In order to ensure completion of the questionnaires, they were distributed to a captive audience (course delegates attending courses at CE at UP), and time was allowed for completion and immediate collection followed. The questionnaire was divided into three different segments: demographic information, importance of the 25 catering attributes, and performance of CE at UP on the 25 catering attributes. Item numbers were incorporated in order to facilitate the data analysis later on (Delpont in De Vos *et al.*, 2005:170). A numerical scale, which is a type of ordinal scaling, was used. Ordinal scaling requires respondents to place the items presented in rank order according to some criterion (Delpont in De Vos *et al.*, 2005:181). Thus the importance and the performance of the catering attributes were both assessed during the delegate's attendance of a CE at UP course. A four-point rating scale of "extremely important" (1), "important" (2), "slightly important" (3) and "not important" (4) was used to assess the importance of catering each attribute. A four-point rating scale of "excellent" (1), "good" (2), "fair" (3) and "poor" (4) was used to assess the performance of each catering attribute.

### **3.11.3 Procedure: Distribution and collection of the questionnaire**

After the development of the questionnaire, and prior to the successful completion of the pilot study, the questionnaire was submitted to the Ethical Committee of the University of Pretoria for ethical approval. The prescribed guidelines were followed and confirmation followed that the questionnaire was approved and that data collection could commence. Before commencing with the distribution of the questionnaires, approval from the general manager of CE at UP too was endorsed. A formal letter (Addendum F) was addressed to the general manager at the organisation explaining the purpose and objectives of the study as well as the data collection plan, thus the need for completion of a questionnaire. The general manager was given a draft of the questionnaire and an opportunity to voice her concerns and offer suggestions. These were considered and only once the questionnaire was finally approved did its distribution commence.

The distribution process started by having a meeting with all the course coordinators working with short courses at CE at UP in order to introduce them to the study and explain the procedure and purpose of the study. The majority of the coordinators volunteered to assist with the distribution of the questionnaires. Each of the coordinators were given several questionnaires, based on the number of delegates attending courses each week, along with clear instructions on how and when to distribute them for completion and for returning them afterwards .

The instructions were as follows:

- Questionnaires were to be distributed only to delegates who were attending courses at CE at UP when held at the University of Pretoria's Graduate Centre
- Questionnaires were only to be given to delegates whose teas and lunches were served by the previously specified foodservice provider
- Questionnaires were to be distributed along with CE at UP's standard forms titled 'Course and Lecturer Evaluation' at the end of each course during the period September to December 2011
- The researcher would collect the completed survey forms from each coordinator's office on a weekly basis.

The questionnaires were distributed at the end of each short course, along with CE at UP's standard evaluation forms. The coordinators were briefed on monitoring the completion of the questionnaires and collected the questionnaires along with the standard CE at UP questionnaires on the last day of each short course. Continuous distribution and collection of the questionnaires took place from 5 October 2011 to 25 November 2011. In total, 357 completed questionnaires were collected.

#### **3.11.4 Data analysis of the demographic data and interpretation of the questionnaire**

The study made use of descriptive analysis, as advocated (Chu & Choi, 2000) and data was subjected to providing simple frequencies, and calculated mean ratings and standard deviations from data related to the respondents' demographic profiles and the 25 catering attributes. The IPA procedure was applied and the mean ratings from the descriptive analysis on the catering attributes were plotted on the IPA grid. When applied in the context of the IPA, cross-hairs refer to the placement of the vertical and horizontal axis on the grid. Using the mean ratings of importance and performance data, cross-hairs were calculated to allocate the derived catering attributes to the four quadrants of the IPA. Importance is shown on the vertical axis and performance on the horizontal axis. This was followed by first applying exploratory factor analysis with VARIMAX rotation (Hu *et al.*, 2009) and then cluster analysis using the demographic information of the respondents. These analyses are explained in more detail in Section 3.12.3.

### **3.12 THE IMPORTANCE PERFORMANCE ANALYSIS**

The application of the IPA started by identifying the catering attributes that are relevant to the case study conducted. This was done by reviewing the relevant literature, conducting an

interview with the operations manager of CE at UP and two focus groups with course delegates. These catering attributes were used to develop a questionnaire to rate the importance and performance of each catering attribute. The IPA measured the delegates' customer satisfaction with the catering component of CE at UP. To successfully apply and interpret the IPA, two statistical techniques were used to explain the results obtained from the database generated from the questionnaires. Descriptive analysis (Section 3.12.1) and exploratory factor analysis, a multivariate technique, was applied with VARIMAX rotation. Multivariate analysis can be described as the group name for "all statistical methods that simultaneously analyse multiple measurements on each individual or object under investigation" (Hair *et al.*, 1995:5). Multivariate analysis can therefore be considered as any simultaneous analysis of more than two variables. Many multivariate techniques are extensions of univariate analysis, which is the analysis of single-variable distributions, and bivariate analysis, which is cross-classification and correlation analysis (Hair *et al.*, 1995:5).

### **3.12.1 Descriptive analysis**

Descriptive analysis involve the measurement of location, such as the mean, median and mode; dispersion of variability, such as variance, standard deviation, range and quartile deviation; and the measurement of shape, such as skewness and kurtosis (Cooper & Schindler, 2008:427). Kruger, De Vos, Fouché & Venter (in De Vos *et al.*, 2005:233) define mean ratings as "the sum of the measurements divided by the number of measurements". It is therefore influenced by both the magnitude of the individual measurements and by the number of measurements in the set. A mean specifies the centre point of the distribution and is the most stable and versatile measure of central tendency (Kruger *et al.* in De Vos *et al.*, 2005:233). The IPA procedure is applied and the mean ratings from the descriptive analysis on the catering attributes are plotted on the IPA grid. When applied in the context of the Importance Performance Analysis, cross-hairs refer to the placement of the vertical and horizontal axis on the grid. Using the mean ratings of the importance and performance, cross-hairs were calculated to separate the derived catering attributes into the four quadrants of the IPA. Importance is depicted on the vertical axis and performance on the horizontal axis (Section 2.5).

### **3.12.2 Exploratory factor analysis**

Exploratory factor analysis with VARIMAX rotation was applied to the data obtained from the questionnaires (Hu *et al.*, 2009). Factor analysis can be defined as a statistical approach used to analyse interrelationships among a large number of variables and to explain these variables



in terms of their common underlying dimensions, known as factors. The goal was to condense the information contained in a number of original variables (catering attributes) into a smaller set of variables, called factors, and to do so with a minimum loss of information (Hair *et al.*, 1995:16). Costello and Osborne (2005) add that exploratory factor analysis (EFA) “is a complex procedure with few absolute guidelines and many options”. Field (2013:681) states that factor loadings are a gauge of the importance of a given variable to a given factor. Most variables have high loadings on the most important factors and small loadings on all other factors which makes interpretation difficult. Factor rotation is therefore necessary to discriminate between factors (Field, 2013:679). A survey of a two-year period in PsycINFO yielded over 1700 studies that used some form of exploratory factor analysis. More than 50% used VARIMAX rotation which is an orthogonal method that produces unrelated factors (Costello & Osborne, 2005).

Field (2013:677) states that not all factors are retained in factor analysis and a process is therefore necessary to decide how many factors to keep. This is called extraction. One of the most commonly used methods to determine factor retention is by looking at the eigenvalues. Eigenvalues associated with a variable indicate the importance of that factor and therefore only factors with large eigenvalues (larger than 1) are retained (Field, 2013:677). By calculating the eigenvalues during the factor procedure, five factors were initially retained for this study (Section 4.5.2). Based on the objectives of the study, the pre-determined sub-categories of the catering attributes and the information gathered from the literature review, a further two factors were eliminated, and three factors were ultimately retained. The catering attributes within each factor and their mean ratings were derived from the factor analysis (Section 4.5.2). After carefully studying the literature on the catering attributes within each factor, the factors were allocated these names: Factor 1: Presentation and Sensory; Factor 2: Menu and Cultural Aspects; Factor 3: Service. Cross-hairs, using the mean ratings of the importance and performance, were calculated to locate the derived catering attributes to the four quadrants of the IPA. For each factor, the importance was depicted on the vertical axis and the performance on the horizontal axis (Section 4.5.2).

Once the three factors were retained, Cronbach alpha was calculated to determine the reliability of the scale (Section 4.5.2). Reliability refers to a measure consistently reflecting the construct that it is measuring. Cronbach’s (1951) measure is loosely equivalent to creating two sets of items in every way possible and computing the correlation coefficient for each split. The average of these values is equivalent to Cronbach’s alpha. Cronbach’s alpha coefficient is one of the most important and universal statistics in research involving test construction and use (Cortina, 1993) and is known as a quality indicator of test scores (Sijtsma, 2009).



### 3.12.3 Cluster analysis

When delegates register for short courses at CE at UP, they have to complete a standard enrolment form, available on-line or as a manual form. Some demographic information is required on these forms, such as date of birth (age), gender and highest qualification. Delegates are also asked for a physical address, but not necessarily that of their residence. International delegates may therefore give the address of their local accommodation without specifying their normal country of residence. This data from the forms is captured when enrolling delegates, but the data is not processed further into more usable data. Wanting to overcome this gap in the knowledge about CE at UP's delegates, cluster analysis was applied to identify the traits of the delegates who attend short courses at CE at UP. However, the more significant objective was to identify commonalities with regard to customer satisfaction among the clusters. Therefore, based on the three factors retained during factor analysis, average factor scores were calculated for each respondent (input data). This means that the socio-cultural characteristics of the course delegates within each of the importance and performance clusters could be examined and conclusions and recommendations about their customer satisfaction could be drawn.

Cluster analysis can be defined as an analytical technique for developing meaningful sub-groups of individuals or objects. The goal is to classify a sample of units into a small number of mutually exclusive groups based on the similarities within the units. The groups are however, not predefined, but are identified by applying cluster analysis (Hair *et al.*, 1995:16). Cluster analysis was therefore applied to identify sub-groups within the sample using demographic data. The demographic observations obtained from the questionnaires were meaningless unless classified into manageable groups. Three clusters were identified on the average mean scores for importance and three clusters calculated on the average mean scores for performance (Section 4.4). This application enabled the identification of the demographic profile of the three importance and performance clusters and displayed customer profiles according to demographic information of gender, age, qualification, ethnic group and country of residence. This data reduction procedure objectively reduced the information from the entire sample to information about specific, smaller sub-groups (Hair *et al.*, 1995:424) and observations and conclusions could be made from the customer profiles. From these observations and conclusions, recommendations would be made to CE at UP concerning the management of the catering component.

### **3.13 QUALITY OF THE DATA**

The quality of the data in Phase 1 is addressed according to soundness and trustworthiness and in Phase 2 according to the validity and reliability.

#### **3.13.1 Phase 1: Soundness and trustworthiness**

De Vos (2005:346) refers to the “truth value” of one’s study when considering its soundness and trustworthiness. Credibility, transferability, dependability and conformability are the four constructs of the “truth value” that are used for the qualitative phase. Credibility refers to the demonstration that the study is, in fact, conducted in a manner that ensures accurate identification and description of the subject. The study’s assumptions, delimitations and limitations are clearly indicated (Section 1.9) to set some necessary boundaries for the purpose of the study, as De Vos (2005:346) explains.

The aim of transferability is to establish the level of applicability of one set of findings to another context by focusing on the investigator who makes the transfer. Other researchers conducting similar studies can then determine if the case described can be generalised for future research or not (De Vos, 2005:346). To increase the transferability of this study, the conceptual framework illustrates this point (Figure 2.3), when it focuses on the theoretical perspective of the study and the parameters surrounding it. Dependability refers to attempts that are made to account for changing conditions in the chosen setting as well as the possible changes in the design of the research (De Vos, 2005:346). The researcher, the study leader and statisticians became aware of this issue during regular discussions between them and possible and necessary changes in the research design and methodology were made to accommodate any neglect of it. Conformability refers to the question whether the data confirms the general findings and leads to any implications. This allows for the removal of some intrinsic characteristics of the researcher, such as objectivity, and places the focus on the data itself (De Vos, 2005:347).

#### **3.13.2 Phase 2: Validity and reliability**

The quality of the quantitative data is controlled by considering internal and external validity. Internal validity is determined by the level of sophistication of the design and the extent of control. External validity is determined by the extent of legitimate generalisability of the results (Walliman, 2005:294). In order to maintain internal validity, the researcher adheres to the following warnings given by Walliman (2005:294). Testing was limited to decrease the chance

of extreme results to get closer to the mean, called statistical regression. Appropriate measuring instruments are used to avoid bias due to faulty or inappropriate measuring instruments. The selection of respondents was done correctly to avoid bias created by wrongful sampling. Internal validity was also achieved by using illustrations and diagrams during the data analysis phase. The conceptual framework (Figure 2.3) illustrates and enhances the relevant explanations (Riege, 2003). In order to maintain external validity, sampling was done in such a way to increase the ability to generalise the results to the whole population being studied. Respondents did not have too much time (15 minutes) to complete the questionnaires which decreased the possibility of manipulated results. Extraneous factors were monitored to minimise the effects on the generalisability of the results (Walliman, 2005:294). External validity was also achieved by comparing the evidence with that found in the relevant literature during the data analysis phase. A thorough literature review was conducted for the purpose of comparison (Yin, 1994:5).

Delpont (in De Vos *et al.*, 2005:160), whose work is used to explain that this study took cognizance of validity, states that validity is a broad term and should be addressed by attending to the four most commonly used categories of validity, which are content, face, criterion and construct validity. Content validity refers to the representativeness of the research content. This implies that a valid measuring device would deliver a representative assessment of the research content as a whole. It was therefore important to ensure that the questionnaire was adequately developed and that the IPA was applied correctly to measure the importance and performance of the catering attributes and the customer satisfaction as a whole, as Delpont, (in De Vos *et al.*, 2005:160) advises. A thorough literature review was undertaken to ensure that the IPA was a suitable theory for the purpose of the study (Section 2.2).

Although face validity is believed to be the least scientific and very subjective, researchers agree that the “appearance” of the measuring instrument’s relevance is very important. Respondents may not wish to participate in a study which seems to have an irrelevant measuring instrument. Care was taken in the application and representation of the IPA to ensure that it measured what the study set out to measure as outlined in the research objectives (Delpont in De Vos *et al.*, 2005:161). Although criterion validity is more objective, it involves multiple measurements using external criteria against which to compare the scores on an instrument (Delpont in De Vos *et al.*, 2005:161). This study did not make use of external criteria for the application of the IPA but rather relied on the data gathered during the qualitative phase of the study. Construct validity involves determining the effectiveness of a measuring instrument, looking at both the functions and capabilities of the measuring instrument as well as the underlying theory (Delpont in De Vos *et al.*, 2005:162). This is achieved in this research

as a chain of evidence was established during the data collection phases. In Phase 1, field notes were written and voice recordings were transcribed. All the questionnaires completed in Phase 2 were filed along with the data from Phase 1 for future reference and for record-keeping purposes.

Reliability refers to the consistency or stability of the measurement procedure. This implies that a reliable measurement procedure will produce identical results when applied in other settings using the same variables. The results will only change once the variables change (Delpont in De Vos *et al.*, 2005:162). In order to increase reliability, all constructs are clearly conceptualised by theoretically defining each construct (Section 1.11). The conceptualisation for this study is represented by means of an illustration, identifying and defining each construct that was measured. An increased level of measurement can also increase reliability, as indicators at higher levels are more precise and reliable. The study therefore aims to measure the importance and performance measures at the most precise level. Reliability can also be increased by using multiple indicators of a variable, thus using more than one indicator to measure a single aspect of a variable. By using importance and performance indicators, each aspect of the variables is measured in two separate ways. A pilot test was done to test the measure for Phase 2 (questionnaire) before applying the final version. Draft questionnaires were given to a number of pilot test respondents before distributing the questionnaires to the entire sample. This enabled identification and correction of any problems or misinterpretations (Neuman & Kreuger, 2003:179).

