

**AN EVALUATION  
OF THE CURRENT MARKETING PRACTICES  
BY STUDENTS AT THE  
UNIVERSITY OF NATAL  
PIETERMARITZBURG (UNP)  
FOR SELF-FUNDED TEACHING PROGRAMMES  
IN THE SCHOOL OF BUSINESS**

By

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## DECLARATION

I hereby declare that *an evaluation of the current marketing practices by students at the University of Natal – Pietermaritzburg (UNP) for self-funded teaching programmes* is my own work and has not been submitted for another degree. I have quoted all the sources of information that I have used by means of complete reference and acknowledgement.

A handwritten signature in black ink, appearing to read 'Sandra Pillay', written over a horizontal line.

**Sandra Pillay**  
**July 2003**

## ABSTRACT

The objective of this dissertation is to evaluate the current marketing practices as viewed by students at the University of Natal - Pietermaritzburg (UNP) for self-funded courses.

Data was collected from a sample size of 221, of which 196 student opinions were established. A sample size of 196, represented 38,7 % of the total population, and can be considered as an adequate sample size. This also confirms that the sample size is a true representation of the population.

The instrument used for the research was a structured questionnaire, formulated by reviewing the literature in Chapter 2 and Chapter 3.

The analysis of the data was done using a software package called SPSS v11,5.

The interpretation of these results was illustrated with the use of bar graphs and pie charts, with a written narration for each question of the questionnaire.

The analysis of the results reflects that students feel very positive about the University's current marketing practices. All departments were rated as at least "good" by the students in terms of reliability, responsiveness, assurance, empathy and tangibles.

Recommendations were formulated as the result of the findings, and challenges facing the University of Natal were presented.



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# **Chapter 1**

## **Introduction**

### **1.1 Statement of the Problem**

The momentous change in South Africa since the 1990's have necessitated profound reforms in education. Without doubt the tertiary sector is in the midst of fundamental transformation (Penceliah, 1997:3). The implementation of the new funding framework, restructuring and merger processes, shrinking budgets, rising bad debts, lower student numbers, rising inflation and a depreciating currency, are some of the factors contributing to the financial dilemma that most tertiary institutions are experiencing.

Universities in South Africa are in the midst of facing even greater challenges as the country makes its footprint in the global arena. Not only is it extremely difficult to compete with existing higher educational institutions such as Damelin, ICESA, Technikon SA and other rapidly emerging colleges, universities are feeling the pressures of globalisation as international competition intensifies.

In addition, higher education is in competition with other areas of government spending, inside and outside the social welfare expenditure area, and therefore needs to increasingly legitimise its claim (Penceliah, 1997:7). Cut backs in government subsidy as a result of a new funding formula is to be expected and universities are seeking alternative ways of boosting their income, hence the introduction of self-funded teaching programmes at the University of Natal.

Students are becoming more demanding and are fully aware of what is available in the market place and at best dictate the quality of goods and services that they expect. For universities to remain competitive they need to establish themselves as market leaders instead of market followers, and constantly innovating and re-engineering their programs and services, in order to create a competitive advantage over their many competitors. But most importantly, since universities are essentially classified as a non-

profit service organisation, many are realising that the emphasis needs to be on implementing more aggressive marketing strategies to attract and retain prospective students. Ultimately, this must include offering a superior level of service.

Since marketing is a necessary management function for both profit and non-profit enterprises, it is for this reason that educational institutions need to be market driven because ultimately their success depends on satisfying the needs and wants of their respective target markets. Educational institutions are recognising that for them to remain competitive and feasible, it is imperative that marketing becomes an integral part of their total management function.

The reason for undertaking this study is to evaluate the current marketing practices by the students at the University of Natal Pietermaritzburg, for self-funded teaching programmes in the School of Business. The research questions for which an answer should be developed can therefore be formulated as follows:

How acceptable or unacceptable are the marketing practices at University of Natal-Pietermaritzburg as evaluated by students? What do these students think about the service quality levels at University of Natal - Pietermaritzburg? How acceptable or unacceptable are the marketing of the 7 P's and related marketing factors at University of Natal Pietermaritzburg?

## **1.2 Background of the study**

Tertiary institutions will certainly be confronted with daunting but nevertheless exciting challenges in the future. In this regard, the need for Universities to transform, and growth in higher education, should be based on a strategy of greater cost effectiveness and the limitation on government financing, (NCHE, 1996:65). Higher Education is supposed to address the development needs of the society and be able to provide a labour market with knowledge-driven people and who have the competencies and expertise necessary for growth and prosperity in the economy. However, in South Africa, there is a chronic mismatch between the output of higher education and the needs of the economy (<http://www.che/doe&minister>).

South Africa is faced with a shortage of skilled human resources. Universities find themselves in a predicament since they are required to provide skilled personnel whilst encountering shrinking budgets. The Ministry of Education released a new funding framework for financing Higher Education in March 2001, which will dramatically change the funding for Universities.

The new funding framework replaces the South African Policies for Secondary Education (SAPSE) formulae and comes into effect in 2003. The SAPSE formulae is essentially market-driven approach, based on choices made by students in prospective careers, and funding linked to access and success rates. The new funding framework is seen as a steering mechanism, aimed at achieving the goals and targets of the Country's National Plan.

The Framework consists of two main elements:-

- a) A mechanism (formula) for allocating general purpose and block grants to higher education institutions, e.g. grants for teaching and support activities and funds for academic research and development.
- b) A set of earmarked funds designed to achieve specific purposes, e.g. student financial support and approved new capital projects (<http://www.gov.za>).

With the new framework, institutions will receive subsidies based on the number of students who have obtained their diploma/degrees in a particular year and thus differs from the SAPSE formulae where subsidies are granted on the bases of students who passed individual modules/subjects. This new framework is set to cause increasingly undue financial pressures on the future funding of the University of Natal and the Council of the University of Natal shares a few major concerns: -

- a) In tying teaching output subsidies to graduation rates, rather than the successful completion of modules, the funding framework is in contradiction of its policy, which strongly endorses the concept of lifelong learning, and this is a serious disjuncture, which needs to be addressed.
- b) The proposed funding model is entirely supply-driven and makes no attempt to identify the normative costs of educating students at Universities, as

distinct from the relative costs of delivery between different disciplines. No specific cognisance is taken, for example, of higher costs of Information Technology and other infrastructural requirements.

- c) The new funding framework will make even less funding available for Universities, given the restructuring envisaged in the National Plan and the equivalence now given, in terms of funding, to universities and technikons.
- d) The proposed new funding framework provides no financial support for residences, which finances replacement and repairs to equipment, as well as new equipment when student numbers increase. This will constitute a loss of income to residential institutions, and negatively impact on students already disadvantaged (<http://innerweb.und.ac.za>).

The National Plan for higher education, which was approved by Cabinet in February 2001, identifies key policy goals and objectives necessary for achieving the overall goal of the transformation of the higher education system. The proposed restructuring will also see 11 universities, 6 technikons and 4 comprehensive institutions instead of the existing 21 Universities and 15 technikons. This includes the merger between the University of Natal and the University of Durban Westville (<http://www.inasp.info>).

Thus it is evident that the University of Natal, together with other universities, will endeavour to seek alternative funding mechanisms to bridge the gaps in the new proposed funding framework as well as the negative effects emanating from the proposed merger. The University of Natal has over the years introduced a number of self-funded teaching programmes, specifically aimed to supplement its income. It is hoped that with aggressive marketing techniques, these programmes will attract more students and ultimately contribute to the continual viability of the University (<http://www.innerweb.und.ac.za>).

“Self-funded teaching programmes” can be defined as programmes mounted with a view to generating additional income for the University, for Schools, and for individual staff members by exploiting a market need (<http://www.innerweb.und.ac.za>).

Such programmes must, by definition, add value to the University and must bring new students into the University who otherwise would not have been able to come. At present, the University of Natal offers nine such programmes, with the Bachelor of

Business Administration and Master of Business Administration, being the most popular. These self-funded courses are specifically structured and offered on a part-time basis. It is University policy that all income generated from these self-funded courses be split into a 60/40 ratio between the School concerned and the University (<http://www.innerweb.und.ac.za>).

Evidently, planning is critical and universities need to be pro-active and develop a change orientated management style. Increased competition both locally and in the global arena, together with steadily rising bad debts and financial restrictions have compelled Universities to use strategic planning as a tool for survival and to obtain a competitive advantage (Penceliah, 1997:2).

The growing advantage of implementing marketing in the educational sector is indicative of the interest of administrators of educational institutions of the marketing idea. This interest is likely to increase as more administrators realise that marketing impacts on an institution's success. Marketing at universities will inevitably lead to:

- a better understanding of the needs of students;
  - careful shaping and launching of new programmes;
  - a pruning of weak services;
  - more effective methods of delivering services;
  - more flexible pricing approaches and
  - improved levels of client satisfaction
- (Lovelock and Weinberg, 1990:304).

Gray (1991:174) asserts that is not enough for tertiary institutions to depend upon the education regulations to protect them from the free-market economy. Universities must take cognisance that they need to be accessible and available to satisfy the needs of the community, particularly the people from disadvantaged backgrounds. Clearly, marketing is imperative to inform people of opportunities available in the institution (Penceliah 1997:3).

Educational institutions have been slow in employing modern management techniques. However, changing economic conditions among others has precipitated the need for managing educational institutions both effectively and efficiently. In this regard, it is

encouraging to learn that many educational institutions have now begun to adopt modern business techniques, including marketing with customer orientation (Penceliah 1997:3)

In the last two years there appears, as indicated by Figure 9 in chapter 5, to be a steady growth in the number of students registering and qualifying in the self-funded teaching programmes at the University of Natal.

It is hoped that with adequate marketing implementation that these numbers will increase further.

An innovative and business approach to the marketing of self-funded teaching programmes would no doubt result in a positive cash flow to the University. An evaluation of the current marketing practices by students registered for self-funded courses will indicate the level of acceptability for these practices and what the University is doing or needs to be doing in order to ensure that the self-funded courses offered remains feasible and competitive. This evaluation will allow the University great insight as to how its students perceive its current marketing strategy.

### **1.3 Objectives of the study**

The purpose of this study is to evaluate the acceptability of the University of Natal's current marketing practices. This dissertation will focus mainly on registered students currently studying self-funded courses in the School of Business at UNP.

The importance of this study will be to determine student responses on the overall marketing practices adopted by the University of Natal in 2003. This will invariably include responses on the level of service received by students, on the acceptability of marketing the 7 P's and other related factors, currently employed by the University of Natal, Pietermaritzburg.

By enforcing a strong marketing philosophy, universities will be able to create a fresh view of their strategic direction and their position in the competitive environment and help them to align their services with the needs and preferences of their students in order to become sustainable. A study of this nature has not been undertaken before at the University of Natal, Pietermaritzburg.

## 1.4 Hypothesis

The following hypotheses can be established:

- H1 - Current marketing practice at UNP as rated by students registered for self-funded courses in the School of Business is excellent.
- H0 - Current marketing practice at UNP as rated by students registered for self-funded courses in the School of Business is not excellent.
  
- H2 - Current marketing practice at UNP as rated by students registered for self-funded courses in the School of Business is very good.
- H0 - Current marketing practice at UNP as rated by students registered for self-funded courses in the School of Business is not very good.
  
- H3 - Current marketing practice at UNP as rated by students registered for self-funded courses in the School of Business is good.
- H0 - Current marketing practice at UNP as rated by students registered for self-funded courses in the School of Business is not good.
  
- H4 - Current marketing practice at UNP as rated by students registered for self-funded courses in the School of Business is fair.
- H0 - Current marketing practice at UNP as rated by students registered for self-funded courses in the School of Business is not fair.

The above hypotheses were tested using the Wilcoxon Signed Ranks Test. In addition the Mann Whitney U tests, which tests for the differences between two independent variables, Kruskal-Wallis one-way analysis of variance, Chi-square goodness-of-fit test were used to test other variables in the research instrument. A Spearman-Brown correlation formula was performed to assess the reliability of the test. The SPSS output results can be found in Appendix 3-8.



## 1.5 Structure of the Dissertation

This dissertation will be presented in the following order:

- Chapter 1:** Introduction - which deals with the problem statement, background of the problem, research objectives, and formulation of hypotheses.
- Chapter 2:** Will provide a literary review and evaluate extensively the literature available on marketing practices for service organisations.
- Chapter 3:** Is an extension of chapter 2 which examines marketing literature applicable to educational institutions.
- Chapter 4:** The research methodology is presented in detail.
- Chapter 5:** Discusses the data analysis and the findings of the research.
- Chapter 6:** Recommendations and conclusion are provided.

Bibliography

Appendices

## **Chapter 2**

### **Literature Review: Marketing of Service Organisation**

#### **2.1 Introduction**

In the past, service industries have lagged behind manufacturing industries in the application of marketing principles. It appears that many service firms have not grasped the theory of marketing. In this regard, Kotler, et al. (1996:593) suggests that service businesses are more difficult to manage when using traditional marketing approaches.

Universities are classified as part of the service industry with their core function being the provision of service. Universities should be responsive and responsible to their markets and enjoy serving their people. Moreover, they should stay flexible, sensing change early, then watching and using it to their competitive advantage. The critical barrier to achieving a service success is that of a co-ordinated strategic marketing effort to clarify goals, unify strategies and utilize resources efficiently (Wonders & Gyure 1991:1).

In an era characterised by more competition, diversity and consumer focus, universities are investing heavily in their marketing strategies. At the same time, policy development aimed at widening participation means that higher education institutions must adopt new and innovative marketing strategies to target traditionally under-represented groups (<http://www.neilstewartassociate.com>).

These strategies are required to target not only the prospective student market, but also a wide range of key stakeholders including parents, lecturers, research partners/sponsors, and business associates (Hodge 2002:1). Higher education in South Africa competes in a local and global market and strategies need to focus across local, national and international levels making an investigation into the basic theoretical concepts regarding services necessary for this dissertation.

This chapter provides a comprehensive outline of the nature, importance, and the characteristics and classifications of services. It also studies the marketing mix applicable to the service industry. In designing an acceptable marketing strategy, a

university needs to take cognisance of the marketing principles and techniques applicable to the service industry, which can ultimately lead to a university differentiating itself from the rest of the educational institutions.

## **2.2 Distinction between Product Marketing and Service Marketing**

At the outset, it is necessary to make a distinction between products, goods and services. Marketing theory has been dominated by concepts and terminology derived from the marketing of goods. This orientation endured despite recognition that services have a number of unique characteristics. Goods and services both provide benefits and customer satisfaction; however, they both have been described as products in the widest sense of the word. There has been a tendency to use terms “goods and products” interchangeably and with little attention to the service, which has far reaching implications for marketers (Gabbott & Hogg 1994:312).

Product marketing and service marketing is essentially the same in concept. However, the basic characteristics that differentiate services from products usually result in a different marketing programme in a service organisation. Therefore, the strategies used in product marketing are often inappropriate for service marketing (Penceliah, 1997:41).

## **2.3 Importance of Services**

The shift towards service economies has been a feature of many economically developed countries in recent years. The move from agriculture to manufacturing is now being followed by a move from production to services. Most countries in Western Europe for example are following the U.S pattern, with an increasing proportion of the working population involved in service (Cannon 1989:185).

In South Africa, the pattern is very much the same, with the country moving towards becoming more service orientated, a large proportion of the work force is employed by the service industry and services account for a significant proportion of the gross national product (Stanton et al. 1992:512). Table 1 on page 11 tabulates the reasons for growth in the service industry.

**Table 1 – Reasons for Growth in the Service Industry.**

1. Increasing affluence	Greater demand for lawn care, carpet cleaning and other services that consumers used to provide for themselves.
2. More leisure time	Greater demand for travel agencies, travel resorts, adult education courses.
3. Higher percentage of woman in the labour market	Greater demand for day care nurseries, maid service.
4. Greater life expectancy	Greater demand for nursing homes and health care services.
5. Greater complexity of life	Greater demand for income tax preparers, marriage counsellors, legal advisers, employment services.
6. Greater complexity of products	Greater demand for skilled specialists to provide maintenance for such complex products such as cars and homes.
7. Greater concern about ecology and resource scarcity	Greater demand for purchased or leased services, such as door-to-door bus service and car rental.
8. Increasing number of new products	The Computer industry and all its developments.

**Source: Schoell, W.F and Ivy, J.T., 1981:277**

## **2.4 Definition of Service**

Services are difficult to define because they are invariably marketed in conjunction with tangible goods. One of the main points of the marketing concept is that a firm's offering goes far beyond the physical product offering into a broader array of need satisfaction. Firms therefore, have to recognise that everyone in the business sells some element of service.

Stanton (1997:515) defines services as "those separately identifiable, essentially intangible activities which provide want satisfaction, and which are not necessarily tied to the sale of a product or another service. To produce a service may or may not require

the use of tangible goods. However, when such use is required there is no transfer of the title (permanent ownership) to these tangible goods”.

Similarly, Kotler (2000:428) states that, “a service is any act or performance that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product.”

Kasper, van Helsdingen and de Vries (1999) in Kunneke (2001:81) states that, “services are originally intangible and relatively quickly perishable activities whose buying takes place in an interaction process aimed at creating customer satisfaction but, during this interactive consumption, this does not always lead to material possession”.

The common element in these definitions is that they all emphasise the essentially intangible nature of a service, since the customer leaves without an actual tangible product. The quality of intangibility is central to another approach to service definition, which focuses on the distinctive characteristics of services (Cowell 1991:23).

## **2.5 Characteristics of Services**

Fundamentally, services are marketed in the same way as goods and the marketing in non-profit and government service organizations is basically the same as in profit-seeking firms. In practice, however, there are four service characteristics, namely, **intangibility**, **inseparability**, **heterogeneity** and **perishability** that differentiate services from goods. These distinctive characteristics create special marketing challenges and opportunities that lead to strategies and tactics being different than those used in the marketing of goods (Etzel, et al., 1997:518).

### **2.5.1 Intangibility**

Services are intangible. Unlike physical products, they cannot be seen, tasted, felt, heard, or smelled before they are bought. To reduce uncertainty, buyers will look for signs or evidence of the service quality. They will draw inferences about quality from the place, people, equipment, communication material, symbols, and price that they see (Kotler, 2000:429).

It is only after students graduate and find employment, that they will be able to assess the true worth of the education and how best to implement what they have learned.

Cowell (1991:23) suggests that the concept of tangibility may be further divided into: -

- a) services providing pure intangibles (e.g. security service, museums),
- b) service providing added value to a tangible (e.g. insurance, launderettes),
- c) services that make available a tangible (e.g. financial services).

Four promotional strategies that may be used to suggest service benefits and reduce the effect of intangibility are:

**a) Visualization**

Cruise lines depict the benefits of their cruises with ads that show people dancing, dining, playing deck games. Educational institutions can promote their campuses using similar techniques such as publishing successful pass rates and the good quality of student life on their campuses (Etzel, et al., 1997:518).

**b) Association**

The intent is to connect the service with a tangible good, person, or place. The University of Natal uses a picture of a “Rolls Royce” in it’s advertising to demonstrate its status and class.

**c) Physical Representation**

Many banks use colour for credit cards, to symbolize wealth and prestige. Most universities have their own distinctive crests in various colour and pattern styles (Etzel, et al., 1997:518).

**d) Documentation**

Many airlines cite facts and figures in their ads to support claims of dependability, performance, care for passengers, and safety (Etzel, et al., 1997:518).

### **2.5.2 Inseparability**

Production of goods and services occur at the same time. This concept is particularly important in personal services. It limits the scope to which dealers, distributors or agents can be effectively used, and places considerable emphasis on the skills and attitudes of those involved in selling. Since both the client and the customer are present, as the service is produced, provider-client interaction is a special feature of services marketing. In a university context, this is evident by the fact that a lecturer has to be present to deliver a lecture and thus becomes a vital link in the delivery of the service.

When clients have strong provider preferences, price is raised to ration the preferred provider's limited time (Kotler, 2000:431). This is clearly evident from the fact that highly reputable lecturers can cost universities a very large financial package to recruit them.

Etzel, et al., (1997:518) confirms that from a marketing standpoint, inseparability limits distribution. A direct sale is the only possible channel of distribution and an individual seller's service cannot be sold in many markets, eg. a lecturer can teach only so many students in a day.

### **2.5.3 Heterogeneity**

Services are usually designed around specific requirements of the individual customer and it is often difficult to achieve standardisation of output for services. Even though standard systems may be used, for example, to handle a flight reservation, each "unit" of service is somewhat different from every other "unit" of the same service because of the "human factor" in production and delivery.

Etzel, et al (1997:519), identifies, an added complication in that, it is often difficult to judge the quality of a service, for example, a visit to the salon, will not produce the exact same hair style every time. No one service is the same, because people are different. A lecturer is an individual with his/her own creativity, methods, and initiatives and no one lecturer will lecture in the same manner. In the same way, not a single lecture is delivered in the same way, even if the same lecture is repeated (Garden, 2003:119). This makes the forecasting of quality in advance of buying the

service very difficult. To offset heterogeneity, service companies should pay attention to the product-planning and implementation stages of their marketing programs. The management of service companies should ensure that there is consistency of quality and be able to maintain high levels of quality control.

#### **2.5.4 Perishability**

Services are highly perishable because they cannot be stored or held over. Hotel rooms left vacant for one night do not add to the following night's capacity, or a lecture missed is a lecture lost forever. The problem of occupancy applies equally to educational institutions. Perishability is frequently compounded by the fact that the demand for many services is characterised by distinct peaks and troughs (Stanton et al., 1992:514).

Kotler (2000:433) identifies several strategies for producing a better match between demand and supply. On the demand side, strategies include reservation systems, complementary services, and differential pricing system. On the supply side, shared services can be developed or increased, consumer participation can be encouraged and facilities for future expansion can be developed.

#### **2.5.5 Lack of Ownership**

Another significant difference between a service industry and a product industry is the concept of *lack of ownership*. In the service industry, access or use of a facility does not mean that the customer obtains ownership of it. A hotel room, car rental, and use of the universities library books are only hired for a period, and ultimately possession reverts to the firm offering the service (Cannon 1989:188).

The above discussion on the characteristics of services are very relevant to educational institutions because institutions are providing a service to the future professional leaders of our country and therefore need to be well equipped with the theoretical concepts of how service organisations function in order to provide these students with the best possible service.