### **3.14 ETHICAL CONSIDERATIONS**

When conducting any research within a workplace or social setting some information of a sensitive nature might come to light. Sensitive information refers to that information, such as discrimination, that might cause damage to the participants or the people around them (Walliman, 2008:340). Due to the cultural diversity of the sample and the nature of the study, the researcher was aware of and susceptible to the possible exposure of any sensitive material. The study leader and ethics officer were consulted on a regular basis to prevent adverse consequences that might have jeopardised the integrity of the researcher or the research project, as Walliman (2008:340) warns.

The literature mentions several ethical issues that this research study addressed. Avoidance of harm refers to the protection of participants against physical and/or emotional harm (Strydom in De Vos *et al.*, 2005:57). It is the responsibility of the researcher to thoroughly inform the participants and respondents of the impact of the investigation beforehand. This

allows for the participants and respondents to withdraw from the investigation if they felt uncomfortable with the terms (Strydom in De Vos *et al.*, 2005:58). Informed consent implies that accurate and complete information is given to the participants about the entire investigation. Participants may not always listen to the information given to them, or may not even be interested in knowing the full extent of the investigation. This, however, did not affect the researcher's obligation to give the participants and respondents all the essential information. Strydom, (in De Vos *et al.*, 2005:59) points out that that approach is essential. All the participants and respondents were provided with consent forms (Addendum A, C & G) which stated that any information gathered during the research project would be handled confidentially. The participants and respondents have the option to withdraw their participation at any stage of the research project and participation was strictly voluntary (Neuman, 2003:124). They were given this opportunity in this research. The deception of participants may occur when information is misrepresented to the participants either by withholding information or giving inaccurate information. Care was taken to provide the participants and respondents with as much information and as accurately as possible. If an unforeseen misrepresentation crops up, it should be discussed with the participants and respondents as soon as possible (Strydom in De Vos *et al.*, 2005:60). In this study such a situation did not arise.

The violation of confidentiality may be a great pitfall especially when collecting and analysing very sensitive information. No concealed media, such as video cameras, were used and, prior to the study, informed consent was obtained from the participants in Phase 1, regarding the use of the voice recorder. The privacy of the participants was protected and any intrusion on their privacy was negotiated before commencement of the study in accord with standard practice as Strydom (in De Vos *et al.*, 2005:61) documents. The actions and competence of researchers may have an effect on the ethical validity of the research study. In preparation of the interview and focus groups, the researcher pursued guidance and training from the study leader to be adequately skilled to undertake the planned investigation, especially as cross-cultural information was involved.

Often researchers require financial sponsors or assistance from colleagues, and cooperation with them and other contributors may raise ethical issues. This study was conducted with the support and cooperation of CE at UP, its managers and course coordinators as well as the foodservice provider. Discussions were conducted beforehand between the researcher and these parties to clarify any ethical concerns and permission was obtained from the general manager of CE at UP (Addendum F) for each phase of the research study. Clear instructions and guidelines (informal contracts) were discussed with the colleagues of CE at UP for their

assistance with the distribution and collection of the questionnaires. This contract prevented possible misunderstandings when acknowledgments were given later on (Strydom in De Vos *et al.*, 2005:64). When releasing or publishing the research results, the researcher was obligated to ensure that a clear and unambiguous dissertation was produced in written form. Bias results and plagiarism are serious ethical offenses and should be avoided at all times. Any shortcomings or errors made during the research process were mentioned in the final report and the report was tested for and cleared of any plagiarism. This research study was a learning experience for both the researcher and the participants. Participants who were involved in the interview and focus groups were objectively and informally informed of the results verbally, an obligation to meet (Strydom in De Vos *et al.*, 2005:65). Respondents of the questionnaires were supplied with the full contact details of the researcher and open lines of communication, by telephone, e-mail or personal meetings, were always assured. This was done to provide feedback or resolve any misunderstandings, although these were limited and non-consequential. The protocol was approved by the Ethics Committee of the Faculty of Natural and Agricultural Sciences, approval number EC101017-058.

### **3.15 SUMMARY**

The research process as Walliman (2005:26) suggests was followed. The subject area was reviewed to find the problem area and the problem area was investigated to define the research problem. The theoretical background was thoroughly studied and the relevant research methods were investigated. A research proposal was submitted to explain the research project and its timing. The ethical issues were examined and approval was obtained to continue with the research. Secondary research was carried out to refine the research problem and the background to the research was compiled. The research methods for the primary research were finalised and the ethical issues were checked again. The research methods used were described. Primary research, including data collection and analysis, was carried out. The actions and results were reported and conclusions were drawn. The results were disseminated and areas that need further research were indicated (Walliman, 2005:26).

This chapter focused on the research design that was used for this study. The research style was discussed and provided an overview of the case study approach and the mixed method design. The sampling procedure and unit of analysis was discussed and followed by the description and illustration of the operationalisation by means of a table. Data collection was part of both Phase 1 and Phase 2. Phase 1 focused on the identification of the catering attributes, by means of an interview and focus groups, and Phase 2 on the questionnaire. This

was followed by the discussion of IPA, including exploratory factor analysis. The quality of the data and the ethical considerations were addressed.

# CHAPTER 4

## RESULTS AND DISCUSSIONS

This chapter presents the results and discusses them in relation to the objectives of this research.

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### 4.1 INTRODUCTION

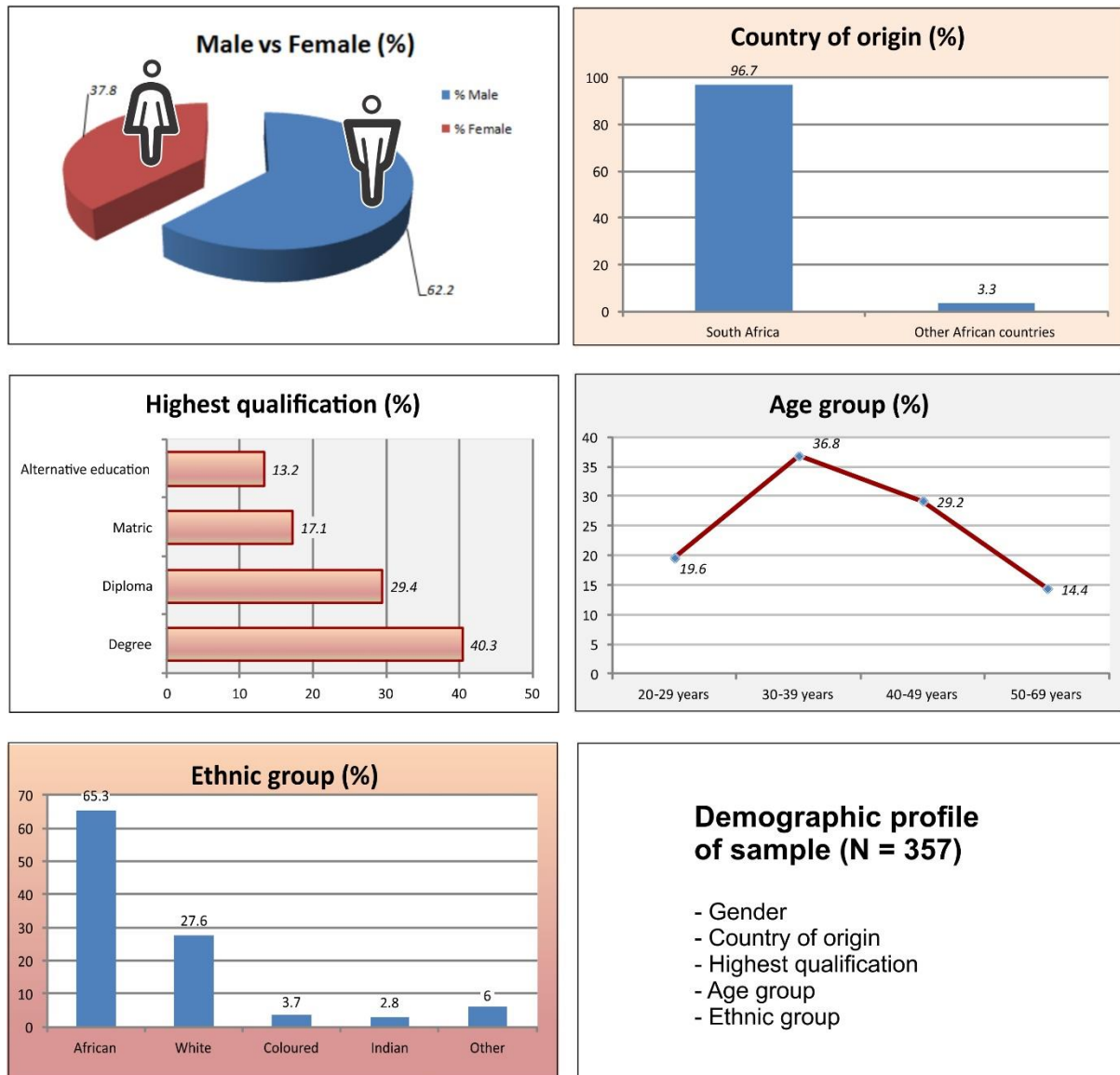
This chapter presents the results from two data collection phases: the qualitative data collection done by means of an interview and two focus groups, followed by the quantitative collection by means of a questionnaire, and the results of the application of the integrated IPA procedure. The results and discussion of the results are given in terms of the research objectives. The profile of the sample is followed by the identification of the catering attributes. A description of the course delegates is detailed and the interpretation of the IPA procedure to measure customer satisfaction is discussed.

### 4.2 PROFILE OF THE SAMPLE

Delegates have to complete a standard enrolment form (on-line or manual form) when registering for short courses at CE at UP (Section 3.12.3). Some demographic information is required on these forms, such as date of birth (age), gender and highest educational qualification. Delegates are also asked for a physical address, but not necessarily that of their country of residence. This data is captured when enrolling delegates, but the data is not processed into further, more usable data. This creates a gap in the knowledge about the demographic characteristics of CE at UP's delegates attending their courses. In order to establish a profile of the sample, selected demographic information of the respondents is collected (Figure 4.1). Between October and November 2011, 380 questionnaires were distributed and a total of 357 questionnaires were completed (93,95 % response rate). Of these 357 respondents, 62,2% are male and 37,8% are female. Furthermore, 96,7% of the respondents reside in South Africa and only 3,3% in other African countries. With regard to the highest qualification, the majority of the respondents have a formal higher education degree (40,3%); 29,4% a diploma; 17,1% have matriculated; and the remaining 13,2% have completed alternative education. According to their date of birth, the delegates' ages were categorised. The largest age group represented in the sample is the 30–39 years age group



(36,8%). The other age groups are distributed as follows: 40–49 years (29,2%), 20–29 years (19,6%) and 50–69 years (14,4%) as shown in Figure 4.1. Most of the respondents belong to an African ethnic group (65,3%), 27,6% are white, 2,8% are Indian, 3,7% are coloured and 6% are from various other ethnic groups (Figure 4.1).



**FIGURE 4.1: DEMOGRAPHIC PROFILE OF THE SAMPLE ACCORDING TO GENDER, COUNTRY OF ORIGIN, HIGHEST QUALIFICATION, AGE GROUP AND ETHNIC GROUP**

### 4.3 OBJECTIVE 1: IDENTIFICATION OF THE CATERING ATTRIBUTES

In order to identify the catering attributes, two qualitative techniques are used, namely a semi-structured one-to-one interview and focus groups. The results from the interview and focus groups are discussed in this section.

#### 4.3.1 The interview

An intensive semi-structured one-to-one interview was conducted with the operations manager of CE at UP and the results assisted in identifying the catering attributes to be used in the IPA. A set of pre-determined questions were prepared as an interview schedule (Addendum B) to guide the discussion. The interview covered the operations manager's feedback on issues regarding the current service level agreement between CE at UP and the foodservice provider, and its expectations of the nature of the relationship between CE at UP and the foodservice provider, and the role of CE at UP in managing the catering component. The interviewee was also asked to list and rate important attributes for a positive catering experience, and suggest what the foodservice provider should offer from a management perspective.

##### ***4.3.1.1 The service level agreement and the catering experience***

The operations manager of CE at UP explained that the service level agreement with the foodservice provider is a written contract that is revised regularly. The contract refers to topics such as the specific service to be offered, financial models, including an agreed price, and mentions the organisation's expectations around the quality of the catering for its delegates. CE at UP expect the service provider to assist in portraying a favourable image of CE at UP hence professionalism, high standards and adherence to budget specifications are required. The operations manager felt that at present the foodservice was open to criticism. However, the foodservice provider was willing to accommodate CE at UP and to address a problem immediately, giving feedback within the hour. On CE at UP's side, the course coordinators on duty for the programmes on offer that week are expected to participate in the meals and refreshments the foodservice provider serves to test for quality.

The coordinators find the food to be tasteless and colourless, and the garnish inadequate. Otherwise, there are not many other complaints. She adds that, to her knowledge, the delegates rate the complete experience in the following order: 1) food provisioning; 2) parking; 3) venue and 4) course content. This indicates that the catering, particularly the food provisioning, is decidedly important to the delegates in terms of their overall satisfaction.

Feedback from some of the course leaders, coordinators and delegates lead the operations manager to realise that the food provisioning service is not up to standard and the matter was taken up with the foodservice provider. Maintaining high standards is very important to CE at UP and the standard of food provided to the delegates is one of the criteria used to evaluate its overall success as an efficient organisation. It is an aspect particularly important to the delegates. Therefore, if the catering experience is negative, the delegates will not market CE at UP well or recommend it to others as word of mouth is a crucial advertising medium for CE at UP.

#### ***4.3.1.2 Suggestions for a positive catering experience***

The operations manager states that, in her opinion, some main aspects are important for the creation of a positive meal experience. The delegates' first impressions of the catering venue, which should also portray the same image as CE at UP, are very important. The menu items should meet the delegates' requirements and expectations. The service provided should be timeous and friendly. The cultural preferences of delegates should not be neglected. Attention should be given to the price strategy and provide healthy options and cater for the different cultures. The operations manager forwards a range of suggestions regarding food service provision to meet CE at UP's requirements: monthly meetings between CE at UP and the foodservice provider to maintain the requirements of both parties; the appearance of the catering venue should be re-considered; increased involvement with the University of Pretoria's Department of Consumer Science would be beneficial; the foodservice provider could use this Department's students when staff are needed; guidance regarding allergies, diabetes and low glycaemic index (GI) options in diets is needed to improve the menu options; the menu cycle should be extended; and menu items on offer should not be repeated too often especially if the duration of a course is longer than 21 days.

#### **4.3.2 The focus groups**

The sample frame (Section 3.4) was applied and selected delegates participated in two focus groups to identify the catering attributes to be used for the IPA. Ten delegates altogether participated and the prepared focus group schedule (Addendum D) guided the event to facilitate the process and ensure that important aspects were remembered. The focus group schedule also contained a list of pre-determined catering attributes identified from the relevant literature, which assisted the researcher in probing participants for further elaboration on the questions set.