## 2.6 Classification of Services

A number of useful attempts have been made since the 1980's to classify services. The classification of services being marketed assists the institution in understanding the value offered to customers (Penceliah, 1997:43). Baron, et al., (1995:15) identifies five classification methods: -

- Classification based on service operations dimensions.
- Classification based on level of tangibility.
- Classification based on customer-employee presence during the service.
- Classification based on "drama" analogy service.
- Classification based on customisation/empowerment.

Cowell (1991:29), on the other hand, classifies services into three main categories as depicted by Figure 1 below: -

**Figure 1 - Classification of Services**

### SELLER RELATED BASES

*Nature of enterprise*



*Functions performed*



*Income Source*



### BUYER RELATED BASES

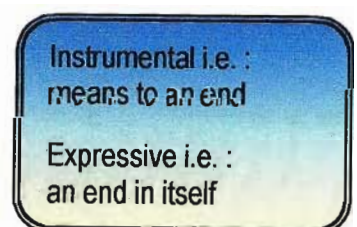
*Market Type*



*Way in which service bought*

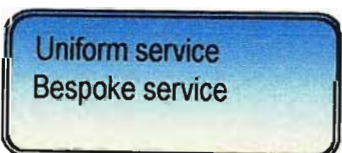


*Motives*

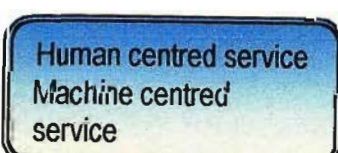


### SERVICE RELATED BASES

*Service Form*



*Human or Machine based*



*High or Low Contact*

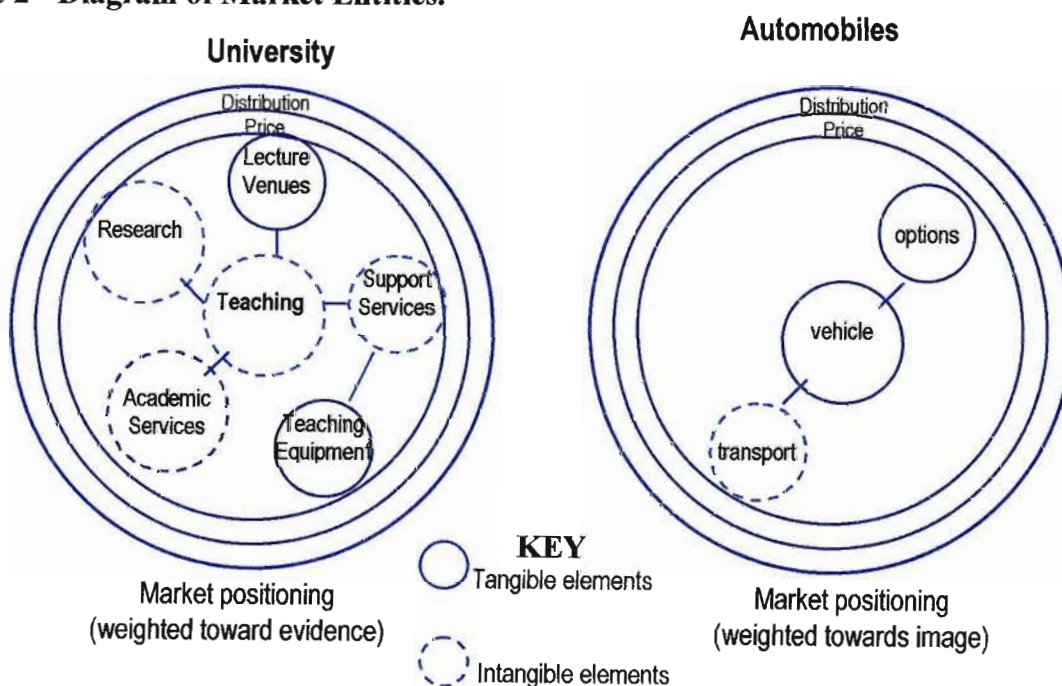


**Source: Cowell (1991:29)**

## 2.7 Molecular Model

A 'molecular' model offers opportunities for visualization and management of a total market entity. It reflects the fact that a market entity can be partly tangible and partly intangible, without diminishing the importance of either characteristic. The model suggests the scientific analogy that if market entities have multiple elements, a deliberate or inadvertent change in a single element may completely alter the entity. Thus it is imperative that a marketer carefully manages all the elements, especially those service-based entities, which may not have been considered previously (Gabbott, et al., 1997:7). A diagram on market entities is reflected below.

**Figure 2 - Diagram of Market Entities.**



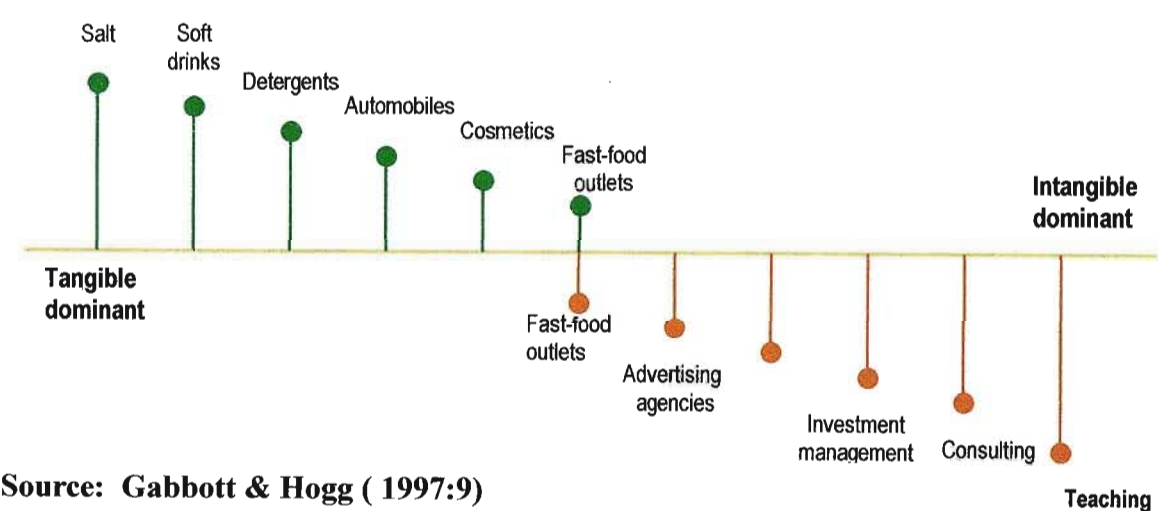
**Source: Gabbott, et.al, (1997:7)**

Figure 2, illustrates that automobiles and universities can be broken down into other major elements, having different nuclei and differ in dominance. As evidenced by the diagram, teaching is intangible-dominant that is; it does not yield physical ownership of a tangible good. In comparing universities to cars, many similarities can be identified. The element of transportation is common as well as tangible décor features prominently. In other ways the two elements can be mirror opposites. A car is a tangible item, whereas teaching cannot be a physical possession. A car is what Shostack (1983) identifies as 'essential service evidence', and which is essential to the service provided,

but which cannot be purchased by the customer. Essential service evidence may have a significant effect on the service purchase as reported in Baron (1995:78).

The molecular concept makes it possible to describe and market entities along a continuum according to the weight of the ‘mix’ of elements that comprise them. Refer to Figure 3. Such a scale accords intangible-based entities a place and weight commensurate with their true importance and this framework also provides a mechanism for comparison and market positioning (Gabbott, et. al, 1997:9). Figure 3 illustrates a scale of market entities.

**Figure 3 – Scale of Market Entities**



**Source: Gabbott & Hogg ( 1997:9)**

**2.7.1 Implications of the Molecular Model**

The most important area of difference as identified by the model is that service knowledge and product knowledge cannot be gained in the same way. A marketer’s first task is to know his/her product. A tangible object can be described precisely. It is subject to physical examination or photographic reproduction or quantitative measure. The difficulty lies in gaining service knowledge or knowledge of a service element, since intangible is described as dynamic, subjective and transient. Services cannot be touched, tried on for size, or displayed on a shelf and are extremely difficult to quantify (Gabbott, et. al., 1997:9).

**2.8 Marketing Strategy and Marketing Mix in Service Industry**

An essential element of any marketing strategy is the marketing mix. The notion of the marketing mix refers to the tools or activities that are essential to marketing and enables a business to communicate with and satisfy its target markets. Traditionally, the

marketing mix has been conceived as consisting of '4 Ps': product, price, promotion and place (McCarthy 1960). Gabbott (1997:73), reports that Booms and Bitner (1981), argued for the expansion of the marketing mix for services beyond the original '4 Ps'. They stated that because services are often produced and consumed simultaneously and because customers frequently interact directly with the organisation's personnel, the service manager has additional controllable elements with which to communicate and satisfy customers.

There are three reasons why adaptation of the traditional marketing mix is required for services:

- a) The original marketing mix was developed for manufacturing companies;
- b) There is patchy empirical evidence that marketing practitioners in the service sector find the marketing mix may not be inclusive enough for their needs;
- c) There is growing evidence that the dimensions in the marketing mix may not be comprehensive enough for service marketing (Cowell, 1991:76)

Booms and Bitner (1981) proposed that these additional variables should be recognized in a broader marketing mix for services that captures the social and physical context of services by adding three additional 'Ps'.

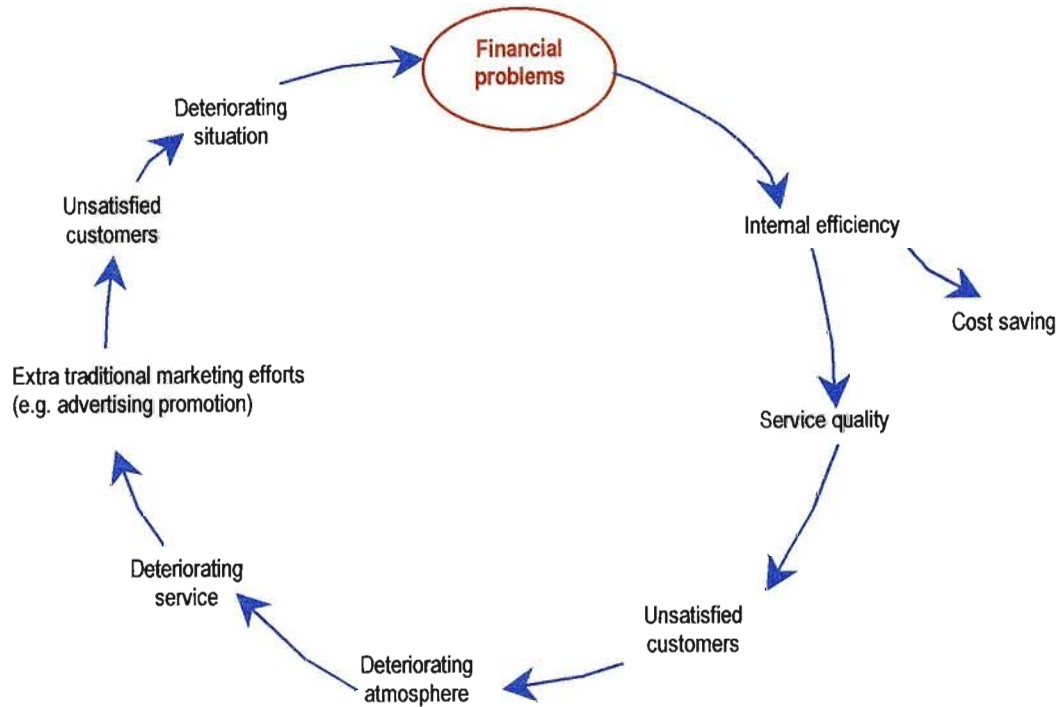
- a) *Participants* – all human actors who play a part in service delivery and thus influence the buyer's perception (personnel and other customers).
- b) *Physical evidence* – the environment in which the service is assembled and where the firm and the customer interact.
- c) *Process of service assembly* – the actual procedures, mechanisms, and the flow of activities by which the service is delivered.

The relevance of these seven 'P's to successful marketing is that any one of them can be used to provide a 'unique selling proposition'. Believing that customers are only interested in price ignores the other six factors in the overall business offer. This could result in poor financial returns that could have been greatly improved by marketing emphasis being placed on some of the other elements of the mix. Analysing what the customer is buying, by ranking the business offer in terms of the customer's 'P' priority listing, can yield surprising results and may suggest changes in current policies and strategies (Clarke, 2000:45).



In service, all activity is integral; costs and cost expenditure or savings have a significant and direct impact on performance. Attempts to achieve profitability at a time of competitive pricing pressure may lead to a deterioration of the service at the point of interaction or discontinuity, and so decrease satisfaction (Irons, 1994:104). Figure 4 below illustrates this situation.

**Figure 4 - The Cost Trap**



**Source: Irons, (1994:104)**

### 2.8.1 Product Planning and Development

New services are just as important to a service company as new goods are to a goods marketing firm. Notably, the improvement of existing services and the elimination of unwanted, unprofitable services are also key goals. Product planning and development has its counterpart in the marketing programme of a service industry. Management must select appropriate strategies regarding: -

- What services will be offered?
- What the breath and depth of the service mix will be?
- How the services will be positioned?
- What needs to be done regarding service attributes such as branding, packaging and service quality?

The high perishability, fluctuating demand and inability to store services make product planning critically important to service marketers. A service industry can expand or contract its product mix, alter existing services and trade up and down (Stanton et al., 1992:518).

In some respects product planning is easier for services than for goods. Packaging, colour and labelling are virtually non-existent in service marketing. However, other features such as branding and quality management, present greater challenges. Branding is a problem because of maintaining consistent quality; a responsibility of brand ownership is difficult. The intangibility characteristic means a brand cannot be physically attached to the service itself. A service marketer's goal should be to create an effective brand image (Etzel et al., 1997:519).

Non-profit organisations have been slow to adopt branding and colour. The little research done, suggests that these features provide effective marketing support. For many years colleges have used nicknames (a form of brand name) primarily for their athletic teams, but also to identify their students and alumni. Most universities have specific colours, another feature that helps increase the market's recognition of the university (Etzel et al., 1997:524).

### **2.8.2 Pricing of Services**

Pricing of services requires a great deal of managerial creativity and skill. It's an emotive issue among service customers yet it is vital that a business charges the right price to make a profit and ensure its continuing survival and capacity for growth and development (Clarke 2000:86).

As mentioned earlier, services are extremely perishable; they cannot be stored and the demand often fluctuates considerably. All these features carry significant implications for pricing. To compound the situation, some customers may require performing the service themselves. This implies that the elasticity of demand for a service should influence the price set by the seller. Service providers do recognise inelastic demand and often charge a higher price, but they fail to react in an opposite manner when faced with elastic demand. As a result of the heterogeneity

nature of services and the extreme difficulty of standardizing the service, most services are highly differentiated (Stanton et al., 1992:518).

In recent years, price competition in the service area has increased considerably, passing through three identifiable phases as illustrated by Brown (1985) and reported by Stanton et al., (1992:520). In the first phase, price is barely mentioned in the firm's advertising. The second phase, the seller uses a market segmentation strategy to target a given market at a specific price. The third phase involves out and out price competition as firms stress comparative prices in the advertising. Many of the pricing strategies used for product pricing are applicable to service pricing. These include quantity discounts such as hiring a car for a whole week, warrants a lower charge. Cash discounts are offered when payment is made earlier. Doctors and management consultants mainly use variable pricing policies. Geographic pricing policies are also very popular in the service industry. Mechanics for example will charge a higher rate for services rendered out of town.

Pricing decisions are important to educational institutions because they depend on revenue to operate. Price is part of the marketing mix and should be considered as an element of the institutions strategic planning, including the role of price in the institutions mission and goals (Kotler and Fox, 1995:326). Further discussion on pricing for educational institutions can be found in chapter 3, page 44.

Price determination differs for profit firms and for non-profit firms as follows:-

**a) Price Determination for Profit Firms**

Cost-plus and prices based on the market alone are the two major pricing methods used by profit orientated firms. Electric power companies' use a cost basis to set prices that will generate a predetermined rate of return on investment. Airlines tend to meet their competitors' prices, especially on routes served by two or more airlines, sometimes resulting in financial loss for them (Stanton et al., 1992:525).

**b) Price Determination for Non-Profit Firms**

Pricing for a non-profit organisation becomes less important, since profit making is no longer a goal. Non-profit organisations operate in two markets, namely the donor market and the client market. In the donor market,

contributors determine the price when they decide how much they will donate for the benefits they expect to receive. In the client market, some non-profit organisations face the same pricing situation and can use the same methods as profit seeking firms (Etzel et al., 1997:527).

The price charged for a service has to be seen as being fair to both parties, especially when repeat business is sought from the same customer or through word of mouth advertising. From a customer's viewpoint, fairness of price depends upon the quality of service – as perceived by the customer. From a business perspective, the right pricing structure for a service is that which best satisfies short, medium, and long term objectives for the organisation (Clarke 2000:86).

### **2.8.3 Place**

Traditionally, most services have been sold directly from producer to consumer. No middlemen are used when the service cannot be separated from the seller or when the service is created and marketed simultaneously. Not using middlemen does limit the geographic market that service sellers can reach, but also enables the sellers to personalize their service and to get rapid, detailed customer feedback (Stanton et al., 1992:520).

Service managers, with a little bit of creativity, can broaden their distribution channels, thus offsetting to some extent the limitation imposed by the inseparability factor. For example, location of the service seller should be conveniently accessible to customers because the service cannot be delivered. Universities set up branch campuses; they also offer correspondence courses. Banks set up ATM machines at locations convenient to their clients. The characteristic of intangibility means that physical distribution problems are basically eliminated for most service producers (Stanton et al., 1992:520).

The physical surroundings and the atmosphere in the distribution of a service, considerably influence a prospective customer's perception of that service and its producer. Since a service is intangible, prospects look to the service facility itself and the people working there to form a prepurchase evaluation (Etzel et al., 1997:528).



#### 2.8.4 Promotion

Marketing strategies that are well developed should have the effect of reducing reliance on promotion as a means of achieving customer take-up service. A well-formulated service offer distributed through the right channels at a reasonable price places less emphasis on the promotion element of the service marketing mix. Nevertheless, promotion plays an important role in the competitive service market (Penceliah, 1997:63).

According to Fifield (1998) as outlined by Kunneke (2001:107), the objectives of promotion are:

- a) To build awareness and interest in the product or service and the organisation.
- b) To differentiate the product and the organisation from competitors.
- c) To communicate and portray the benefits of the product or service.
- d) To build and maintain the overall image and reputation of the organisation.
- e) To persuade customers to buy the product or use the service.

Promotion covers all those communication tools that can deliver a message to a target audience. The tools fall into four broad classes: -

- a) **Advertising** – defined as any paid form of non-personal presentation and promotion of services by an identified individual or organisation.
- b) **Personal Selling** – defined as the personal presentation of services in a conversation with one or more prospective purchasers for the purpose of making sales.
- c) **Publicity** – defined as the non-personal stimulation of demand for a service by obtaining commercially significant news about it in any medium or obtaining favourable presentation of it in any medium that is not paid for by the service sponsor.
- d) **Sales Promotion** – marketing activities other than advertising, personal selling or publicity that stimulate customer purchasing and use and enhance dealer effectiveness (for example competition and coupons) (Cowell, 1991:162).

### **2.8.5 People**

People are at the centre of any business. They provide the direction and much of the motivation behind its development and success. In service industries the 'people dimension' gains added power from the lack of a tangible product offering. Service personnel may perform a 'production' or 'operational' role but may also have a customer contact role. Their behaviour may be as important in influencing the perceived quality of a service as the behaviour of formal sales staff. It is crucial therefore that these service personnel perform their jobs effectively and efficiently; also that the service organisation's measures of effectiveness and efficiency include a strong element of customer orientation among its staff (Cowell, 1991:203).

### **2.8.6 Process**

Process relates to how a service is actually provided and this includes the element of time. How do customers access the service? Processes that are in place solely for the service provider's benefit may become abused by customers and staff alike if they lead to delays and/or frustration for either of them. How is the service delivered? Is service staff directly involved or is the process automated or self-service? (Clarke, 2000:45).

## **2.9 Conclusion**

The elements of the marketing mix as a traditional marketing strategy were analysed in this chapter, together with a detailed discussion on the characteristics and classification of services, which is applicable to educational institutions. In addition, a brief discussion was also presented on the Molecular Model.

With the average life cycle of products and services shortening; intensifying local and global competition; development of advanced information technology; and more demanding customers, the differentiating factor will be the quality of their services offered by educational institutions. The implementation of new services or new service packaging will be necessary, in order to retain students until their completion of studying and be able to attract new students. It is the personalised factor in the globalisation process that retains customers and satisfies needs (Kunneke, 2001:52).

## **Chapter Three**

### **Literature Review: Marketing of Educational Institutions**

#### **3.1 Introduction**

Declines in prospective students, registration, donations and grants, government subsidy, and other resources in the face of mounting costs remind Universities of their dependence on the marketplace that they serve. Many Universities face changing student needs and societal expectations, increasing competition for scarce student and funding resources and in-house financial pressures (Kotler and Fox 1995:5).

In South Africa, universities are faced with declining high school matriculants, as well as financial constraints and these changing demographics, will lead to increased competition from rival institutions. This competition will be won by those institutions that know themselves, who know their appeal, who know their potential students, and how to reach them with messages that are consistent with institutional goals (Schmidt, 1991:113).

The fact that students have needs and wants underpins the need for marketing in an institutional environment.

Chapter two discussed the marketing of service organisation in general and sets the platform for chapter three. This chapter focuses on the marketing principles for educational institutions and covers topics such as marketing orientation, an introduction to educational marketing, marketing benefits, and characteristics of tertiary institutions. Thereafter, a discussion on strategic marketing planning is presented and finally an in depth discussion on the marketing mix strategy applicable to educational institution is addressed.

#### **3.2 Educational Marketing**

Fischer (1989:343) highlights the importance of educational marketing and states that it should focus, firstly on satisfying the needs of customers and secondly on persuading

customers to buy. He further states that educational marketing is the combination of activities required to direct the flow of educational programs and services from the source to the final user in a form, place, time, and cost that are best able to *satisfy the client's needs*.