#### **4.3.2.1 Importance of the catering component**

The delegates agree that the catering component of any short course they attend is really important. They also feel that providing catering on the premises of the course is convenient and creates an opportunity to be sociable. Some mention that there is not enough variety of either food items or drinks and suggest that the meal should have three courses each with several choices. Quite a few delegates point out the lack of healthier and more tasteful food items. A valuable comment is that the presentation of the food is more important than most foodservice providers realise.

#### **4.3.2.2 Delegates' expectations of the catering component**

The delegates' expectations of the catering component when attending short courses reveal that aspects of cleanliness and hygiene need consideration. They also mention that they expect sufficient food options for vegetarians, diabetics and people from different cultures, and more variety in the provision of food and drink options. The delegates expect fresh food to be served at the correct temperature and in appropriate dishes. Several counted on the venue having a convenient location with sufficient parking. These identified aspects would affect their overall experience of the course including the catering component, either negatively or positively.

#### **4.3.2.3 Delegates' experience with the catering component**

The researcher asked the delegates about their experience of the catering component when attending previous short courses. The majority of the delegates mention that they had previously experienced insufficient variety, too little and tasteless food at other foodservice providers. Some also experienced being sick due to eating the cooked food and its inadequate presentation. Most delegates however, said that they enjoy the catering component at the current foodservice provider. The food is tasty and the service good. The delegates list several catering attributes as important in the creation of a positive catering experience: food quality, food safety, menu variety, healthy options, good service and cleanliness. They add that they do not like standing in long queues at the buffet before being served.

### **4.3.3 The catering attributes**

A summary of the catering attributes identified from the literature, the interview and the two focus groups is presented in Table 4.1. The information collected about each catering attribute is recorded in rows for each of the four data collection methods used. Six different sub-categories of attributes pertain to the catering component as identified from the literature review done at the outset of the study: 1) sensory aspects (such as taste and aroma); 2)

presentation (how the food is served), 3) environment (where the food is served); 4) menu variety; 5) cultural preferences; and 6) service. These categories are used to choose the final catering attributes. The columns represent the catering attributes within each of these sub-categories. These columns contain all the data collected for each sub-category from each of the data collection methods. This enables the researcher to get a holistic view of the catering attributes within each sub-category as all the information about each is recorded.

From this summary, the final catering attributes are deduced by applying content analysis. Leedy and Ormond (2001:155) define this method as “a detailed and systematic examination of the contents of a particular body of materials for the purpose of identifying patterns, themes, or biases”. The procedural process for content analysis is designed to achieve the best possible level of objectivity. It involves identifying the body of material to be studied and is used to define the characteristics and qualities to be examined through content analysis. The forms of human communication consulted may include books, newspapers and films to identify patterns, themes, or biases, the content of which provide specific characteristics (Leedy & Ormond, 2001). Using colour coding assisted the process of exploring the evidence in the form of verbal, visual, behavioural patterns, themes, or categories. The aim was to look for trends and patterns that reappeared within a single data collection method or between the four data collection methods. Table 4.2 depicts the final 25 catering attributes used in the questionnaire in Phase 2. It has the question numbers of the catering attributes as allocated in the questionnaire on the left-hand side, and the description of the catering attributes on the right-hand side. The table also shows the sub-categories into which the catering attributes are placed.

**TABLE 4.1: SUMMARY OF CATERING ATTRIBUTES IDENTIFIED IN PHASE 1**

Source of Information	Sensory	Presentation	Environment	Menu Variety	Cultural Preferences	Service
<b>Interview (1 person)</b>	Good taste Good colour	Proper garnish Clean cutlery and crockery Clean tablecloths	Cleanliness of environment Relaxing atmosphere and feel comfortable Tasteful decorations like flowers Enough parking	Cater for special diets Healthy options – low GI to sustain energy Longer menu cycle	Cater for variety of cultures	Professional and friendly staff Neat and clean staff/waiters Efficient and trained staff – use expertise of the UP Consumer Science students
<b>Focus Group 1 (5 people)</b>	Fresh food Good quality food Good taste and taste variety Hot or cold as it should be Savoury snacks in the morning More substantial snacks in the morning	Salt, pepper, serviettes and sauces available on the tables State ingredients of the food on the table/dishes (especially for allergy reasons) Clean cutlery and crockery How/with what the food is covered In what dishes/trays the food is served	Table setting should encourage the social component (groups sit together) Hygiene and food safety Buffet style with staff dishing up – portion control Enough parking Cleanliness of environment Seating style – professional not residence dining hall Distinction of groups done discreetly, not everyone can eat together due to different course fees	Healthy options – low GI to sustain energy More food choices/greater variety Catering for vegetarians Serve lighter meals Basics – coffee, tea and water – available all day More creativity (something different/unique)	Adequate food for men and delegates of African cultures Do not need a three course meal Know dietary requirements beforehand – especially Halaal Separate service station for special diets Keep in mind different food preferences according to the delegates' geographical residence within SA Keep in mind different social standing/status of the delegates – with cost implications Serve simpler, basic food	Good and punctual service Professional and friendly staff Bring own food to reduce course fee Higher food cost – thus higher course fee – is still value for money Food served on time
<b>Focus Group 2 (5 people)</b>	Fresh food Good quality food Good taste Hot or cold as it should be	Well organised – thus no queues Clean and presentable Clean tablecloths Clean cutlery and crockery	Food at the same premises as the training venue Table setting should encourage the social component (groups sit together) Hygiene and food safety Buffet style with staff dishing up – portion control Cleanliness of environment	Cater for diabetic people and special diets, healthy options More food choices/greater variety Catering for vegetarians Cold drinks available	Adequate food for men and delegates of African cultures	Adequate food Professional and friendly staff
<b>From Literature</b>	Taste Aroma Flavour Smell Texture Temperature	How the food is served How the food looks - colour variety and appetising	Atmosphere Music Noise Location Decor Layout/set-up Cleanliness Hygiene Safety	Buffet options Beverage variety	Some cultures feel excluded	Service of the personnel Friendly staff

**TABLE 4.2: FINAL CATERING ATTRIBUTES**

Importance Question Number	Performance Question Number	Attribute Description
<b>Sensory</b>		
Q8	Q33	Good Taste
Q9	Q34	Correct food temperature
Q10	Q35	Taste variety
Q11	Q36	Fresh ingredients
Q12	Q37	Colour variety
<b>Presentation</b>		
Q13	Q38	Clean utensils
Q14	Q39	Dishes in which the food is served
Q15	Q40	Portion control
Q16	Q41	Social dining room layout
<b>Environment</b>		
Q17	Q24	Background music
Q18	Q43	Cleanliness
Q19	Q44	Parking
Q20	Q45	Location
<b>Menu Variety</b>		
Q21	Q46	Buffet variety
Q22	Q47	Cater for special diets
Q23	Q48	Healthy good options
Q24	Q49	Beverage variety
<b>Cultural Preferences</b>		
Q25	Q50	Cater for variety of cultures
Q26	Q51	Larger portions
Q27	Q52	Catering for special diets served separately
Q28	Q53	Three course meal
<b>Service</b>		
Q29	Q54	Friendly staff
Q30	Q55	Professional service
Q31	Q56	Trained staff
Q32	Q57	Timeous service

#### 4.4 OBJECTIVE 2: DESCRIPTION OF THE COURSE DELEGATES

Cluster analysis was applied to describe the delegates who attend short courses at CE at UP. The objective is to identify commonalities with regard to customer satisfaction among the clusters. Therefore, based on the three factors retained during factor analysis (Section 4.5.2), average factor scores were calculated for each respondent and three clusters emerged. This initial input data was followed-up by looking at the demographic information of the respondents within each cluster. SAS/STAT® 9.2 PROC CLUSTER enabled the statistician to select from eleven different mathematical methods to hierarchically cluster observations in the SAS/STAT® data set. This process is hierarchical in that each individual observation begins as its own cluster. Distances between clusters are then calculated using the selected method; single-observation clusters are then turned into two-observation clusters to replace the old single-observation clusters. This iterative process continues until the process groups all the

observations into a single large cluster ([WWW – document - [http://support.sas.com/documentation/cdl/en/statug/63033/HTML/default/viewer.htm#statug\\_cluster\\_sect004.htm](http://support.sas.com/documentation/cdl/en/statug/63033/HTML/default/viewer.htm#statug_cluster_sect004.htm)]). PROC CLUSTER is used to display customer profiles according to demographic information of gender, age, qualification, ethnic group and country of residence. This means that the course delegates within each of the importance and performance clusters can be discussed and conclusions and recommendations about their customer satisfaction drawn. Table 4.3 depicts the average mean scores for importance and performance for each of the three clusters.

**TABLE 4.3: AVERAGE SCORES FOR IMPORTANCE AND PERFORMANCE FOR EACH OF THE THREE CLUSTERS**

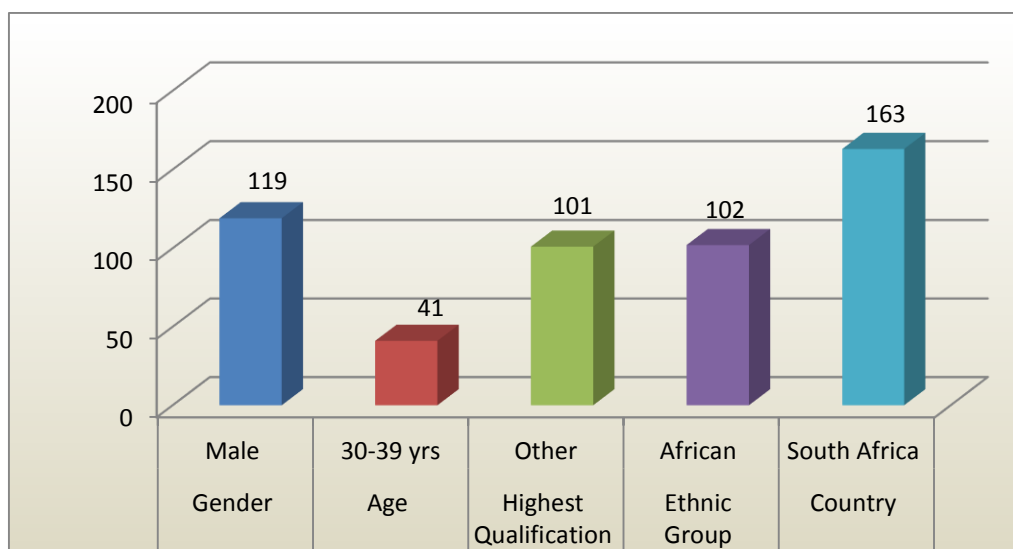
CLUSTER	IMPORTANCE MEAN	PERFORMANCE MEAN
Cluster 1	1.3751	2.7470
Cluster 2	2.7539	1.9974
Cluster 3	1.9922	1.2620

The aim is to determine the respondents' profile of each of the three importance and performance clusters. Table 4.4 describes the demographic profile of the three importance clusters according to the respondents' demographic profiles. The dominant cluster (according to size) is Cluster 3 which consists of 188 respondents. The majority of the respondents are male and between the ages of 30 and 39 years. Most of them have other non-degree qualifications, are from an African ethnic group and reside in South Africa. Cluster 3 is illustrated in Figure 4.2.



**TABLE 4.4: DEMOGRAPHIC PROFILE OF THE THREE IMPORTANCE CLUSTERS**

IMPORTANCE SCORES				
<b>Cluster 1 = total of 144 respondents</b>				
<b>Gender</b>	<b>Male</b>	<b>Female</b>		
	87	57		
<b>Age</b>	<b>20-29</b>	<b>30-39</b>	<b>40-49</b>	<b>50-69</b>
	20	31	28	10
<b>Highest qualification</b>	<b>Degree</b>	<b>Other non-degree</b>		
	47	91		
<b>Ethnic Group</b>	<b>African</b>	<b>White</b>	<b>Other</b>	
	98	29	10	
<b>Country</b>	<b>South Africa</b>	<b>Rest of Africa</b>		
	121	4		
<b>Cluster 2 = total of 20 respondents</b>				
<b>Gender</b>	<b>Male</b>	<b>Female</b>		
	13	7		
<b>Age</b>	<b>20-29</b>	<b>30-39</b>	<b>40-49</b>	<b>50-69</b>
	1	5	3	1
<b>Highest qualification</b>	<b>Degree</b>	<b>Other non-degree</b>		
	8	12		
<b>Ethnic Group</b>	<b>African</b>	<b>White</b>	<b>Other</b>	
	13	1	0	
<b>Country</b>	<b>South Africa</b>	<b>Rest of Africa</b>		
	13	0		
<b>Cluster 3 = total of 188 respondents</b>				
<b>Gender</b>	<b>Male</b>	<b>Female</b>		
	119	69		
<b>Age</b>	<b>20-29</b>	<b>30-39</b>	<b>40-49</b>	<b>50-69</b>
	20	41	30	19
<b>Highest qualification</b>	<b>Degree</b>	<b>Other non-degree</b>		
	82	101		
<b>Ethnic Group</b>	<b>African</b>	<b>White</b>	<b>Other</b>	
	102	60	13	
<b>Country</b>	<b>South Africa</b>	<b>Rest of Africa</b>		
	163	6		



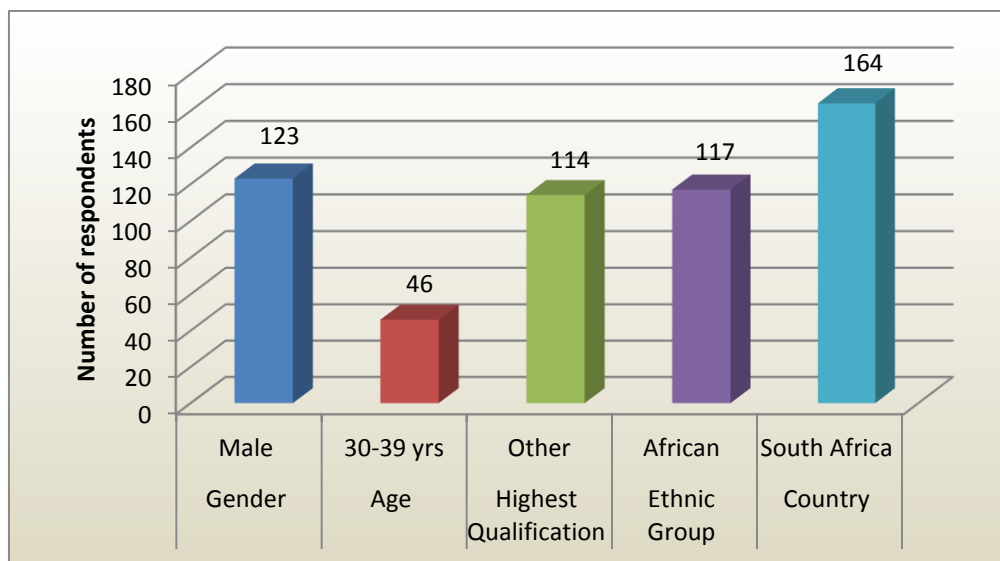
**FIGURE 4.2: ILLUSTRATION OF IMPORTANCE CLUSTER 3**

As this cluster is the dominant importance cluster (Figure 4.2), CE at UP has to take cognisance of the demographic profile of this cluster (mainly males in their 30s). Having this information, CE at UP should now focus on selecting menu items that are a better-fit, appropriate and important for delegates in this cluster. The delegates are also mostly from an African ethnic group and reside in South Africa. Since most delegates are in this category CE at UP should focus on catering for their cultural preferences that are important to them. Management of the catering component should consider local delegates with an African background first. The delegates mostly have other non-degree qualifications, a point to note. The information gained from investigating this cluster will assist CE at UP in better management of the catering component if this information is relayed to the foodservice provider. The catering needs that are important to their delegates should be incorporated in their service level agreement.