Marketing is of growing interest to schools, colleges and universities and other educational institutions that face declining enrolment, rising costs and an uncertain future. Many of these institutions realize their dependence on the marketplace and strive for ways to become more successful in attracting and serving their stakeholders (Kotler and Fox 1985:7). Administrators have accepted the notion that marketing is an important and essential ingredient in any successful educational institution (Simerly 1989:3). They must know their markets, attract sufficient resources, convert these resources into appropriate programs, services and ideas, and effectively distribute them to various consuming parties (Kotler and Fox 1985:7).

Hanson and Henry (1992:3) concurs and asserts that educational marketing involves developing or refining a specific program in response to the needs and desires of specific target-markets and using effective means of communication to understand those needs and inform and motivate those markets.

Educational marketing can be defined as “the analysis, planning, implementation and control of carefully formulated programs designed to bring about voluntary exchanges of values with target markets to achieve institutional objectives (Kotler & Fox 1985:7). It is also a concept of organizational strategy grounded in a customer orientation value that is shared throughout the organisation (Hanson and Henry 1992:3).

Douglas et al (1999:1), advocates that educational marketing is an extremely broad construct that subsumes many of the activities traditionally associated with program planning and development, curriculum development, instructional design, and other administrative and planning actions that make or break programmes. Furthermore, they argue that the central task of educational marketing is to match would be learners to the services being offered.

Simerly (1985:13) is of the opinion that marketing strategies would enable institutions to achieve their mission more effectively and result in dynamic, flexible and responsive organisations.

### **3.3 Marketing Orientation**

What distinguishes institutions with a marketing orientation? Most educational institutions have admission offices, fund raising programs and alumni offices, they include advertising and public relations experts on their staff. These institutions are using some of the marketing tools, but they are not necessarily market orientated. Kotler and Fox (1995:10) define marketing orientation as follows: -

A marketing orientation holds that the main task of the institution is to determine the needs and wants of target markets and to satisfy them through the design, communication, pricing and delivery of appropriate and competitively viable programs and services.

An institution with a marketing orientation concentrates on satisfying the needs of its stakeholders and making the interest and needs of the students pivotal in the institution. Without satisfied target markets, institutions would find themselves “customerless” and on the brink of non-existence. A marketing orientation requires not only sensitivity towards the needs of the market, but also balance between programmes that are efficiently and effectively serviced and marketed (Kotler and Fox 1995:10).

A framework examining the market can be seen in the table on page 29. It is largely, but not only concerned with customer satisfaction. An educational marketing perspective is also concerned with ways in which existing services might be offered to new market segments, and particularly to those potential customers with traditionally low involvement in education. It seeks ways of developing new services, which meet those needs. It looks to ways in which its resources might be used to provide new kinds of services to new groups of users (Gray 1991:27).

**Table 2 - A Framework for Examining the Market**

	<b>Existing Service</b>	<b>New Service</b>
<b>Existing Customers</b>	Improving quality of current courses	New courses for existing Groups
<b>New Customers</b>	Market expansion: Increasing participation	Diversification: new Activities

**Source: Marketing Education: L Gray (1985:27)**

Institutions could also become sidetracked and could concentrate more on their product (product orientation), with efficiency (production orientation), or with pushing consumers to select the institution’s current programs (a selling orientation).

Kotler and Fox (1995:28) share the same sentiments of Gray (1991), but refer to institutions with a market orientation approach as “responsive institutions”. They state that a responsive educational institution makes every effort to sense, serve and satisfy the needs and wants of its consumers and public within the constraints of its mission and its budget. Each institution must decide how responsive it can and wants to be and then implement programs to create this level of satisfaction. Kotler and Fox (1995:28) identifies three levels of responsiveness. This is also tabulated in Table 3.

- a) **The Unresponsive Institution** – usually reflects a bureaucratic mentality. This kind of educational institution often assumes that it knows what people need. Such overconfidence has been eroded by the fact that students now have many educational choices. Such institutions are probably already out of business or on their way out.
- b) **The Casually Responsive Institution** – When universities began to experience a decline in student applications, administrators began to pay more attention to their students and stakeholders. They left their doors open, made occasional surprise visits to the student union, encouraged suggestions from students and added student numbers to the university committees. This moved the universities to becoming “casually responsive”.
- c) **The Highly Responsive Institution** – this institution surveys current consumer satisfaction and also researches unmet customer needs and preferences to

discover ways to improve its service. These institutions also select and train their staff to be consumer-minded.

**Table 3 – Three Levels of Consumer Responsive Institutions.**

	<b>Unresponsive</b>	<b>Casually Responsive</b>	<b>Highly Responsive</b>
<b>Complaint system</b>	No	Yes	Yes
<b>Surveys of satisfaction</b>	No	Yes	Yes
<b>Surveys of needs and preferences</b>	No	No	Yes
<b>Customer-oriented personnel</b>	No	No	Yes

**Source: Kotler and Fox ( 1995:29)**

### **3.4 Marketing Benefits**

Marketing is an applied science most concerned with managing exchanges effectively and efficiently, and it is relevant to service orientated organisations like educational institutions, with a few variations as mentioned earlier. Kotler and Fox (1995:12) identify four principal benefits applicable to tertiary institutions: -

- a) **Greater success in fulfilling the institution's mission.** Marketing provides the tools for comparing what the institution is actually doing with its stated missions and goals. Careful analysis prepares the groundwork for programs to address the real problems and plan responses that will help the institution fulfil its mission.
- b) **Improved satisfaction of the institution's stakeholders.** To succeed, the institution must satisfy consumer needs. Failure to do so, makes it difficult to attract new students and adequate alumni support. Marketing, in stressing the importance of measuring and satisfying consumer needs, tends to produce an improved level of client services and satisfaction.
- c) **Improved attraction of marketing resources.** In striving to satisfy their customers, institutions must attract various resources, including students, employees, volunteers, donations, grants and other support. Marketing provides a disciplined approach to improving the attraction of these needed resources.

- d) **Improved efficiency in marketing activities.** Many institutions make decisions about product development, pricing, communication and distribution without considering their inter-relationship, resulting in more costs incurred. Educational institutions simply cannot afford to waste their scarce resources and administrators must ensure they achieve maximum efficiency and effectiveness in marketing activities.

Traditionally, educational institutions had no need to take marketing seriously. Gray (1991:29), asserts that educational institutions were started and financed for specific purposes, which included students specified by age, ability, and geographical location. As the demand for places from students was greater than the supply of places on various courses, many institutions limited their efforts to the production of prospectus and endeavoured to fill places through some clearing system. Today, most educational institutions attempt to regulate demand by introducing some entry criteria, which normally includes some entry qualification. The times have changed with the large increase in the number of courses available, making it more difficult for educational institutions to recruit students for some courses. There is a need for a pro-active approach, to attract good students to fill empty seats. The structure, life styles, values and expectations of South African society have seen marked changes in the last few years. The environment of tertiary educational institutions has changed as evidenced by the massive growth in student numbers, especially African students (Penceliah 1997:80).

### **3.5 Characteristics of Tertiary Institutions**

Litten (1980) explores the characteristics of tertiary institutions as set out by Penceliah (1997:87).

- a) The selection of a tertiary educational institution is a major and complex decision. Very often the student's decision is only made once in a lifetime.
- b) Tertiary educational institutions market a comprehensive package of services including academic and social learning experiences.
- c) The technical and performance descriptions of these institutions are complex to describe and are not always readily available.
- d) These institutions may selectively exclude potential clients on bases other than on price.



- e) Customer behaviour is characterised by multiple, simultaneous applications to several preference ranked tertiary educational institutions.
- f) Performance criteria are applied to students to determine whether they may continue to be customers and to determine the level of benefit of the investment by the student purchases.
- g) The abilities and efforts of the student interaction with the institution are assessed, which influences the nature and result of educational services.
- h) A matriculant, as a prospective student, has less maturity and experience on which to base his choice of tertiary educational institution and specific direction, than adults who are faced with a similar magnitude.
- i) The individual client pays a small fraction of the cost of the educational services and the general public pay substantial proportions through taxation and donation.
- j) Financial aid based on ability to pay is a major aspect of financing higher education consumer purchases.
- k) Trial size introductory prices are difficult to adapt to higher educational services.
- l) Personal communication and publicity are more effective promotional tools than advertising for educational institutions.
- m) The educational institutions need to maintain standards and therefore a complete responsiveness to the market and individual desires are not possible. Some courses may be discontinued because of lack of demand and may impact on certain cultures.
- n) Competition in higher education is concerned with being selective in admissions and securing grants rather than with eliminating competition or dominating the market.

In highlighting the characteristics of educational institutions, it is apparent that these institutions also require to incorporate marketing within their operations in order to survive in this highly competitive world.

### **3.6 Market Planning Process**

Most educational institutions acknowledge the value of formal plans when faced with declining student numbers, revenue depletion, poorly managed and unsuccessful admission campaigns and sponsorship drives. When faced with this situation, administrators investigate ways to deal with problems and develop plans to address them. Marketing planning guides the institution's operation in the market place (Simerly 1989:15).

#### **3.6.1 Strategic Marketing Planning**

Hanson and Henry (1992:255) argue that the application of strategic marketing planning in education can be of significant value to educational institutions in developing public confidence and support, including establishing guidelines for future development. These authors further state that, especially in today's turbulent social, political, and economic times, providing for clear and convincing exchanges of information between educational institutions and communities are critical undertakings.

In the educational environment, three levels of planning are applicable. The first level is the budgeting and scheduling process. Many universities are making use of linear programming and optimisation models to improve the process. The second level is the short-range tactical planning level, which includes recruiting of students, physical plant decisions, development efforts, and program and curriculum changes. Strategically oriented long range planning is the third level and involves clarifying the institution's mission, assessing its resources and examining the environment to determine what the institution's priorities and strategies should be (Kotler and Fox 1985:72).

Kotler and Fox (1985:72) define strategic planning as follows:

Strategic planning is the process of developing and maintaining a strategic fit between the institution's goals and capabilities and its changing marketing opportunities. It relies on developing a clear institutional mission, supporting goals and objectives, a sound strategy, and appropriate implementation.

The above definition suggests the appropriate steps an educational institution can take to improve its effectiveness. Cunningham et al. (1987) defines strategic planning as the process of utilising the resources of the organisation, in terms of its mission statement in the long term. This invariably involves an examination of the organisation's strengths and weaknesses, including those of competitors and considering opportunities created by social change (Penceliah, 1997:93).

Educational institutions have planning systems of various degrees of sophistication, from simple budgeting systems to formal long range planning systems. Although educators often resist formal planning, sophisticated formal planning systems can contribute to institutional effectiveness (Kotler and Fox 1985:92).

Educational institutions should carry out strategic planning and tactical marketing planning. Strategic planning consists of a number of steps. The first step being the environment analysis, in which the institution examines its internal environment, markets, stakeholders, competitors, and the macro-environment. Implied threats and opportunities are identified so that the institution can prepare contingency plans and monitor changes. The institution then examines its major strengths and weaknesses in personnel, funds, facilities, systems, and other resources. In the goal formulation step, the institution formulates its basic mission, its major goals, and its specific quantifiable objectives (Kotler and Fox 1985:92).