Table 4.5 and Figure 4.3 depict a profile of the respondents' within the three performance clusters according to their demographic characteristics. The dominant cluster (according to size) is Cluster 2 that has 192 respondents. The majority of the respondents are male and between the ages of 30 and 39. Most of them have other non-degree qualifications, are from an African ethnic group and reside in South Africa. As this cluster is the dominant performance cluster, CE at UP has to take cognisance of its demographic structure. With this information, CE at UP can now focus on selecting menu items that this dominant cluster perceives as good 'performers' and manage the catering component in such a way that it responds to the majority of cultural preferences, thus ensuring that the foodservice provider delivers and performs optimally to meet the catering needs of its delegates. CE at UP should relay this information to the foodservice provider to use, to support its recommendations as stipulated in the service level agreement. This should then meet the delegates' expectations as far as catering provision is concerned. It is the service provider's obligation to perform in line with standard required by CE at UP and its delegates.

**TABLE 4.5: DEMOGRAPHIC PROFILE OF THE THREE PERFORMANCE CLUSTERS**

PERFORMANCE SCORES				
<b>Cluster 1 = total of 64 respondents</b>				
<b>Gender</b>	<b>Male</b>	<b>Female</b>		
	35	29		
<b>Age</b>	<b>20-29</b>	<b>30-39</b>	<b>40-49</b>	<b>50-69</b>
	8	16	14	2
<b>Highest qualification</b>	<b>Degree</b>	<b>Other non-degree</b>		
	37	26		
<b>Ethnic Group</b>	<b>African</b>	<b>White</b>	<b>Other</b>	
	44	8	7	
<b>Country</b>	<b>South Africa</b>	<b>Rest of Africa</b>		
	52	3		
<b>Cluster 2= total of 192 respondents</b>				
<b>Gender</b>	<b>Male</b>	<b>Female</b>		
	123	69		
<b>Age</b>	<b>20-29</b>	<b>30-39</b>	<b>40-49</b>	<b>50-69</b>
	23	46	29	21
<b>Highest qualification</b>	<b>Degree</b>	<b>Other non-degree</b>		
	72	114		
<b>Ethnic Group</b>	<b>African</b>	<b>White</b>	<b>Other</b>	
	117	51	11	
<b>Country</b>	<b>South Africa</b>	<b>Rest of Africa</b>		
	164	6		
<b>Cluster 3= total of 96 respondents</b>				
<b>Gender</b>	<b>Male</b>	<b>Female</b>		
	61	35		
<b>Age</b>	<b>20-29</b>	<b>30-39</b>	<b>40-49</b>	<b>50-69</b>
	10	15	18	7
<b>Highest qualification</b>	<b>Degree</b>	<b>Other non-degree</b>		
	28	64		
<b>Ethnic Group</b>	<b>African</b>	<b>White</b>	<b>Other</b>	
	52	31	5	
<b>Country</b>	<b>South Africa</b>	<b>Rest of Africa</b>		
	81	1		



**FIGURE 4.3: ILLUSTRATION OF PERFORMANCE CLUSTER 2**

## 4.5 OBJECTIVES 3 AND 4: IMPORTANCE AND PERFORMANCE OF THE CATERING ATTRIBUTES

As suggested by Martilla and James (1977), IPA determines the importance and performance of a catering attribute. In this study IPA is applied by using both descriptive analysis (Section 4.5.1) and exploratory factor analysis (Section 4.5.2). The results from each application are discussed in this section.

### 4.5.1 Descriptive analysis

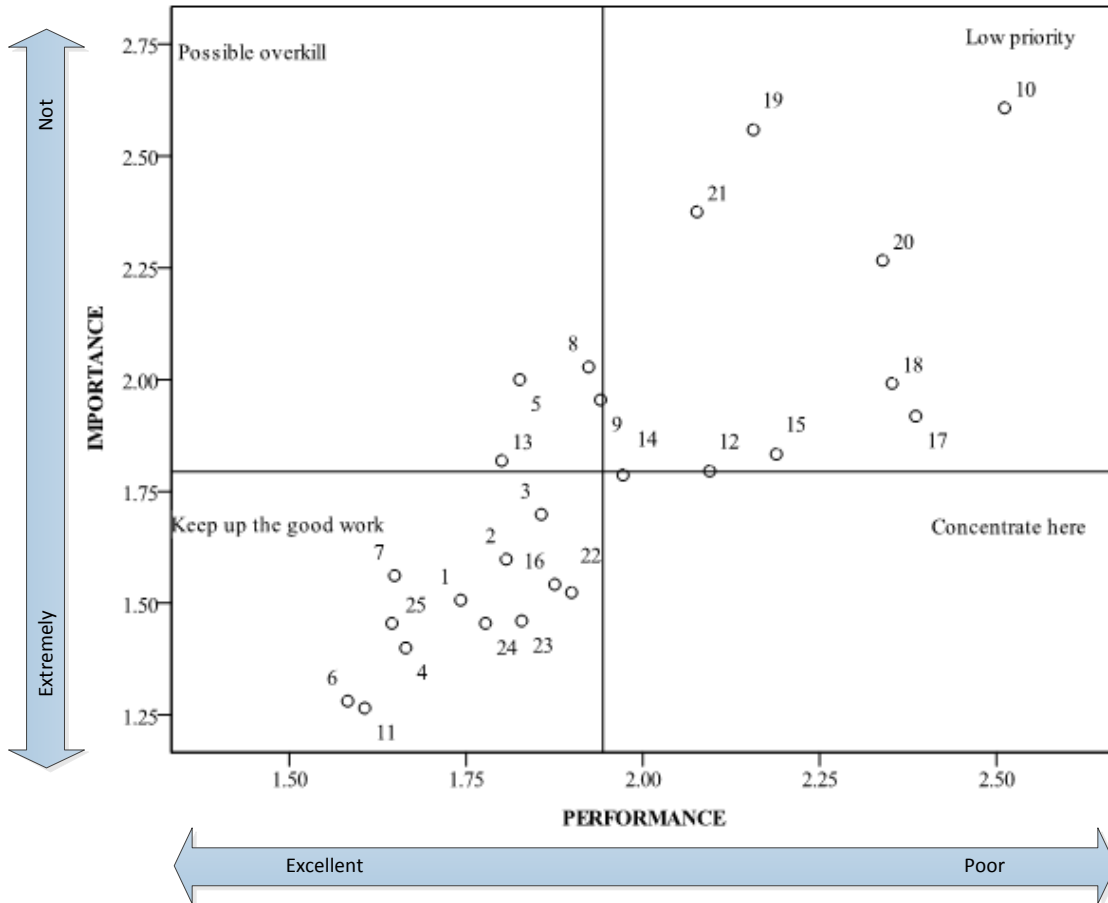
As a technique, IPA determines the importance and performance of each catering attribute and the ones on which CE at UP should focus to manage delegate satisfaction are deduced. The data for calculating descriptive analysis (simple frequencies, mean ratings and standard deviations) is derived from the respondents' demographic profiles and 25 catering attributes. The mean ratings of the catering attributes give an indication of the centres of gravity of the scale that ranges from "extremely important" to "not important" for the importance measure, and from "excellent" to "poor" for the performance measure. These are plotted on the IPA grid (Figure 4.4). When applied in the context of an assessment of an IPA, cross-hairs refer to the placement of the vertical and horizontal axis on the grid. Cross-hairs are calculated to divide the derived catering attributes into the four quadrants of the IPA procedure. The average importance and performance mean scores for each of the 25 catering attributes are calculated and placed alongside each other to draw a scatter plot, with the importance values on the vertical axis and the performance on the horizontal axis. Each plot on the scatter plot represents the values for importance and performance concerning the question, as per its number on the questionnaire. The average mean scores of the single item average mean scores are calculated for both importance and performance, and incorporated into the graph (Figure 4.4) and used to divide the graph into the four quadrants of the IPA.

The catering attributes and their mean ratings derive from the descriptive analysis and are given in Table 4.6. The first column from the left represents the attribute number assigned to each specific catering attribute. The second column from the left represents the attribute description matching the specific number. The third column from the left shows the mean importance rating for each catering attribute, and the last column shows the mean performance rating for each catering attribute. The catering attributes are not arranged according to sub-categories here, but only according to their mean ratings. Although the IPA quadrants are displayed in Figure 4.4, the attributes within each quadrant can already be seen here in Table 4.6. The top of the table (above the attribute numbers 14 and 12) represents the

attributes in *keep up the good work* section, followed by attributes within *concentrate here*. This is followed by attributes within *low priority* and then *possible overkill* at the bottom of the table. The total score of the importance and performance means are shown along with the standard deviations. The standard deviation refers to the measure of spread around the mean and should not have a value larger than half of the mean rating, which is the case here.

**TABLE 4.6: IMPORTANCE AND PERFORMANCE MEAN RATINGS (N=357)**

Attribute Number	Attribute Description	Mean Importance	Mean Performance
11	Cleanliness	1.27	1.61
6	Clean utensils	1.28	1.58
4	Fresh ingredients	1.40	1.66
23	Professional service	1.46	1.83
24	Trained staff	1.46	1.78
25	Timeous service	1.46	1.65
1	Good taste	1.51	1.74
22	Friendly staff	1.52	1.90
16	Healthy food options	1.54	1.88
7	Dishes in which the food is served	1.56	1.65
2	Correct food temperature	1.60	1.81
3	Taste variety	1.70	1.86
14	Buffet variety	1.79	1.97
12	Parking	1.80	2.09
13	Location	1.82	1.80
15	Catering for special diets	1.83	2.19
17	Beverage variety	1.92	2.39
9	Social dining room layout	1.95	1.94
18	Catering for variety of cultures	1.99	2.35
5	Colour variety	2.00	1.83
8	Portion control	2.03	1.92
20	Catering for special diets served separately	2.27	2.34
21	Three course meals	2.38	2.08
19	Larger portions	2.56	2.16
10	Background music	2.61	2.51
	<b>Total Score</b>	<b>Mean</b>	<b>Std. Deviation</b>
	Importance All items	1.79	0.47
	<b>Total Score</b>	<b>Mean</b>	<b>Std. Deviation</b>
	Performance All items	1.94	0.56



<p><b>Possible Overkill:</b>          colour variety (5)          portion control (8)          social dining room layout (9)          location (13)</p>	<p><b>Low Priority:</b>          background music (10)          catering for special diets (15)          beverage variety (17)          larger portions (19)          catering for special diets served separately (20)          three course meals (21)          catering for variety of cultures (18)</p>
<p><b>Keep up the good work:</b>          good taste (1)          correct food temperature (2)          taste variety (3)          fresh ingredients (4)          clean utensils (6)          dishes in which the food is served (7)          cleanliness (11)          healthy food options (16)          friendly staff (22)          professional service (23)          trained staff (24)          timeous service (25)</p>	<p><b>Concentrate Here:</b>          buffet variety (14)          Parking fell between <i>low priority</i> and <i>concentrate here</i> (12)</p>

**FIGURE 4.4: IMPORTANCE PERFORMANCE ANALYSIS: DESCRIPTIVE ANALYSIS**  
 (adapted from Martilla & James, 1977)

The distribution of the 25 catering attributes on the importance performance grid is depicted in Figure 4.4. This importance performance grid is reversed in comparison to the original importance performance grid designed by Martilla and James (1977). This could be explained by the reversal of the scales. These differences are shown in Table 4.7. The original scale for importance starts with “extremely important” on 4 and ends with “not important” on 1. The importance scale for this study starts with “extremely important” on 1 and ends with “not important” on 4. The original scale for performance starts with “excellent” on 4 and ends with “poor” on 1. The performance scale used for this study starts with “excellent” on 1 and ends with “poor” on 4. The quadrants of the grid are therefore a reversal of the original quadrants. However, this does not interfere with the interpretation of the importance performance grid. For ease of reference the quadrants are numbered the same: *concentrate here* (1), *keep up the good work* (2), *low priority* (3), and *possible overkill* (4). In the original model (Figure 2.1) the quadrants start with 1 at the top left-hand corner, and end with 4 at the bottom right-hand corner. In the model used for this study (Figure 2.3) the quadrants start with 1 at the bottom right-hand corner, and end with 4 at the top left-hand corner.

**TABLE 4.7: DIFFERENCE IN SCALES**

<b>Martilla &amp; James (1977)</b>				
Importance Scale	Extremely important	Important	Slightly important	Not important
	4	3	2	1
Performance Scale	Excellent	Good	Fair	Poor
	4	3	2	1
<b>Current study</b>				
Importance Scale	Extremely important	Important	Slightly important	Not important
	1	2	3	4
Performance Scale	Excellent	Good	Fair	Poor
	1	2	3	4

The results of the application of the IPA using descriptive analysis shows that the majority of catering attributes fall within two of the four quadrants (Figure 4.4). There is one attribute that lies in the *concentrate here* (1) quadrant, namely, that of buffet variety; and one which falls on the border between *low priority* (3) and (1) *concentrate here* (1), which is parking. Therefore then, for CE at UP the focus must be on improving the buffet offering by providing more variety and adequate parking facilities. The results show that the delegates find these two attributes important, and that CE at UP performs poorly with them. Considering the evaluation data collected from previous years’ course evaluations (Section 1.4), the issue of the lack of variety of menu items is a long-standing concern as a negative experience. It is therefore imperative that CE at UP negotiates alternative buffet options with the foodservice provider. They also have to discuss the matter of additional parking space with the relevant campus authorities. However, in this study an analysis of the descriptive analysis shows that buffet variety is the

attribute on which management should focus most. Although this is a case study in a specific type of environment, this observation is important and contributes to the existing literature on how to realise customer satisfaction, especially where course delegates are involved.

In relation to the results found in other studies on customer satisfaction and which also apply IPA, as documented in the literature, the results from this work seem to focus more on the food itself than on the facilities. Attributes such as cleanliness, prompt service and trained personnel, as well as convenient and professional facilities, are seen to mostly fall within the *concentrate here* quadrant in those other studies (Aigbedo & Parameswaran, 2004; Breiter & Milman, 2006).

In this research most of the attributes (12 of the 25 attributes) evaluated fall within the quadrant named *keep up the good work (2)* in which importance and performance are highly rated as satisfactory. This quadrant includes attributes related to the presentation of the refreshments, such as cleanliness and the dishes in which the food is served; sensory aspects such as the desirable taste and temperature of the refreshments; and friendly and professional service by trained staff. The results provide positive feedback for CE at UP, and encouragement to keep their current good practice with regard to these attributes, in place. These results are very similar to those found by Hu *et al.* (2009) who identified staff service, service speed, food quality, interior design, comfort, cleanliness, the aroma of the food and the restaurant atmosphere as being in the *keep up the good work (2)* quadrant. Since their study is in the field of tourism, it shows that some attribute similarities exist between the environment of this case study and the tourism industry, with evidence of high levels of importance and performance.

The results also reveal that cultural and environmental attributes have a *low priority (3)* (with 7 attributes). Cultural attributes, represented by portion size and catering for a variety of different cultures, and environmental attributes, comprising background music and serving and catering for special diets, are not important for the delegates nor does the company perform well on these issues. CE at UP has to monitor these attributes to ensure that this remains true, and be aware of any future changes in their level of importance. The attributes within the *possible overkill (4)* quadrant (with 4 attributes) indicate that CE at UP performs well on the colour and variety of the food on the menu as well as the portion control. The results also show that delegates are satisfied with the layout and location of the dining room. However, the delegates do not find these attributes important. CE at UP should therefore focus less on improving these attributes and rather continue with this good practice.