The next step is strategy formulation, which requires analysing the institution's current portfolio of programs to determine which it should build, maintain, or drop. The resulting strategy includes decisions about the institution's current and future programs and markets, and about needed changes in the institution's structure, people, and culture. Finally, the institution examines its systems of information, planning and control to be sure they are adequate to carry out the strategy successfully (Kotler and Fox 1985:93).

Tactical marketing planning is the process of developing the specific plans that will implement the overall strategy. The tactical marketing plan contains the following sections: -

- Executive summary
- Situation analysis
- Goals and objectives
- Marketing strategy
- Action program
- Budgets
- Control

The marketing strategy section of the plan defines the target markets, marketing mix and marketing expenditures that will be used to achieve the marketing objectives (Kotler and Fox 1985:93).

Gray (1991:43), describes the basic elements of an institutional plan for an educational institution as follows:

- a) **Mission statement and objectives:** what the institution is trying to do and where it is going.
- b) **Situational analysis:** statement of the current situation, including a SWOT analysis (strengths, weaknesses, opportunities and threats), together with the extent to which the institution is achieving its agreed objectives.
- c) **Planning elements:**
  - Resources – annual budget, income and expenditure forecasts, premises plan, capital expenditure programme.
  - Curriculum – plans for reviewing current course provision; and implementing and supporting new courses.
  - Staff deployment and training – staffing plan, including deployment and succession and other personnel management issues.
  - Marketing - marketing plan with objectives, SWOT analysis, marketing mix and strategies.
- d) **Management and organisation** – These include management responsibilities and accountabilities within and outside the institution including organizational structures.

- e) **Monitoring and evaluation** – Financial controls; performance indicators and their uses; reporting procedures, lecturer appraisal and student assessment systems; staff and student evaluation procedures.

Simerly (1989:10) draws attention to important guidelines that would lead to the development of more effective marketing plans for educational institutions:

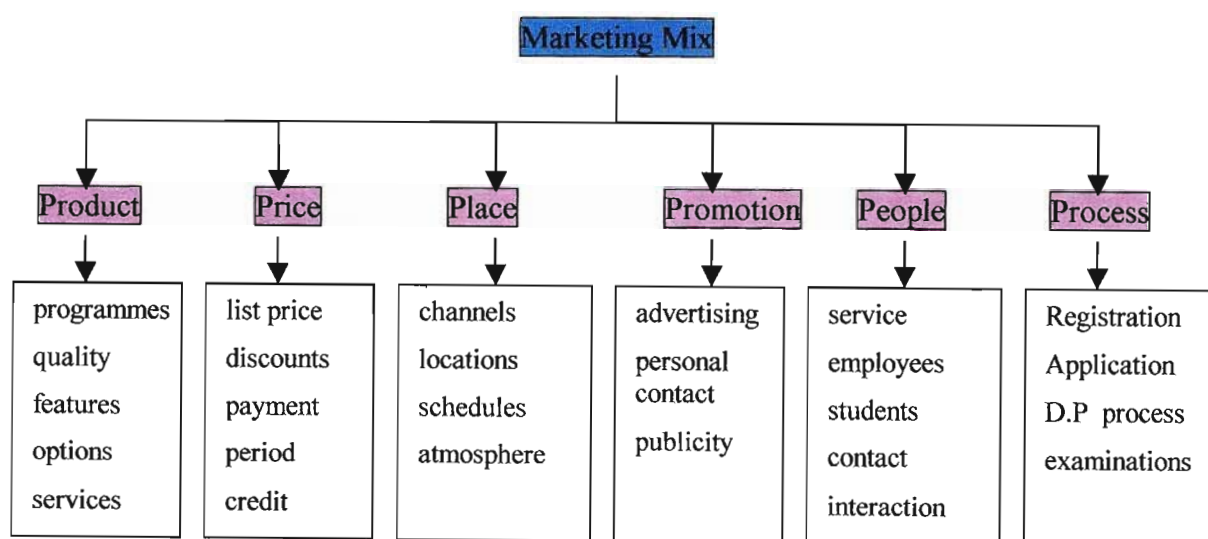
- a) There should be clear understanding of the differences among marketing, advertising and publicity; this will help in drawing up effective marketing plans. The terms marketing, advertising and publicity are often used interchangeably; however, there are important distinctions among these concepts.
- b) There must be relationship to achieving overall mission, goals and objectives of an institution. Marketing cannot be effective unless it is directly related to achieving the institution's mission.
- c) The scanning of the environment would assist in the operational efficiency of marketing activities. Environmental scanning enables institutions to gather information about issues that are critical to the success of the institution, its programs and services. It also allows the institution to monitor the marketing moves of its competitors.
- d) Developing customer service orientation would enhance the institution and marketing.
- e) Psycho-graphic and demographic data are essential components of the marketing database for regular modification of marketing plans.
- f) Market segmentation is an important marketing concept for tertiary educational institutions. Institutions must be able to find reliable and effective ways to segment the market since the key to marketing success lies in being able to target the most attractive segments.
- g) Tracking the effectiveness of marketing efforts is necessary in the total marketing plan.
- h) The development of a marketing plan is a continuing process, requiring constant modification.
- i) An up to date library of marketing resources would help staff in becoming more effective in their marketing efforts.

### 3.7 Applying the Marketing Mix to Educational Institutions

The elements of the marketing mix were outlined earlier and initially four elements – product, place, price and promotion were identified as a useful framework for developing educational marketing strategies. Booms and Bitner (1981) then argued for the expansion of the traditional 4 P's and included participants, physical evidence, and process of service assembly to the marketing mix.

It is vital that an institution develops an appropriate marketing mix and marketing expenditure level that supports the institution's ability to compete in the target market and that will allow it to reinforce its chosen competitive position. An institution's expenditure level depends on estimating how much money is needed to accomplish its admission objectives. An estimate can be derived from past experience of administrators who can estimate the cost associated with each activity.

**Figure 5 – Service Marketing Mix**



**Source: adapted from Kotler and Fox (1985:154)**

In academic marketing, these activities include the programs and extracurricular activities along with the personnel (product); rand costs, student effort and stress, and requirements for admission (price); location of programs and facilities (place); and activities that communicate the institutions services to their target market (promotion) (Ziegler, 1991:139). Like many non-profit organisations, higher education institutions in their initial attempts at marketing generally take a sales orientated approach to

marketing. The emphasis is on sales orientation and more specifically on aggressive promotion through personal selling and advertising. In marketing higher education, a tremendous weight has been placed on student enrolment and recruiting activities. It appears that the marketing efforts of higher education institutions have basically neglected the other elements of the marketing mix, including price, place and distribution. It is imperative that all of the elements of the marketing mix need to be integrated together to develop the optimum level of marketing activities for institutions (Taylor and Darling, 1991:17).

### **3.8 Product Development And Planning**

The most basic decision an educational institution makes is what programs and services it will offer to its student, alumni, donors, and other stakeholders. An institution's mix of offering establishes its position vis-à-vis other educational institutions in the minds of consumers and determines how consumers will respond. Institutions with similar programs will find their markets and stakeholders differentiating between them on the basis of the combination of programs and their quality (Kotler and Fox 1985:221).

#### **3.8.1 Product Mix Decision**

A product must be defined in terms of the benefits to the buyer. A critical question that educational institutions must ask is 'what is the buyer buying?' Once this question is established, the next step is to define what is being sold and to state the product in terms of its benefits to the customer (Riggs 1989:126).

Educational institutions offer multiple products and an institution's product mix consists of all the product lines and items that the institution makes available to consumers. According to Gray (1991:69), the service offered by institutions covers a broad range but primarily it is the courses on offer to the student. The services often go beyond the curriculum and include such services as extra-curricular computer clubs to contract research programme and provision of meals.

Kotler and Fox (1985:222) concur with Gray (1991), but categorises the products offered as follows: -

- a) Educational products – classes, library, campus lectures.
- b) Recreational products – athletic facilities and clubs, film series, parties.

- c) Personal growth products – counselling centre, religious organizations, advisors.
- d) Curative products – health centre.
- e) Future planning products – career counselling, placement service.

Each of the above categories can be considered a product line.

All institutions have a ‘product mix’, and this is usually reviewed fairly regularly in order to determine whether the same broad mix should be continued, whether the institution has the capacity to continue to deliver as before, and whether to fine-tune by modifying the delivery of existing products? They can decide to expand the mix by adding more product lines, such as residential services or expand existing product lines such as a new degree or diploma. Likewise a university might decide to reduce its product line to reduce costs or to attain a more specialised position in the market.

### 3.8.2 Analysing The Educational Product

Gray (1991:70) points out that in developing a ‘product strategy’, a thorough analysis of constraints from both a technical and a political perspective is necessary, before going on to identify ways of improving this vital aspect of an educational organization’s marketing. Gray identifies the five constraints below: -

- a) **System constraints** – include the time-scale for institutional, governmental, and other responses to new initiatives and the curriculum and validation limitations imposed through the Education department, together with the requirements of examination and validating bodies.
- b) **Funding constraints** – include restrictions on institutional control over its own finances, restriction on fee income by fixing process outside the institution and by claiming back all or part of any surplus income earned from self-financing activities and reduced levels of funding from the government.
- c) **Personnel constraints** – this will include lack of flexibility for staff deployment arising from conditions of service and availability of suitably qualified staff. Other constraints are poorly motivated staff, problems of dependence on short-term and contract staff.

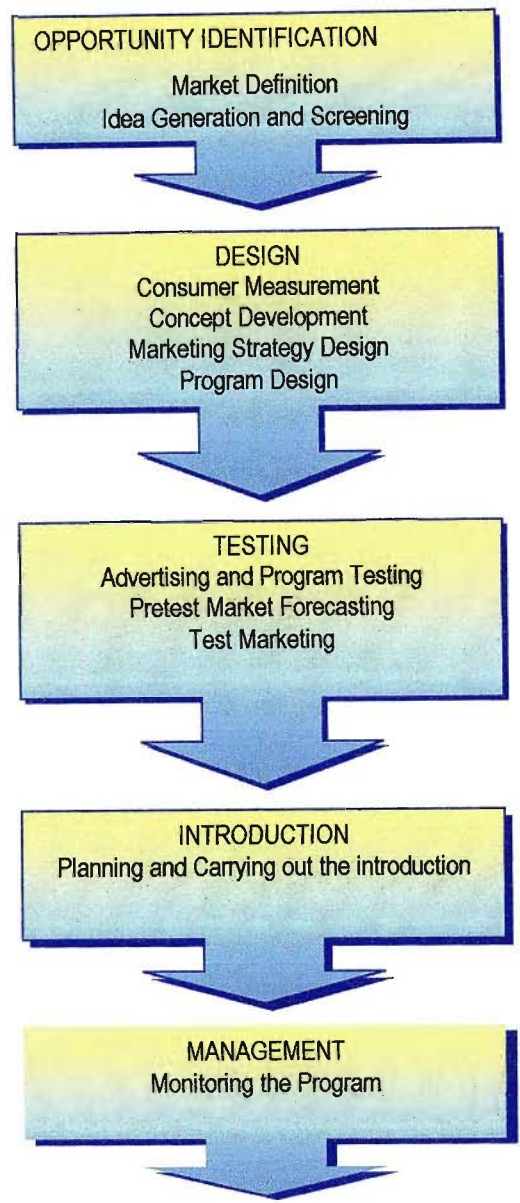


- d) **Political constraints** – include efforts and demands of powerful groups within and outside the institution for particular forms of curriculum provision.
- e) **Demographic constraints** – emphasize the need to focus more strongly upon services for non-traditional groups where the total numbers of traditional customers are declining or the socio-economic nature of those groups is changing.

### 3.8.3 New Product Development

Planning new programs is a demanding process. Most educational institutions think that new program planning must be informal, because they lack the time and money to do the job right. Kotler and Fox (1985:227) believe that because most universities have limited resources; they cannot just throw together programs for convenience. Some consumer product companies can afford to launch new products that fail because they are able to recoup their losses from other successful products. Figure 6, depicting a new program and service development process, are found on page 41.

**Figure 6 – New Program and Service Development Process**



**Source: Adapted Kotler and Fox (1995:290)**

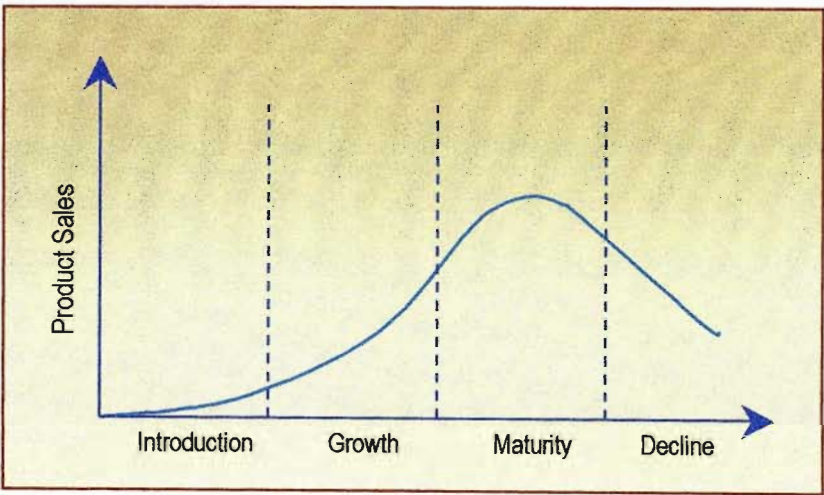
The development process has five main steps as indicated in Figure 6. The opportunity identification involves selecting the best areas for further analysis and generating ideas that could be turned into new programs. Market characteristics, such as size of the market, growth of the market, cost to enter the market, investment required, availability of resources, likelihood of competition, are all factors to be considered at this stage. In addition, after identifying potential markets, the planning group will also want to

consider how well each of these markets matches the university's capabilities. New program ideas are then developed to take advantage of the identified opportunity.

The design step involves converting the ideas into implementable form, including describing the program, preparing the materials, and developing a preliminary marketing strategy. The design step includes gaining a clear understanding of what consumers want and using that knowledge to guide the design of the program and the marketing mix. The testing step includes testing the design, its market potential, and its appeal to consumers. Introduction is the actual launch of the program. The final step is managing the new program over time to ensure its success and profitability.

### 3.8.4 The Product Life Cycle

**Figure 7 - Product Life Cycle Diagram**



New products, if successful will eventually become old programs. Broad changes in the macro environment and changes in consumers and competitors usually call for significant adjustments in the programs and its marketing strategy. The nature of the appropriate adjustments can be conveyed through the concept of the *product life cycle* as illustrated in Figure 7 (Kotler and Fox, 1985:234). Cowell's (1984:116) idea of the concept of the product life cycle, suggests that the products pass through a number of stages over time.

Gray, (1991:74) asserts that the concept of the product life cycle is quite common in the manufacturing field, but translates less obviously into the educational terms. Furthermore, he declares that courses in every sector go through a development process

in which the notion of the 'life-cycle' can assist in planning and marketing decision-making. A new course usually requires a substantial amount of investment initially, on developing it, on informing customers of the course's availability, and on training staff to deliver it effectively. It can take several years before a course breaks even and to justify its initial development and promotion costs.

Kotler and Fox (1985:234) confirm that in this introductory stage, promotional expenditure is very high due to informing potential customers of the new and unknown program, as well as to try to induce them in trying the program. In addition, they argue that there are few competitors at this stage and institutions strive to attract the 'early adopters', those people who tend to be first to try new programs and services. Riggs (1989:128) adds that in this stage attempts should be made to educate consumers about the advantages of the product.

Programmes then go through the processes of growth and maturity. If the new program satisfies the market, more consumers will be attracted to it. New customers are also likely to be attracted to a new course as messages of its availability and benefits spread through word of mouth and more structured publicity. Brand differentiation should be stressed in the institution's communication messages (Riggs 1998:128). Others will simply opt to follow the early adopters. New competitors enter the market and the institution may decide to expand its market. The institutions will also try to sustain rapid market growth for as long as possible.

At some point, the program's rate of growth will slow down and the program will enter the maturity stage. Overcapacity is one of the reasons cited for this slow down as more institutions offer the same program and demand declines. This overcapacity also tends to aggravate competition, resulting in price-cutting and increase in promotional budgets. At this stage, institutions, try to improve and/or modify their programs, while weaker competitors drop out. What remains is sets of well-entrenched competitors striving to maintain or gain a competitive advantage that will help them survive.

The final stage is the decline stage, as the demand for the programs decline. Enrolments and donations may also decrease but most importantly, consumer interest may plummet as a result of changes in technology, or a particular program does not meet consumer needs or the economy may dictate what the need is for new programs. As interest

declines, some programs will be eliminated. Remaining programs may reduce their offerings and withdraw from certain segments of the market. Some institutions may decide to increase their promotional budget, add new courses, and keep raising their prices to meet costs.

Carrying weak programs by any university is very costly and is more than a financial loss. These programs require a substantial amount of administering, advertising and other attention that could be directed to making other 'healthier' programs more successful. Inevitably, some institutions will abandon the market earlier and the remaining ones will enjoy a temporary increase in consumers. For those who remain in the market, Kotler and Fox (1985:237), offer various strategies: -

- a) **Continuation strategy** – a university will continue its past marketing strategy; its same marketing segments, channels, pricing and promotion.
- b) **Concentration strategy** – a university will concentrate its resources in the strongest markets while phasing out its efforts elsewhere.
- c) **Harvesting strategy** – a university will sharply reduce its expenses to increase its positive cash flow, knowing that these cuts will accelerate the programs decline and the ultimate demise of such a program.

### 3.9 Pricing Of Educational Programs

Cowell (1984:147) states, that as with other marketing mix elements, the pricing by an institution should be related to achieving marketing and institution goals and should be appropriate for the institution's marketing programme. Prices may be set for a number of reasons: an organisation may seek to gain or yield market share, or to prevent others from entering the market or perhaps to simply discourage some competitors (Riggs 1998:130).

Educational institutions regularly make pricing decisions. Annually, the financial officers will review tuition rates, and residence costs to establish needed increases. Other fees such as registration, application, and health services will also be revised. In South Africa, the Department of Education is involved in most tuition decisions made by state subsidised universities. Invariably, tuition is often adjusted incrementally, by adding some 'reasonable' percentage increase across the board (Weidemann 1989:131).

Studies conducted by Blackburn and Goldgehn (1982:41) into the effectiveness of marketing techniques reveals that out of 2039 members of the American Association of Collegiate Registrars and Admission Officers, pricing as a marketing technique was used by only 47.2% of the responding institutions but ranked fifth in terms of effectiveness. Some users, namely 36.2 % rated it as highly effective and 52.7 % as somewhat effective. As the cost of public and private education skyrockets, pricing strategies need to become a more important element of a university's strategy. Even for public institutions, it can be seen as a controllable variable, which can play a major role in the 'packaging' of the product.

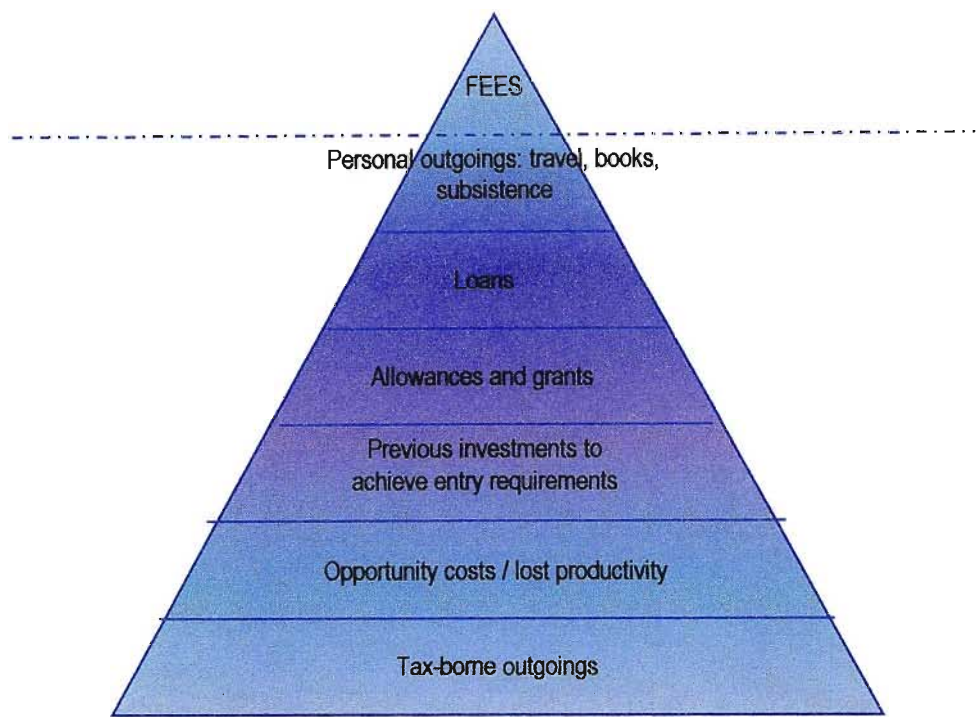
Gray (1991:83) submits that the pricing element of the marketing mix is the most likely element to create problems for the educational administrators. He divides this component into two distinct categories, namely *costing* and *pricing*. The key tasks are, on the costing side, to seek as close a match as possible between institutional spending and customer benefits. On the price side, the task is to ensure that customers are charged amounts in line with the institution's overall objectives.

Three distinct principles shaping a costing and pricing strategy for educational institutions are discussed. The first principle according to Gray (1991:85) is that the institution's mission and the resultant policies should be actively promoted by this strategy. In times of prolonged financial stringency, it is easy for institutions to lose sight of its purposes in an effort to reduce costs and implement more savings. When institutions are considering cost reductions, administrators need to be cognisant of the impact on the quality of the service provided to their customers.

The second principle is that costing and pricing decisions must take full account of the market and of current and forthcoming changes in the market. The basic objective is to attract as much business as the institution is capable of delivering effectively, at a price, which at least covers the real delivery and development costs of the service.

The third principle is that costing and pricing strategies should include those directly providing the service. By including the service providers in the decision-making, enables them to look for ways to achieve the twin goals of providing value for money and a high quality service.