#### 4.5.2 Exploratory factor analysis

The IPA process determines the importance and performance of each catering attribute. In the case of CE at UP, it highlights the catering attributes on which it should focus to manage delegate satisfaction better. The goal of applying factor analysis is to condense the information contained in a number of original variables, catering attributes in this study, as smaller sets of variables, called factors, and to do so with a minimum loss of information as Hair *et al.* (1995:16) point out. One of the most commonly used methods to determine factor retention is by looking at the eigenvalues. Eigenvalues associated with a variable indicate the importance of that factor and therefore only factors with large eigenvalues ( $>1$ ) are retained (Field, 2013:677). By calculating the eigenvalues during the factor analysis procedure, five factors were initially retained for importance and four factors for performance (Table 4.8). The fifth importance factor only contains two items which is not statistically significant (there should be at least three items within a factor) and thus it is eliminated. Ultimately, and based on the objectives of the study, the pre-determined sub-categories of the catering attributes, and the information gathered from the literature review, three factors are retained for importance and three factors for performance. The items within the importance and those in the performance factors are similar and thus could be used as part of the study. With the final decision about the retention of factors, the reliability of the scale is tested using Cronbach alpha as calculated for each factor (Table 4.10).

**TABLE 4.8: FACTOR PROCEDURE: EIGENVALUES**

Importance	
Factor	Eigenvalues
1	8.61490819
2	2.93646012
3	1.72152670
4	1.36488497
5	1.09201845
Performance	
Factors	Eigenvalues
1	11.9225857
2	2.0973615
3	1.4153276
4	1.1585313

The catering attributes within each of the three retained importance factors are shown in Table 4.9. The left-hand column represents the question number of the catering attribute as per the questionnaire. The right-hand column represents the factor loadings for each catering attribute matching the specific question number. The items within each factor are determined by grouping the biggest factor loadings across the factors. In Factor 1 the factor loadings are

grouped together above 0.5; in Factor 2 the factor loadings are grouped together above 0.4; and in Factor 3 the factor loadings are grouped together above 0.8.

**TABLE 4.9: FACTOR ANALYSIS WITH VARIMAX ROTATION: IMPORTANCE FACTORS RETAINED**

<b>Question Number</b>	<b>Factor 1</b>		
Q13	0.78197		
Q18	0.76843		
Q11	0.75284		
Q8	0.69291		
Q9	0.64915		
Q10	0.61389		
Q14	0.52326		
<b>Question Number</b>		<b>Factor 2</b>	
Q27	0.04636	0.77434	
Q22	0.22948	0.74992	
Q25	0.12095	0.74575	
Q28	-0.05430	0.62149	
Q26	-0.16490	0.59661	
Q24	0.18240	0.54875	
Q23	0.43137	0.53927	
Q21	0.34210	0.44381	
<b>Question Number</b>			<b>Factor 3</b>
Q31	0.25987	0.16381	0.85135
Q30	0.30211	0.16445	0.84112
Q29	0.24872	0.22611	0.80195
Q32	0.27666	0.12994	0.78569

The catering attributes within each of the three retained performance factors are shown in Table 4.10. The left-hand column represents the question number of the catering attribute as per the questionnaire. The right-hand column represents the factor loadings for each catering attribute matching the specific question number. The items within each factor are determined by grouping the biggest factor loadings across the factors. In Factor 1 the factor loadings are grouped above 0.6; in Factor 2 the factor loadings are grouped above 0.55; and in Factor 3 the factor loadings are grouped above 0.6.

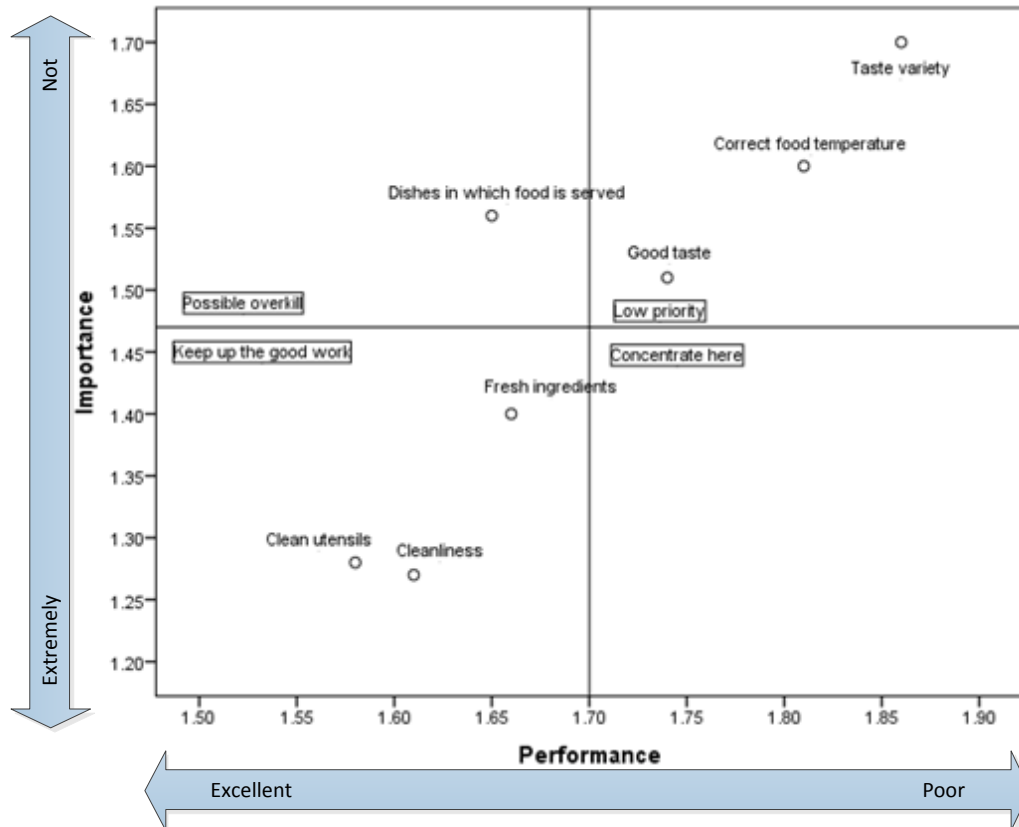
**TABLE 4.10: FACTOR ANALYSIS WITH VARIMAX ROTATION: PERFORMANCE FACTORS RETAINED**

Question Number	Factor 1		
Q36	0.78466		
Q35	0.77914		
Q34	0.77756		
Q33	0.68967		
Q37	0.65043		
Q39	0.64183		
Q43	0.62716		
Q38	0.61866		
Question Number		Factor 2	
Q50	0.19706	0.82630	
Q52	0.09149	0.79949	
Q47	0.34703	0.74857	
Q49	0.19438	0.72455	
Q51	0.10839	0.64917	
Q53	0.21383	0.56897	
Q42	0.16291	0.56598	
Q46	0.51280	0.55362	
Question Number			Factor 3
Q54	0.26986	0.25865	0.81348
Q56	0.28002	0.29086	0.80952
Q55	0.32835	0.28897	0.80398
Q57	0.30639	0.19161	0.69153

The catering attributes and the mean ratings derived from the factor analysis for both importance and performance are depicted in Table 4.11. After carefully studying the literature on the catering attributes within each factor, the factors are named as Factor 1: Presentation and Sensory; Factor 2: Menu and Cultural Aspects; Factor 3: Service. The table shows the attribute number and the description for each attribute in the first two columns on the left-hand side. The last two columns on the right-hand side show the mean importance rating for each catering attribute followed by the mean performance rating for each catering attribute. Cronbach alpha determines the reliability of the scale as calculated for each factor. The Cronbach alpha measure for importance and performance is included at the bottom of each factor. The Cronbach alpha for all three factors (>0.80) reflects consistency in the data and implies good reliability. Once retained, the importance and performance mean values for both importance and performance in factors 1, 2 and 3 were calculated and plotted on the importance and performance grid. The distribution of the catering attributes within each of the three factors as retained, are depicted on the importance performance grids in Figures 4.5, 4.6 and 4.7.

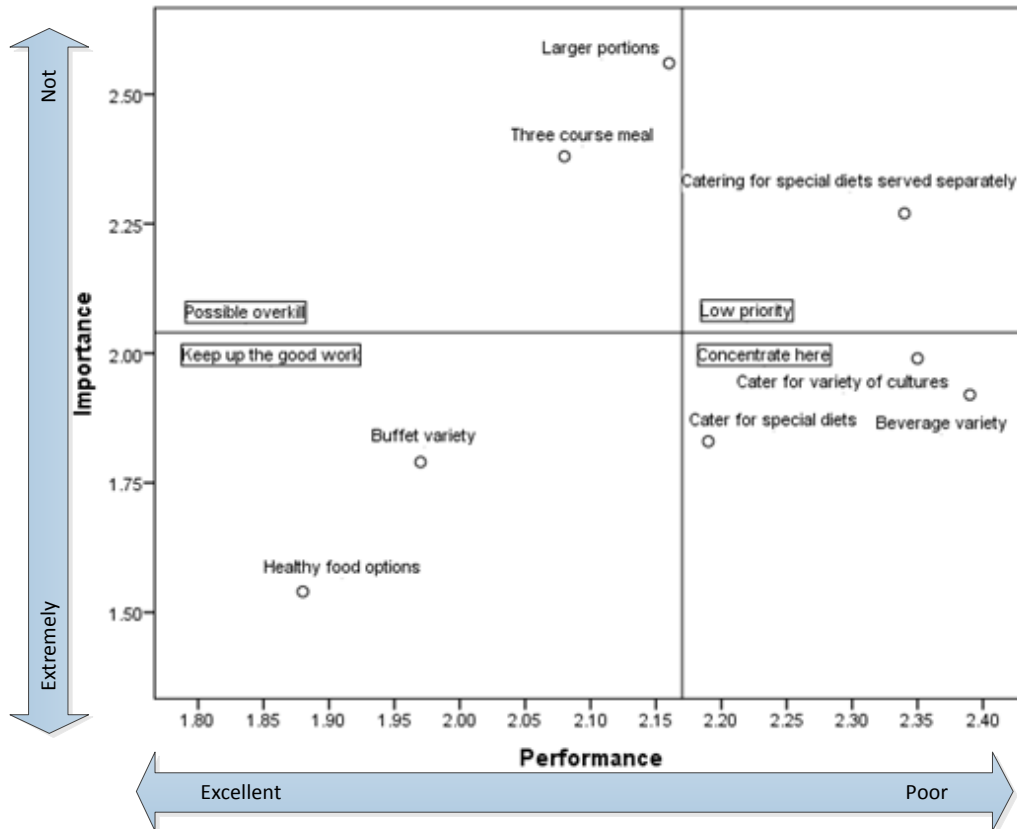
**TABLE 4.11: FACTOR ANALYSIS: IMPORTANCE AND PERFORMANCE MEAN RATINGS**

<b>Factor 1: Presentation and Sensory</b>			
<b>Attribute Number</b>	<b>Attribute Description</b>	<b>Mean Importance</b>	<b>Mean Performance</b>
6	Clean utensils	1.28	1.58
11	Cleanliness	1.27	1.61
4	Fresh ingredients	1.4	1.66
1	Good taste	1.51	1.74
2	Correct food temperature	1.6	1.81
3	Taste variety	1.7	1.86
7	Dishes in which the food is served	1.56	1.65
	Cronbach alpha	0.86	0.90
<b>Factor 2: Menu and Cultural</b>			
20	Catering for special diets served separately	2.27	2.34
15	Cater for special diets	1.83	2.19
18	Cater for variety of cultures	1.99	2.35
21	Three course meal	2.38	2.08
19	Larger portions	2.56	2.16
17	Beverage variety	1.92	2.39
16	Healthy food options	1.54	1.88
14	Buffet variety	1.79	1.97
	Cronbach alpha	0.85	0.91
<b>Factor 3: Service</b>			
24	Trained staff	1.46	1.78
23	Professional service	1.46	1.83
22	Friendly staff	1.52	1.9
25	Timeous service	1.46	1.65
	Cronbach alpha	0.93	0.91



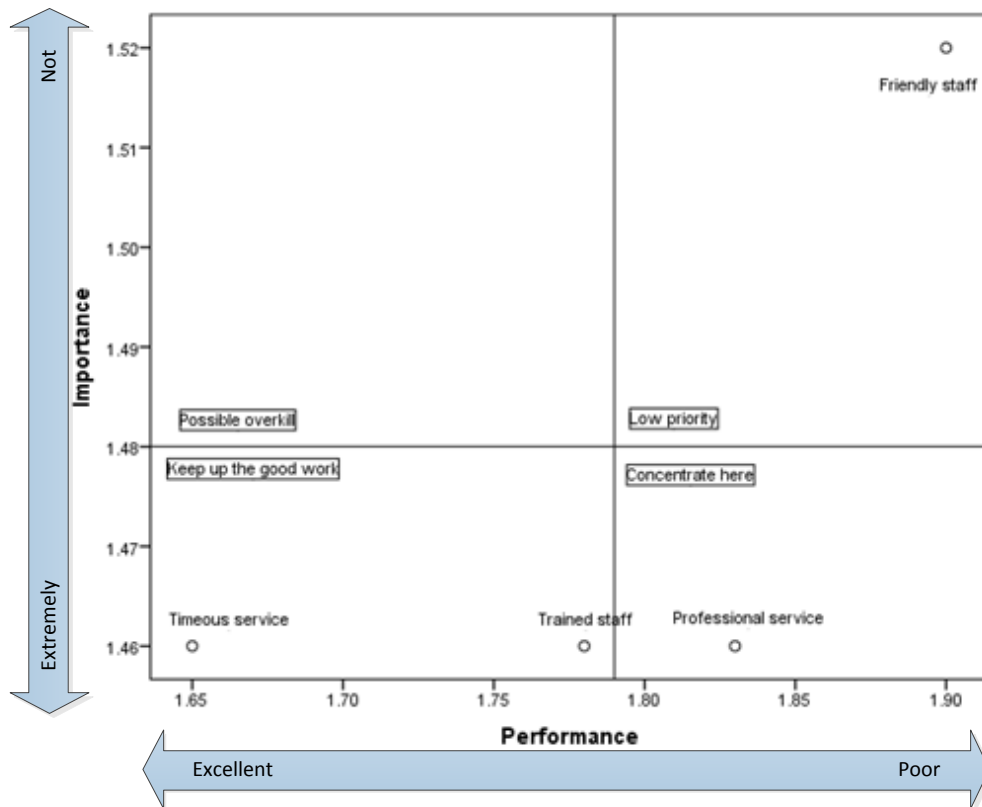
**FIGURE 4.5: SINGLE ATTRIBUTES PER FACTOR 1: PRESENTATION AND SENSORY**  
(adapted from Martilla & James, 1977)

Figure 4.5 illustrates the IPA grid of the single catering attributes for Factor 1. The results show that there are no attributes within the *concentrate here* (1) quadrant. This shows that the delegates are generally satisfied with the presentation and sensory aspects. Fresh ingredients, clean utensils and cleanliness fall within *keep up the good work* (2). This quadrant depicts attributes that are very important to the delegates, and which also perform very well. This is complimentary feedback for CE at UP. In the *low priority* (3) quadrant lie food concerns about it having a good taste, served at the correct temperature and in various ways. Moreover, the delegates regard these attributes as issues of minor importance, but they are also not satisfied with the organisation's performance in these areas. Although the delegates regard the attributes in the *possible overkill* (4) quadrant as unimportant, for example, the dishes in which the food is served, they are quite satisfied with the company's performance.



**FIGURE 4.6: SINGLE ATTRIBUTES PER FACTOR 2: MENU AND CULTURES** (adapted from Martilla & James, 1977)

Figure 4.6 illustrates the IPA grid of the single catering attributes for Factor 2. Catering for different cultures and special diets and offering a variety of beverages fall within the *concentrate here* (1) quadrant. This quadrant represents the attributes that are very important for the delegates, however, they are not satisfied with CE at UP's performance in these attributes. CE at UP should therefore pay closer attention to the cultural and dietary needs of delegates. Buffet variety and healthy food options fall within the *keep up the good work* (2) quadrant that depicts attributes that are not only very important for the delegates but are also areas in which CE at UP performs very well. Serving special diets separately is a *low priority* (3) as an attribute in this quadrant and not important either. Delegates are also not satisfied with the organisation's performance concerning these aspects. The results show that offering larger portions and a three course meal are regarded as a *possible overkill* (4). This quadrant represents the attributes of low importance for the delegates. However, they are highly satisfied with the company's performance of this respect.



**FIGURE 4.7: SINGLE ATTRIBUTES PER FACTOR 3: SERVICE** (adapted from Martilla & James, 1977)

Figure 4.7 illustrates the IPA grid of the single catering attributes for Factor 3. Professional service falls within the *concentrate here* (1) quadrant. This quadrant represents the attributes that are very important to the delegates, but the delegates are not satisfied with the performance of these attributes. This shows that CE at UP should attend to the professionalism of the staff serving in the catering component, and take the delegates' concerns to the foodservice provider as a matter of urgency. However, timeous service and trained staff who are thus competent falls within the *keep up the good work* (2) quadrant that contains the attributes that delegates regard as highly important and where they experience good service.

#### 4.6 OBJECTIVE 5: INTERPRETATION OF THE IMPORTANCE PERFORMANCE ANALYSIS TO MEASURE CUSTOMER SATISFACTION

The IPA method suggests that customer satisfaction is based on the customers' perceptions of the performance and importance of the attributes (Martilla & James, 1977). Importance and performance items can often be mapped without sophisticated computer knowledge. The advantage of clear results from a more detailed analysis is that there is an indication of where

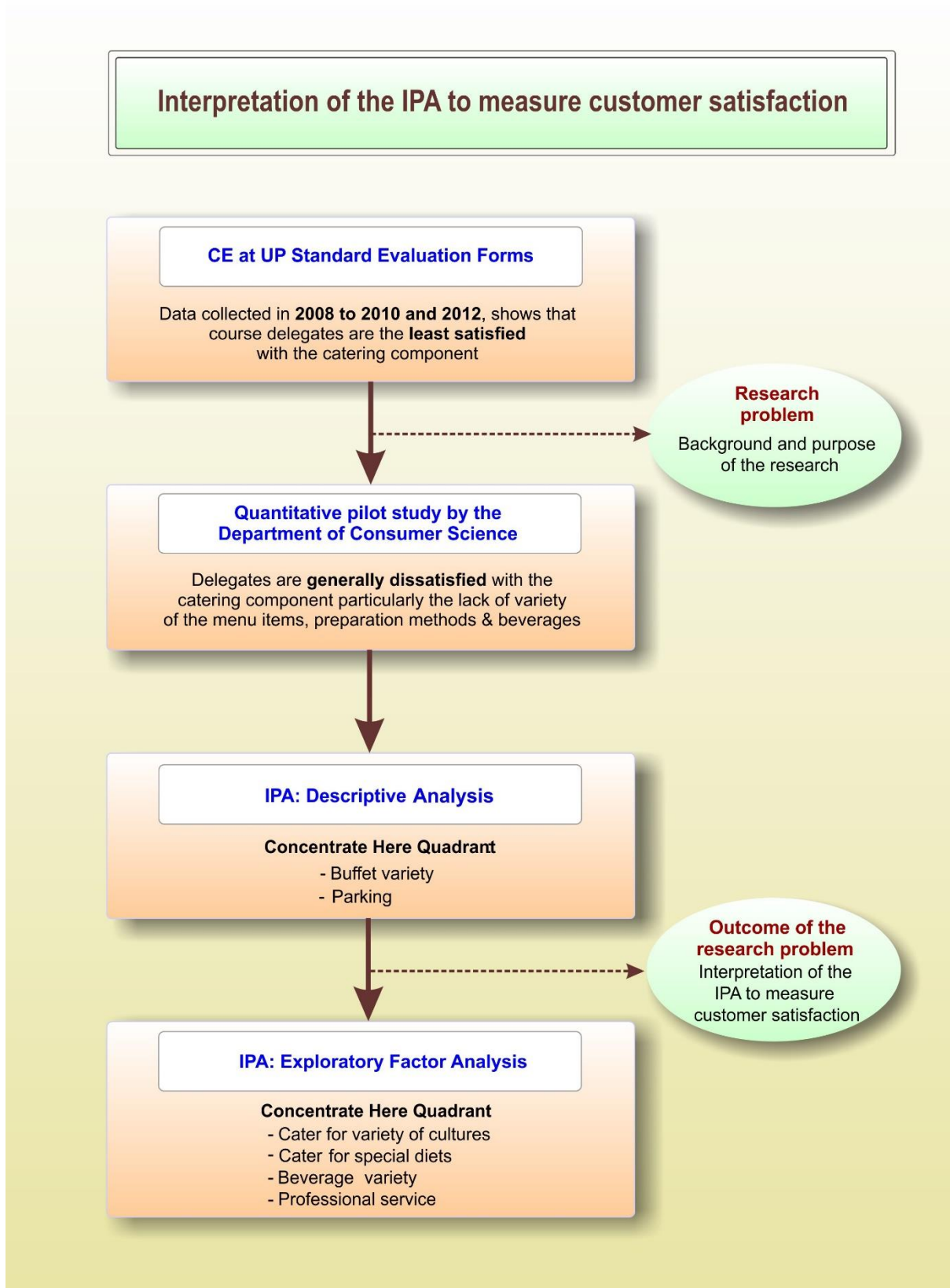
resources should focus. Although IPA theory lost favour when more quantitative methods became applicable in a practical way with computerisation, it is still widely used and the theory has now been adapted for measuring customer satisfaction (Duke & Persia, 1996). Applying IPA with both descriptive analysis and the factors retained from exploratory factor analysis provides a more in-depth view. In this study the nature and level of delegates' satisfaction with the catering component are exposed. The combined results are presented in Table 4.12 according to each of the four IPA quadrants.

In relation to the results found in previous customer satisfaction research (Section 2.3.5), these results are fairly similar. The literature states that the quality of food and the accompanying service are the two attributes most frequently identified as being of major importance when measuring customer satisfaction. One study, however, found that menu variety was not really important for business diner satisfaction but very important for the pleasure diner (Dube *et al.*, 1994:39). This contrasts with the results from this case study if the CE at UP course delegates are viewed as business diners, which in a sense they are at CE at UP, as their intention is to further their professional careers and/or education by attending the course presented. This observed result is noteworthy and is therefore reported as important and an issue for providing food variety, in this case the buffet offering. It should not be overlooked when striving to achieve customer satisfaction as far as course delegates are concerned, both at CE at UP and other similar teaching institutions.



**TABLE 4.12: SUMMARY OF THE INTERPRETATION OF THE IMPORTANCE PERFORMANCE ANALYSIS**

QUADRANTS	DESCRIPTIVE ANALYSIS	EXPLORATORY FACTOR ANALYSIS	INTERPRETATION FOR CE AT UP
<b>Keep up the Good Work</b>	The results from the IPA with the descriptive analysis show that most of the attributes relate to the presentation of the catering, the sensory aspects and the service (12 attributes) were most important to the delegates.	Factor analysis reveals 7 catering attributes within this quadrant: clean utensils, cleanliness, fresh ingredients, healthy food options, buffet variety, timeous service, and trained staff. Buffet variety in particular also lies in the <i>concentrate here</i> quadrant when using the descriptive analysis. This implies that CE at UP might have performed better on this catering attribute than initially revealed.	Delegates feel that CE at UP perform well on these attributes, which is positive feedback for CE at UP. They should, however, ensure that they keep their current good practice with regard to these attributes.
<b>Low Priority</b>	The results from the IPA with the descriptive analysis show that background music, catering for special diets, beverage variety, larger portions, catering for special diets being served separately, three course meals and catering for variety of cultures are of low importance to the delegates.	Factor analysis reveals 5 catering attributes within this quadrant namely, good taste, correct food temperature, taste variety, catering for special diets served separately and friendly staff. Catering for special diets served separately is found in both data sets, indicating that CE at UP does not need to change the serving set-up to accommodate this attribute. Catering for a variety of cultures is in the <i>concentrate here</i> quadrant of Factor 2, implying that this catering attribute is equally important and not important for some of the respondents, therefore making it a borderline importance attribute to be monitored closely.	Although these attributes are not important for the delegates, CE at UP also does not perform well on these matters, thus encouraging CE at UP to monitor these attributes to ensure that this situation remains true. They should be aware of any changes in the importance of any of these attributes to ensure ongoing customer satisfaction.
<b>Possible Overkill</b>	The results from the IPA with the descriptive analysis show that CE at UP performs well on the attributes of colour variety, portion control, social dining room layout and location.	Factor analysis reveals 3 catering attributes within this quadrant, namely, dishes in which food is served, three course meal and larger portions. The size and control of portions in particular is therefore not seen as important.	CE at UP should not invest additional financial or human capital in improving these attributes, but rather still continue with this current good practice.



**FIGURE 4.8: INTERPRETATION OF THE APPLICATION OF IMPORTANCE PERFORMANCE ANALYSIS TO MEASURE CUSTOMER SATISFACTION**

Interpreting the results from the application of IPA enables the identification of key attributes on which CE at UP should focus their time, money and personnel resources to maintain customer satisfaction in areas in which they are successful and increase it where it is not being achieved (Figure 4.8) .

Having reached this point, Figure 4.8 brings the investigation together by starting with the stated research problem then refers back to the standard CE at UP evaluation forms and the pilot study discussed in Section 1.3 where the delegates' evaluation of the catering component is seen to play a vital role in overall customer satisfaction. The catering component therefore appears to influence the success of the performance of CE at UP as a company. By applying the IPA, the six key attributes that have the most influential effect on the delegates' satisfaction with the catering component of CE at UP are identified. Thus the outcome of the research problem is given by interpreting the IPA measures of the customer through identifying and understanding their key attributes. Concerning the implications for practical managerial efficiency, the study advises CE at UP to assess its current agreement with the foodservice provider and consider a revision of it. It gives the organisation more knowledge about managing the catering component effectively, and offers recommendations for changes and improvement that are in-line with the delegates' assessment of the importance, performance and role of the various attributes and CE at UP. However, it also alerts the organisation to be aware of any change of attributes moving from one quadrant to another, and to keep up-to-date with their customers' needs. Although the majority of results point to positive feedback about their experience when attending CE at UP courses, the attributes that show negative feedback do affect the overall results to a substantial extent. This shows that, even though delegates are satisfied with most of the catering attributes, the few attributes that are important and do not perform well, lead to an overall decline in satisfaction. CE at UP should therefore not ignore these attributes and attend to improving performance in these areas and maintaining efficiency where achievement is evident.

#### **4.7 SUMMARY**

This chapter presented the results from two data collection phases: the qualitative data collection by means of an interview and two focus groups, followed by the collection of quantitative data through responses to a questionnaire, and the results from the application of an IPA procedure. The discussion of the results was presented according to the objectives framed for this research.

To identify the catering attributes, the interview (Addendum B) and focus group discussions (Addendum D) were analysed. To describe the delegates attending short courses at CE at UP, the delegates' demographic information came from the questionnaire (Addendum H) and the responses were analysed by applying cluster analysis. To determine the importance and performance of each catering attribute during attendance at CE at UP courses, respondents were asked to answer questions and rank the catering attributes on a specially designed questionnaire that addressed the stated research questions. This data was analysed by using descriptive analysis, followed by exploratory factor analysis and the application of the IPA. Applying the IPA with both descriptive analysis and the factors retained from the exploratory factor analysis provide a more in-depth view of the delegates' satisfaction with the catering component. CE at UP is therefore able to know on which catering attributes they should focus to manage delegate satisfaction.

# CHAPTER 5

## CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

In this chapter, the conclusions, implications and recommendations of the results and major findings as reported in the previous chapter, are presented. The evaluation of the research is addressed according to the quality of the results and the limitations of the IPA.

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### 5.1 INTRODUCTION

The core aim of this study was to use the IPA to assess delegates' satisfaction with the catering component of courses offered by CE at UP. Delegate evaluation forms from previous years were available and scrutinised. The present situation with regard to customer satisfaction with this service needs to be determined. IPA is applied to measure customer satisfaction with the catering that accompanies the courses CE at UP offers, and findings could be transferred to similar teaching institutions for mutual benefit. Such a study has not yet been undertaken. By addressing the issues at CE at UP as a case study and using this technique, this research contributes to the national and international body of empirical research.

### 5.2 SUMMARY OF MAJOR FINDINGS

The literature review and empirical research led to drawing some conclusions from the research results and findings and certain implications are identified. A summary of these major findings is presented according to the five research objectives specified for this research.

#### 5.2.1 Objective 1: To identify the catering attributes

After analysing the information gleaned from the literature review, interview and focus groups, the identified catering attributes are summarised. Six different sub-categories of attributes pertaining to the catering component as found in the literature are:

- 1) Sensory aspects (such as taste and aroma)
- 2) Presentation (how the food is served)
- 3) Environment (where the food is served)
- 4) Menu variety
- 5) Cultural preferences

## 6) Service.

The final catering attributes are deduced from this summary with categories, themes and patterns generated, using colour coding to assist in the process. The final catering attributes (Table 4.2) are used in the development of the questionnaire. The goal is to measure delegates' satisfaction with specific catering attributes relevant to this particular environment. The catering attributes are not only identified from studying relevant literature, but also through interaction with people who attended courses at CE at UP and from whom information was collected through an interview and focus group participations. This ensured that the study is built on a foundation of relevant data and that the data used for the questionnaire is also reliable.

To strengthen the validity of the catering attributes, triangulation methods are applied to the data. Triangulation refers to the combination of data sources, research methods, investigators and theoretical perspectives to resolve a research problem leading to richer and more valid interpretations (Decrop, 1999). To achieve data triangulation in the qualitative phase, different methods of data collection are used. The study's database comprised transcribed voice recordings and relevant literature from journal articles and textbooks were consulted. During the interview and focus groups field notes were kept and transcriptions were done directly after the interview and each focus group.

### **5.2.2 Objective 2: To describe the course delegates**

The literature suggests that, when assessing the overall customer satisfaction with the restaurant or company, its operational performance and the demographic characteristics of the customer should be considered. Objective 2 is therefore set to describe the course delegates to better understand their satisfaction with the catering component of CE at UP (Section 4.4). Based on the factors retained during factor analysis (Section 4.5.2), average factor scores were calculated for each respondent, yielding three clusters. This initial input data was followed-up by looking at the demographic characteristics of the respondents within each cluster. Customer profiles (Figure 4.2) refer to selected demographic variables, namely, gender, age, highest qualification, ethnic group and country of residence. The dominant importance cluster (according to size) is Cluster 3 which consists of 188 respondents. The majority of the respondents are male and between the ages of 30 and 39 years. They mostly have other non-degree qualifications and are from an African ethnic group and they reside in South Africa.

The dominant performance cluster (according to size) is Cluster 2 which consists of 192 respondents. The majority of the respondents are male and between the ages of 30 and 39. They mostly have other non-degree qualifications, and are from an African ethnic group and reside in South Africa (Figure 4.3). Knowing more about the gender, age, highest qualifications, ethnic groups and country of residence of the delegates can affect the expected sensory attributes, food presentation, dining environment, menu variety, cultural preferences and services offered by the foodservice provider. This enables CE at UP to better plan their service level agreement with the foodservice provider in the sense that they can now be more specific in terms of meeting customer needs in the light of an overall profile of their customers.

### **5.2.3 Objectives 3 and 4: To determine the importance and performance of each catering attribute**

The IPA, as suggested by Martilla and James (1977), is to be applied by using both descriptive analysis (including simple frequencies) and exploratory factor analysis. For the descriptive analysis, mean ratings and standard deviations are calculated using data related to the respondents' demographic profiles, and on the 25 catering attributes as Chu & Choi (2000) suggest. The IPA procedure is applied and used the mean ratings from the calculated descriptive analysis of the catering attributes as plotted on the IPA grid (Figure 4.4). One attribute lies in the *concentrate here* (1) quadrant, that of buffet variety; and one falls on the border between *low priority* (3) and *concentrate here* (1), which is parking. CE at UP therefore has to focus on the buffet variety offered and the provision of parking facilities.

Exploratory factor analysis condensed the information contained in a number of original variables (catering attributes) into smaller sets of variables, called factors, and to did this with a minimum loss of information, as Hair *et al.* (1995:16) advise. Three factors were retained and named accordingly:

- Factor 1: Presentation and Sensory
- Factor 2: Menu and Cultural Aspects
- Factor 3: Service.

The distribution of the catering attributes within each of the three factors retained is illustrated on the importance performance grids in Figures 4.5, 4.6 and 4.7. The results show that the delegates are generally satisfied with the presentation and sensory aspects of the food. CE at UP should, however, pay closer attention to the cultural and dietary needs of delegates, as this varies and delegates may feel that their catering needs are not met. CE at UP should also

attend to the catering staff's attitude to professionalism and take the importance of this matter up with the foodservice provider.

#### **5.2.4 Objective 5: To interpret the importance performance analysis to measure customer satisfaction**

Through the application of IPA, both descriptive analysis and the factors retained from the exploratory factor analysis provide a more in-depth view of the delegates' satisfaction with the catering component (Figure 4.8). Combining the results, and assessing them according to each of the four quadrants of the IPA, allows for a more holistic view of overall customer satisfaction. These results show that most of the feedback about CE at UP's catering component is positive. Even so, the attributes that do show negative feedback have a major impact on the overall results. This shows that even though delegates are satisfied with most of the catering attributes, the few attributes that are important and do not perform well, lead to an overall decline in satisfaction.

CE at UP should therefore attend to the following attributes in order to improve its performance value, thereby improving customer satisfaction with their catering component:

- Buffet variety
- Provision of parking facilities
- Catering for a variety of cultures
- Catering for special diets
- Beverage variety
- Professional service.

### **5.3 EVALUATION OF THE STUDY**

The study is evaluated according to the quality of the results and the limitations of the IPA procedure. Thus attention focuses on the validity and reliability of the methodology used, the extent to which the findings can be generalised and the ethics displayed during the execution of the study.

#### **5.3.1 Quality of the results**

##### **5.3.1.1 Validity**

Theoretical validity is ensured by having conducted a thorough review of the relevant literature that related to similar studies. The review of the literature focuses on obtaining information



from previous studies done on the satisfaction of customers regarding establishments that provide food and beverages, as well as previous studies that utilise the IPA to measure customer satisfaction. Inferential validity of the data and internal consistency of the factors is confirmed as the services of a qualified statistician were enlisted and Cronbach alpha values were calculated as an appropriate technique (Section 4.5.2).

#### **5.3.1.2 Reliability**

Participation in the focus groups and responding to the questionnaires were voluntary, therefore the claim is made that all the participants and respondents took part in this study willingly. The carefully chosen sample profile ensures that it only included course delegates who attended short courses on the CE at UP premises, and who had their teas and lunches as specified on the programme and offered by the designated foodservice provider. Furthermore, all constructs are clearly conceptualised and theoretically defined (Section 1.11). The study's aim is to measure the importance and performance indicators at the most precise level. A pilot test was done to test the measure for Phase 2 which involved implementing the final version of questionnaire. After applying factor analysis, Cronbach alpha was calculated on each factor to determine the reliability of the scale.

#### **5.3.1.3 Generalisation**

The results from the qualitative part (Phase 1) of the study, the use of an interview and focus groups, cannot be generalised and applied to a larger population since they only represent feedback from participants involved with CE at UP courses. Triangulation through the mixed method design did, however, enhance the general applicability of these research findings. The results and findings extracted from the quantitative part (Phase 2) of the study only applied to the sample case of the delegates attending short courses at CE at UP during a specified period. Other studies relating to customer satisfaction could use IPA to good effect, especially within the hospitality environment.

#### **5.3.1.4 Ethics**

All possible considerations were taken into account to accommodate the participants and respondents to ensure recognition of ethical standards. Participation in the focus groups and in completing the questionnaires was voluntary. Abiding by conditions set in the institutional approval awarded, ensured that ethical research procedures were followed. Participants and respondents completed consent forms (Addendum A, C & G) that states that any information gathered during the research project would be handled confidentially. Care was taken to provide the participants and respondents with as much information and accurately as was possible and necessary. No concealed media, such as video cameras, were used and

informed consent was obtained for the use of the voice recorder from the participants in Phase 1, prior to the commencement of the study. CE at UP, its managers and course coordinators, as well as the foodservice provider, supported and cooperated with the researcher who discussed the project with them beforehand, clarifying their ethical concerns. The general manager of CE at UP (Addendum F) gave written permission for each phase of the research study. Colleagues at CE at UP assisted with the distribution and collection of the questionnaires and, after discussing the content with them, they were given clear informal contracts that contained instructions and guidelines to follow. Compliance with all requirements as set out for institutional approval was honoured.

### **5.3.6 Limitations of the importance performance analysis**

IPA is widely implemented in the social sciences today. It is the researcher's opinion that the results obtained from the application of IPA in this study, shows how well this type of methodology suits research that focuses on customer satisfaction, especially within the hospitality environment. The limitations of this study are acknowledged but do not detract from the value of the findings. Adapting IPA to various types of environments and broadening its application does create the potential for problems that might arise (Section 2.2). In order to counter these possible problems, the IPA and the placement of grid lines are defined for appropriate interpretation. The limitations associated with the development of the theory behind the IPA are dealt with and the attribute selection and importance are discussed. Examples of the application of IPA were found during the literature study. As this was a case study done solely on CE at UP course delegates, it can be inferred that the responses are only characteristic of the given sample, and the findings are therefore not necessarily transferable to the wider population. A special effort ensures that only respondents who complied with the sample specifications were asked to complete the questionnaire.

## **5.4 CONCLUSIONS ABOUT THE RESEARCH PROBLEM**

The research problem of this study states that it aims to assess the course delegates' satisfaction with the catering component of courses offered by CE at UP by using IPA. Importance performance theory is applied in various industries such as service quality (e.g. Ennew *et al.*, 1993), travel and tourism (e.g., Evans & Chon, 1989; Go & Zhang, 1997), leisure and recreation (e.g. Guadagnolo, 1985; Hollenhorst *et al.*, 1992), education (e.g. Alberty & Mihalik, 1989; Ortinau *et al.*, 1989), and health care marketing (e.g., Hawes & Rao, 1985; Dolinsky & Caputo, 1991). In customer satisfaction research, various researchers have studied convention tourists' views of the services provided by a convention facility, but these

were mostly limited to the hotel industry (Bonn *et al.*, 1994; Oppermann, 1998; Hinkin & Tracey, 2003). Customer satisfaction research as found in current literature, is often conducted in the restaurant industry (Dube *et al.*, 1994; Johns & Howard, 1998; Andaleeb & Conway, 2006; Ladhari *et al.*, 2008). A gap in the knowledge therefore exists, thus this research addresses measuring delegates' satisfaction with the catering component within a professional teaching and training environment, such as that of CE at UP through the application of the IPA procedure.

The catering component is most important to the effective operation of CE at UP. However, it is an area of concern as it generally receives the lowest score given by delegates during standard course evaluations. The evaluation data collected from these forms shows that course delegates are the least satisfied with its catering component. By applying IPA, the results from this study could suggest which catering attributes the course delegates deem as most important, and which catering attributes they feel CE at UP perform poorly on, which are the ones that fall within the boundaries of the *concentrate here* (1) quadrant of the IPA grid. A large number of attributes do, however, lie in the *keep up the good work* (2) quadrant (Section 4.5). This indicates that the attributes that do fall in the *concentrate here* (1) quadrant, are so important to the customers that they have the ability to decrease the overall level of customer satisfaction. With this insight in mind, attending to the key attributes and improving the company's performance in these areas, overall customer satisfaction with the catering component, should increase. In turn, this should then be visible in the results of future analyses of the standard course evaluation forms. It is therefore advisable that CE at UP not only improves on the quality of their dealing with key attributes, but also periodically reassesses the data obtained from the standard course evaluations to determine their success or failure regarding improvements.

## 5.5 IMPLICATIONS FOR THEORY

As mentioned in Chapter 2, Martilla and James (1977) note that problems often encountered arise when companies conduct attribute research and then translate the findings from the research results into practical action. The outcomes can be particularly troublesome. According to them, management has trouble understanding the practical significance of the research results, and therefore they conclude that only one side of consumer acceptance questions are examined, either attribute importance or attribute performance (Martilla & James, 1977). Therefore IPA is based on the concept that customer satisfaction is a result of a preference for a specific product or service, and a decision regarding service providers' performance. Using importance performance theory in this case study, yielded key attributes

that could be conveyed to CE at UP for possible practical action that would maintain and increase customer satisfaction (Section 4.5). Wider application of the findings of this study in this regard is possible as the results are also transferable to areas such as campus dining, educational institutions and convention facilities.

Companies similar to CE at UP and even foodservice providers similar to the one in this case study, may greatly benefit from understanding what attributes are important to their customers and how their performance is perceived by their customers. The application of IPA in this case study shows how well the IPA procedure is suited to measuring customer satisfaction and it also indicates that more research could be done by using this application in similar environments. The results contribute positively to theory building and the future application of IPA. Cluster analysis in this case yields a set of specifics about the demographic profile of the course delegates in terms of gender, age, highest qualification, ethnic group and country of residence (Section 4.4). From these results CE at UP should better understand the catering needs of their customers. Since this information is likely to change over time, it is recommended that CE at UP periodically re-assesses the profile of their delegates in order to stay relevant.

## 5.6 IMPLICATIONS FOR POLICY AND PRACTICE

This section is included for the benefit of managers and executives, as they should find its content valuable. Since the results of this study give CE at UP management enhanced appreciation of their customers and their satisfaction with its catering component, it is better equipped to assess the current agreement it has with the foodservice provider. As a company, CE at UP would therefore be able to manage the catering component more effectively and recommend changes and improvements that would be in line with the delegates' assessment of the importance and performance of the various attributes.

For CE at UP to benefit, focusing more on these attributes will lead to better service provision:

- **Buffet variety** – CE at UP should ideally negotiate alternative buffet options with the foodservice provider that fall within the same price range as the current options, as more expensive buffet options would mean an increased cost of the catering that, in turn, would increase cost of the course. Delegates pay a course fee for the whole package that includes the catering. Pricing options should therefore be discussed with the foodservice provider, and CE at UP will have to adapt their course fees where applicable.

- **Provision of parking facilities** – CE at UP should discuss the matter of additional parking space with the relevant campus authorities.
- **Catering for a variety of cultures** – It is acknowledged that it is very challenging to cater for too large a variety of cultural food preferences. Perhaps CE at UP should identify and focus on the major cultural preferences of delegates who prefer African ethnic foods as they are in the majority, according to the customer profiles generated from the cluster analysis. This would, however, require further research into cultural food preferences of the delegates in general. CE at UP might consider adding a section to their standard enrolment forms which asks the delegates to specify their cultural food preferences. This would enable data on the subject to be captured for future analysis.
- **Catering for special diets** – Alternative options for special diets such as Halaal, Kosher, vegan, vegetarian and common food allergies should be available. Although CE at UP's standard enrolment forms does have a section which asks the delegates to specify any dietary requirements, many delegates are not aware of the fact that currently the foodservice provider does offer Halaal and vegetarian options on request. Awareness of such options should definitely be promoted.
- **Beverage variety** – Over and above the fruit juice, water, tea and coffee offered to the delegates during the duration of the course, alternative beverages should also be available, like soft drinks. However, this will affect the catering costs, and therefore the course fee, as delegates pay a combined price for the refreshments, course material and its presentation. Pricing options should be discussed with the foodservice provider too, and CE at UP will have to adapt their course fees accordingly.
- **Professional service** – As CE at UP outsources the catering required by using a foodservice provider they do not have that much control over its personnel, or the standard of professionalism of the service their delegates experience. However, in the service level agreement between CE at UP and the foodservice provider, CE at UP should clearly specify its expectations of all aspects of the service offered. Outlining their expectations very explicitly should assist in generating acceptable professional conduct and a high standard of culinary offerings to meet realistic expectations and pleasurable experiences for the delegates.

CE at UP should be aware of the main demographic characteristics of their delegates and focus on these when planning to provide an appropriate service to their satisfaction. They should pay most attention to these profiles:

- **Gender:** the majority of the respondents are male
- **Age:** the majority of the respondents are between the ages of 30 and 39 years

- **Highest qualification:** they mostly have non-degree qualifications
- **Ethnic group:** they are mainly from an African ethnic group
- **Country of residence:** most of the respondents reside in South Africa.

## 5.7 IMPLICATIONS FOR METHODOLOGY

The literature on previous IPA studies shows that focus groups are a popular method of obtaining information from which to develop a questionnaire. The literature provides much information on the development of an IPA from detailing procedures followed in previous applications. The majority of the studies use a questionnaire with either a 5-, 6- or 7-point rating scale to appraise the importance and performance of each attribute, although Martilla and James (1977) originally proposed a 4-point rating scale. Researching the hotel and tourism industries irrespectively, Chu and Choi (2000) and Hu *et al.* (2009) use descriptive analysis with simple frequencies and mean ratings, and exploratory factor analysis with VARIMAX rotation, to derive the attributes for the application of IPA. These studies show successful use of this methodology. This case study follows a similar approach by using both focus groups and a questionnaire with a 4-point Likert type rating scale. The study also follows Chu and Choi's (2000) and Hu *et al.*s. (2009) research by using descriptive analysis and exploratory factor analysis with VARIMAX rotation. By identifying key attributes that influence the delegates' satisfaction with the catering component of CE at UP, the application of IPA as a methodology is deemed to have been successful, and useful to CE at UP's management team in a practical way. The literature also provides information on the limitations and possible problems associated with IPA. These limitations are noted and the possible problems are avoided in this case study (Section 5.3.6). These observations demonstrate the merit of this approach to measure and evaluate customer satisfaction with professional teaching and training institutions like CE at UP, thereby broadening the scope of researching similar environments for future IPA studies.

## 5.8 RECOMMENDATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

The research methodology could be adapted to generalise the findings and be extended to research involving international course delegates. Future research directions could follow these specific recommendations and their implications:

### ***In terms of the catering attributes:***

- More in-depth qualitative methods or comprehensive quantitative methods could be used to identify a larger number of catering attributes

- The catering attributes for companies in different regions (e.g. provincial studies in Gauteng compared to KwaZulu-Natal) may vary greatly, and it could therefore be useful to re-evaluate the catering attributes for individual studies accordingly

***In terms of the course delegates:***

- The profile of course delegates may vary between regions and at different times and should therefore be re-evaluated before drawing conclusions
- A larger number of course delegates attending a larger range of courses could be questioned. making the sample bigger and more diverse
- The demographic information obtained from the standard CE at UP enrolment forms could be captured and that data could be used to periodically evaluate the profile of the delegates attending courses at CE at UP; this could assist in making accurate managerial decisions about the catering component
- As the profile of the course delegates is likely to change over time, the results from the application of cluster analysis should be periodically re-evaluated

***In terms of the teaching and training institution:***

- CE at UP is a diverse and growing company, so applying IPA at regular intervals in the future to identify possible changes in the delegates' levels of satisfaction, and then re-assess and evaluate strategies, would be beneficial
- As the services offered by teaching and training institutions differ from company to company, a study could be conducted to compare the application of the IPA between similar companies

## **5.9 SUMMARY**

This final chapter discussed the implications and recommendations of the major findings of this study. The evaluation of the research is addressed according to the quality of the results and the limitations of the IPA procedure. The contribution from this case study enabled the researcher to fill the gap in the knowledge and add information regarding the catering component of CE at UP in such a manner that other similar teaching institutions could benefit too.

The execution of this study contributes to the body of knowledge by:

- Providing an understanding of the catering component of CE at UP
- Providing insight into the profile of sampled course delegates through cluster analysis
- Providing an understanding of the catering attributes identified by course delegates

- Providing insight into the importance and performance of the catering attributes
- Providing insight into the customer satisfaction of the course delegates with regard to the catering component
- Supporting CE at UP to better appreciate and manage the catering component
- Demonstrating the value of IPA to measure customer satisfaction in this environment



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# Addendum A

## Letter of consent to interview participant

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UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

### INTERVIEW CONSENT LETTER

*Beste Amanda*

*Ek is tans besig met my Meesters in Verbruikerswetenskap: Voedselbestuur. Die navorsingsvoorlegging is in Augustus goedgekeur en ek mag nou met die datainsamelling begin. Die titel en agtergrond van my studie is:*

#### **An Importance Performance Assessment of the Catering Component of Courses offered by Continuing Education at University of Pretoria**

The catering component offered during short courses, workshops and seminars is of major importance. The catering component is however an area of concern for CE at UP as it generally receives the lowest score given by delegates during course evaluations. The delegates experience of the catering plays a vital role in the overall customer satisfaction which in turn influences the success and performance of CE at UP as a company. The researcher thus aims to assess the importance of the various attributes of the catering and to assess their performance, which will then provide an evaluation of the delegates' customer satisfaction. CE at UP has to determine which attributes of the catering were important and how did their performance influence customer satisfaction in order to better serve their customers and increase their market share by attracting and retaining more customers. CE at UP outsources its catering needs to more than one foodservice provider situated on-campus. The majority of these catering needs (more than 80%) are however outsourced to one foodservice provider. The researcher will focus on this particular foodservice provider as it is mostly used by CE at UP and is in close proximity of CE at UP.

*Een van my datainsamellingsfases is om 'n onderhoud met jou te voer rakende die "catering component". Die onderhoud sal deur my gedoen word en my navorsingsassistent, Andrea, sal notas neem tydens die onderhoud. Die onderhoud sal ook opgeneem word d.m.v 'n "voice recorder". Sal jy asb aandui of hierdie onderhoud en methods van rekordhouding jou goedkeuring wegdra? Ek sal graag die onderhoud met jou wil skeduleer vir Donderdag of Vrydag middag. Dit sal ongeveer 'n uur neem. Laat weet gerus wat jou beskikbaarheid is.*

*Baie dankie, Agathe*

# Addendum B

## Interview schedule

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UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

### Introduction

- Test the recording equipment and make sure the facilitator has everything she needs
- Introduce the researcher and facilitator and offer the participant water, tea or coffee
- Make sure that everyone is seated together comfortably and can see each other properly
- Read out the statement on confidentiality and have the participant sign a consent form
- Check that there are no objections to the use of the voice recorder; then switch it on
- State the purpose of the study and the interview discussion
- Explain the interview proceedings and begin with the question sections

### Section 1

- 1.1 Where does CE at UP currently stand in terms of the service level agreement with the foodservice provider?
- 1.2 What is stipulated in the current service level agreement?
- 1.3 What does CE at UP expect of the foodservice provider?

### Section 2

- 2.1 What is your personal experience with the foodservice provider?
- 2.2 Are there specific problems? If so, how are they handled?
- 2.3 How do you feel does the meal experience impact on the company and delegates separately?
- 2.4 What do you make of the impact in terms of CE at UP's relationship with the delegates and the foodservice provider?

### Section 3

- 3.1 What catering attributes do you feel is important to create a positive catering experience?
- 3.2 Not meeting the delegates' cultural preferences were previously identified as a negative aspect of the catering component. Are the different cultural preferences of delegates now being addressed? If so, how?
- 3.3 What suggestions would you make from a management perspective in terms of highlighting the important attributes to create a positive catering experience?

#### **Probes: Pre-determined catering attributes**

- Sensory aspects: taste, aroma, flavour, smell, texture
- Presentation: how the food is served, how the food itself looks, colours, appetizing
- Environment: where the food is served, atmosphere, music, noise, location, décor, layout/set-up, cleanliness, hygiene, safety
- Menu variety: variety of menu items (buffet options, beverage variety)
- Cultural preference: which cultures feel let out, which culture should be included
- Service: service of the personnel, friendliness

#### **Conclusion**

- Summarise the discussion
- Collect the signed consent form
- Thank the participant for her time and insight
- See that the facilitator has the necessary notes and recordings for the transcription



# Addendum C

## Participant consent form of focus groups

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UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

Dear Delegate

### **Focus Group: An Importance Performance Assessment of the Catering Component of Courses Presented by Continuing Education at University of Pretoria (CE at UP)**

A Masters student from the department of Consumer Science is currently busy with a comprehensive study on the catering component of courses presented by CE at UP. Please assist us in the data collection by participating in this focus group regarding the importance and performance of the catering component.

#### **Please note the following:**

- This is an anonymous focus group. Your name will not appear on the field notes obtained during the focus group and the information obtained from it will be treated as confidential.
- Your participation in this study is important to us and we want to include a large amount of CE at UP delegates.
- Please assist us and answer the questions honestly and completely.
- Should you wish to no longer participate in this study, you are welcome to withdraw at any stage.
- Please note that this focus group will be voice recorded.
- The findings of this study will be used for academic purposes, and may be published in an academic journal. A summary of the findings will be available on request.

To ensure that all aspects of this comprehensive topic are included the focus group is divided into different topics of discussion, namely: importance of the catering component, expectations and experience of the catering component and a section to determine your opinion on aspects relating to the catering component.

The focus group will take approximately 45 minutes to complete.

Please fill out and sign the consent form below where you give your informed consent to participate in this study on a voluntary basis. This also confirms that you have read and understand the information provided.

Thank you for your esteemed cooperation. It is highly appreciated.

I \_\_\_\_\_ (respondent name, please print clearly), hereby give my informed consent to participate in this study.

\_\_\_\_\_

**Respondent Signature**

\_\_\_\_\_

**Date**

# Addendum D

## Focus group schedule

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UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

### Introduction

- Test the recording equipment and make sure the facilitator has everything in she needs
- Introduce the researcher and facilitator and offer participants water, tea or coffee
- Make sure that everyone is seated together comfortably and can see each other properly
- Read out the statement on confidentiality and have each participant sign a consent form
- Check that there are no objections to the use of the voice recorder; then switch it on
- State the purpose of the study and the focus group discussion
- Explain the focus group proceedings and begin with the question sections

### Section 1

- 1.1 How do you feel about the catering component?
- 1.2 Do you feel that the catering component is important when attending short courses?
- 1.3 If yes, then why do you think so and how important is this part of the course to you in totality?
- 1.5 If not, then why do you think so and how do you view the impact of the catering component as part of the overall experience of the course?

### Section 2

- 2.1 What are your expectations of the catering component when attending short courses?
- 2.2 Do you have high expectations or do you look forward to the catering component when attending short courses and why?
- 2.3 Do you have low or no expectations of the catering component and why?
- 2.4 What do you expect to find in terms of the catering component, with specific reference to the catering attributes?

2.4 What is important before going?

### **Section 3**

3.1 Have you previously attended short courses? What was your experience of the catering component from previously attending short courses?

3.2 If not, you can use the current short course as an example.

3.3 Was the overall catering experience positive or negative and why?

3.4 What was your experience in terms of the catering component, with specific reference to the catering attributes?

### **Section 4**

4.1 What catering attributes do you feel is important to create a positive catering experience once you are there and why?

4.2 Do you feel that some of the attributes are more important?

4.3 Which attributes are the important ones and why?

### **Probes: Pre-determined catering attributes**

- Sensory aspects: taste, aroma, flavour, smell, texture
- Presentation: how the food is served, how the food itself looks, colours, appetizing
- Environment: where the food is served, atmosphere, music, noise, location, décor, layout/set-up, cleanliness, hygiene, safety
- Menu variety: variety of menu items (buffet options, beverage variety)
- Cultural preference: which cultures feel let out, which culture should be included
- Service: service of the personnel, friendliness

### **Conclusion**

- Summarise the discussion
- Collect all signed consent forms
- Thank the participants for their time and insight
- See that the facilitator has the necessary notes and recordings for the transcription

# Addendum E

## Pilot study for finalisation of questionnaire

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UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

Department of Consumer Science and Continuing Education at University of Pretoria

### **An Importance Performance Assessment of the Catering Component of Courses offered by Continuing Education at University of Pretoria**

Dear respondent,

This pilot study involves an anonymous survey. Your name will not appear on the questionnaire and the answers you give will be treated as strictly confidential.

### **KINDLY COMPLETE THE ATTACHED QUESTIONNAIRE AND ANSWER THE FOLLOWING QUESTIONS**

1. Is the overall questionnaire easy to read / to follow?

If not, please explain.

---

---

2. Are the instructions easy to understand?

If not, please explain.

---

---

3. Are the questions / concepts easy to understand?

If not, please explain.

---

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4. Is the meaning of each catering attribute clear?

If not, please explain?

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---

5. Do you feel that any catering attributes were left out?

If so, what would you like to add?

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6. Do you have any additional questions and / or suggestions about the questionnaire?

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### **IMPORTANT CONCEPTS AND HOW TO COMPLETE THE QUESTIONNAIRE**

#### **- Demographical Information**

Questions 1 – 6 pertain to the demographical information. Kindly tick (x) the appropriate box and / or specify where necessary.

#### **- Importance**

Questions 7 – 30 pertain to the importance of the catering attributes within the short course environment. Please tick (x) the box that best describes your opinion on the rating scale of (1) extremely important, (2) important, (3) slightly important, (4) not important. With this section, the researcher would like to know from the participant which catering attributes they deem as important and / or not important when attending a short course at CE at UP.

#### **- Performance**

Questions 31 – 54 pertain to the performance of the catering attributes within the short course environment. Please tick (x) the box that best describes your opinion on the rating scale of (1) excellent, (2) good, (3) fair, (4) poor. With this section, the researcher would like to know from the participant which catering attributes they feel CE at UP performed well on or did not perform well on.

# Addendum F

**Approval letter to General Manger of CE at UP**

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# Addendum G

## Letter of consent for questionnaire respondents

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# Addendum H

## Questionnaire

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## An Importance-Performance Assessment of the Catering Component of Courses Presented by Continuing Education at University of Pretoria

Respondent Number

<b>1</b> What is your gender?	Male	1	
	Female	2	
<b>2</b> What is your age? (in years)			
<b>3</b> What is your highest qualification?	Matric	1	
	Diploma	2	
	Degree	3	
	Other (specify)		4

For Office Use

Q0			
Q1			
Q2			
Q3			

**4** To which ethnic group do you belong?

African	1
White	2
Indian	3
Coloured	4
Other (specify)	5

For Office Use

Q4			
Q5			
Q6			
Q7			

**5** Where do you live? (city/town/area)

**6** Today's date:

**7** General Comments and/or suggestions?

Please indicate the <b>IMPORTANCE</b> of each catering attribute		Extremely Important	Important	Slightly Important	Not Important	
9	Good taste	1	2	3	4	Q8
	Correct food temperature	1	2	3	4	Q9
10	Taste variety	1	2	3	4	Q10
11	Fresh ingredients	1	2	3	4	Q11
12	Colour variety	1	2	3	4	Q12
13	Clean utensils	1	2	3	4	Q13
14	Dishes in which the food is served	1	2	3	4	Q14
15	Portion control	1	2	3	4	Q15
16	Social dining room layout	1	2	3	4	Q16
17	Background music	1	2	3	4	Q17
18	Cleanliness	1	2	3	4	Q18
19	Parking	1	2	3	4	Q19
20	Location	1	2	3	4	Q20
21	Buffet variety	1	2	3	4	Q21
22	Cater for special diets	1	2	3	4	Q22
23	Healthy food options	1	2	3	4	Q23
24	Beverage variety	1	2	3	4	Q24
25	Cater for variety of cultures	1	2	3	4	Q25
26	Larger portions	1	2	3	4	Q26
27	Catering for special diets served separately	1	2	3	4	Q27
28	Three course meal	1	2	3	4	Q28
29	Friendly staff	1	2	3	4	Q29
30	Professional service	1	2	3	4	Q30
31	Trained staff	1	2	3	4	Q31
32	Timeous service	1	2	3	4	Q32

Please indicate the <b>PERFORMANCE</b> of each catering attribute		Excellent	Good	Fair	Poor	
33	Good taste	1	2	3	4	Q33
34	Correct food temperature	1	2	3	4	Q34
35	Taste variety	1	2	3	4	Q35
36	Fresh ingredients	1	2	3	4	Q36
37	Colour variety	1	2	3	4	Q37
38	Clean utensils	1	2	3	4	Q38
39	Dishes in which the food is served	1	2	3	4	Q39
40	Portion control	1	2	3	4	Q40
41	Social dining room layout	1	2	3	4	Q41
42	Background Music	1	2	3	4	Q42
43	Cleanliness	1	2	3	4	Q43
44	Parking	1	2	3	4	Q44
45	Location	1	2	3	4	Q45
46	Buffet variety	1	2	3	4	Q46
47	Cater for special diets	1	2	3	4	Q47
48	Healthy food options	1	2	3	4	Q48
49	Beverage variety	1	2	3	4	Q49
50	Cater for variety of cultures	1	2	3	4	Q50
51	Larger portions	1	2	3	4	Q51
52	Catering for special diets served separately	1	2	3	4	Q52
53	Three course meal	1	2	3	4	Q53
54	Friendly staff	1	2	3	4	Q54
55	Professional service	1	2	3	4	Q55
56	Trained staff	1	2	3	4	Q56
57	Timeous service	1	2	3	4	Q57