**Figure 8 - The Educational Priceberg**



**Source – Gray (1991:93)**

Any pricing policy must be directly related to the institution’s mission and policies. It needs to incorporate both financial and non-financial benefits such as ‘reputation’ and ‘goodwill’, market dominance and most importantly customer benefits. Pricing needs to be analysed from a customer’s perspective. According to Gray (1991:93), a ‘priceberg’ as indicated by Figure 8 is used as a starting point. It indicates that the amount of actual cash paid out for an educational service forms only a small but visible tip of far larger amounts of costs to be perceived and considered by the customers. It recognizes, as did Adam Smith many years ago, that the real price of everything is the toil and trouble involved in acquiring it. While at the base are those substantial outgoings paid out in the form of taxes (Gray, 1991:94).

In practice, price setting strategies are cost-oriented, demand-oriented, competition-oriented, or a combination of these. Many institutions charge different prices for a particular program or service. This practice is termed *price discriminating* or *differential pricing* (Weidemann 1989:132).

Several institutions charge differential prices on the following bases: -

- a) **By program** – indicated by student major courses in the various faculties.
- b) **By student level** – undergraduates, postgraduates, honours and masters level.



- c) **By student course load** – using the SAPSE credit value and multiplying this by a rate.
  - d) **Type of student** – degree verses non-degree.
  - e) **By residency status** – resident verses a non-resident student.
  - f) **By course** – each course chosen from a cluster of disciplines.
  - g) **By time/place of offering** – winter schools, evening classes or classes offered at different location.
- (Kotler and Fox, 1985:250).

Institutions planning on changing an existing price must consider how the consumer will interpret the price change. A higher tuition price might actually increase the number of participants, because a higher price might imply higher quality and prestige. But administrators must bear in mind that the opposite is also true, viz. a lower price could signify a lower quality. Price increases should be announced well in advance and are accompanied by a communications campaign explaining reasons for the increase and the institutional responses (Weidemann 1989:132).

### 3.10 Place/Distribution

All organisations, whether producing tangibles or intangibles, are concerned with place decisions. Place/distribution, the third major component of the market mix, is the process by which an institution makes its programs and services available and accessible to its target market. This element is also concerned with the location of the institution and its appearance, as well as the facilities on offer (Gray 1991). Since educational services usually cannot be “stored up”, educational institutions need to consider how to make their services as convenient as practicable in terms of both location and schedule (Kotler and Fox, 1985:274).

Carson (1989:103) postulates that location decisions are made on at least two levels, the global level, which is a geographic decision, and the local level, which is a facility decision. Carson further elaborates that location can literally add value to the perceived quality and attractiveness of a program, to the expertise and credibility of the lecturers, and to the fairness of the price.

Marx and Van Der Walt (1993), as reported by Penceliah (1997:107), identifies three reasons for the importance in the choice of location for non-profit organisations:



- a) The location must be appropriate and convenient for prospective donors. Opening an additional office in a central business district to cater for potential donors would be an advantage.
- b) The office of the institution is indicative of the involvement and credibility of the institution in a particular area.
- c) The location of an institution will make it more accessible to its target markets. A further aspect of an institution environment needs is to be considered; the impact of its geographical location or specialist facilities which would result in the location being so distinctive that the institution is sought after by students despite its inaccessibility.

### **3.10.1 Distribution Channels**

As established earlier, 'place' refers to placing goods where, purchasers can obtain them. It is concerned with the *distribution channels*, which transfer the goods from the producer to the consumer. Gray (1991:108) establishes that although there is no equivalent tangible movement of goods in the provision of educational services, there is still a need to consider whether the service is available in the most appropriate places, conveyed along the most effective routes, to its users. In deciding how to distribute their programs and services, institutions must also consider the nature as well as the important characteristics of the consumer who will ultimately benefit from it. A workable distribution system successfully gets the right product or service to the consumer who wants it, at a cost that both the producer and consumer can afford (Kotler and Fox, 1985:264).

Although, it is difficult to physically shift the location of an institution in order to make it more accessible and convenient, there are two significant ways in which services might be distributed to match more closely the needs of customers. The first is by establishing 'satellite' or 'outreach' services in premises where particular groups of students can obtain the service more conveniently than on the main site. Adult education programmes have long since adapted this approach of taking the classroom to the people off campus (Gray, 1991:109). The Internet has become a magical tool for online teaching programmes. The distance learning MBA programme offered by Natal University, is one way of reaching students across the country and even internationally.

Another way in which education might be distributed more effectively is by extending the period of time when it is made available.

### **3.10.2 The Campus Itself**

An education institution should also consider the appearance of the facilities; furthermore, the atmosphere in which educational services are delivered can affect consumers' attitudes and behaviour, for example, a suitably air conditioned lecture room will allow students to be able to concentrate more effectively during the intense summer months. Many institutions are particularly aware of the value of having an attractive campus and invest heavily in maintaining and improving their buildings and grounds. Each facility should have a look that may add to consumer satisfaction and employee performance. Since the employees work in the facility all day long, the facility should be designed to support them in performing their work with ease and cheerfulness (Riggs, 1989:133)

Educational institutions usually produce and deliver their services directly to the consumer. However, the use of a middleman has its advantages because of being less expensive and generally more efficient as a result of their experience. Institutions also make use of facilitating intermediaries such as banks and consultants that provide the institutions with expert knowledge and services. A rather unique approach adopted by institutions is the concept of 'franchising', where the institution arranges with other organizations, to deliver planned courses, which are then validated by the institution. A proportion of the student fees are paid to the parent institution/organisation for the use of the course and for some monitoring and external examination (Kotler and Fox, 1985:264).

### **3.11 Promotion**

The above sections described ways in which educational institutions develop attractive programmes, price them appropriately, and ensure their availability in convenient and accessible locations. All of this is of no use, if potential consumers do not know what is on offer to them. The institution must inform consumers and others about its goals, activities, and offerings and motivate them to take an interest in the institution. In order to achieve this, educational institutions need to communicate effectively with their target market.

### 3.11.1 Communicating with Customers and Clients

Riggs (1998:133) draws our attention to the fact that a well designed product, program or service will not be successful unless markets are aware of its existence; target consumers understand what its benefits are, and target consumers have some knowledge of where and how to obtain it.

The educational communicator must start with a clear idea of the communication tasks facing the institution. Kotler and Fox (1985:278) assert that the following tasks are typical: -

- a) To maintain or enhance the image of the institution.
- b) To build alumni loyalty and support.
- c) To attract prospective donors.
- d) To provide information about the institution's offering.
- e) To attract prospective students and encourage applications and enrolment.
- f) To correct inaccurate or incomplete information about the institution.

The institution also has an obligation to determine and meet the information needs of faculty, staff, current students, and others operating in the internal environment (Kotler & Fox, 1985:278). According to Gray (1991:118), a starting point in communicating with customers and clients is a basic marketing model, summarised by the acronym 'AIDA'. A four-stage process is required to obtain a sale: -

- a) First the need to get **attention (A)**- awareness of the benefits;
- b) Then to hold **interest (I)** – understanding the benefits;
- c) Then to arouse **desire (D)** – wanting the benefits; and,
- d) Finally, to obtain **action (A)** – obtaining the benefits - the sale.

Hence, the above model is equally applicable in bringing services to the attention of potential users, and different marketing techniques are likely to be used at each of the different stages.

An effective communication program requires strong professional skills and cannot be left to chance. For example, the educational institutions publications should be reviewed for quality and consistency of content and style. The institutions should also strive to ensure that their communications are personalised and accurate.

As established in chapter two, the basic promotional techniques can be categorised into the following groups:

### **3.11.2 Advertising**

Any form of advertising is expensive and most institutions adopt an advertising approach simply to recruit new staff rather than potential students. Some administrators resisted the concept of 'advertising' and failed to realise that any institution involved in producing prospectus, direct mail, and bulletins are already engaged in advertising (Simerly, 1989:273). Allen (1989) highlights the fact that in the field of the educational environment, advertising is typically utilized in two important ways. Firstly, as institutional advertising that promotes the organisation as a whole, and secondly, as product advertising that focuses on individual programs or courses of study.

Many institutions are aware, that with careful planning, the institution can make its advertising more effective and competitive. Advertising is one area where institutions can create a competitive advantage and outsmart their existing rivalries. This approach has become vital for survival, considering the intense competition facing these institutions, both locally and internationally.

Since advertising requires a distinctive and consistent image, usually with careful thought given to its design; the recent trend is to recruit an advertising agency to assist with the advertising campaigns. The University of Natal adopts this approach, as the administrators recognise the benefits to be gained from seeking assistance from advertising agencies.

The main advertising mediums available to institutions are, press, television, radio, cinema, buses, bulletin boards and the latest trend are the institution's own web site. Gray (1991:123) argues that the advertising media needs to be identified, costed and evaluated according to their capacity to penetrate market groups. The advertising budget must also be set based on what is affordable and what is required to accomplish the institution's advertising objectives. The intangible nature of an education service makes it crucial that the messages are clear, simple and unambiguous. Kotler and Fox (1985:315) state that evaluating advertising results

helps to determine the cost-effectiveness of the advertising and to suggest changes in future advertising.

### **3.11.3 Personal Selling**

Personal selling plays an important role in persuading clients to register at a particular educational institution. This form of promotion requires face-to-face communication with staff and potential customers. What makes a student enrol at a particular institution and in a specific department for a specific course?

Organising for personal selling involves the determination of who should do the selling and how these individuals should be assigned to selling functions and targeting clients. The professional must deliver good work and manage the client relationships well as a basis for future business (Penceliah, 1997:112). Customers are exposed to risks when making purchasing decisions and personal selling helps to reduce these risks and so easing the shift from interest to desire and from desire to action as earlier illustrated. Etzel et al., (1997:462) argues that personal selling is more flexible than other tools since educational administrators can tailor their presentation to fit the needs and behaviour of individual customers. They can see the reaction to a particular presentation and can make adjustments on the spot.

### **3.11.4 Public Relations**

Public relations or 'PR' is defined by the Institute of Public Relations as the 'planned and sustained effort to establish and maintain goodwill and mutual understanding between an organisation and its publics'. The purpose of a PR function in any organisation is to provide information about that organisation to all who are interested Gray (1991:123). In addition, it is the responsibility of the public relations officer to monitor the institution's public image and advise the administrators on areas of strength and weaknesses. Patterson (1989:201) summarizes public relations as advertising, image building, and the creation of goodwill.

Gray (1991:134) confirms that the concept of PR includes: -

- a) The preparation of informational material and reports.
- b) The cultivation and lobbying of key decision makers.

- c) Support for worthy events.
- d) Issues management: the development of coherent viewpoints on controversial issues, to be communicated internally and externally. The appointment of the University's vice Chancellor and the merger between the University of Durban Westville and University of Natal has recently been, the topic of discussion.

In a highly competitive, fluid and changing economy, a comprehensive public relations plan is essential namely because of the changing world, increased competition and the quest for clients, customers, members (Patterson 1989). Educational institutions invest heavily in the publication of attractive prospectuses, supported by an array of brochures, leaflets and course directories in user friendlier formats. Goods available through institutional sales point can reinforce the image of an institution. Items such as tracksuits, stationery, t-shirts, and other souvenirs are sold in order to project the institution's image.

Kotler and Fox (1985:293) reiterate that relations practitioners must be skilled communicators, adept at developing written material, audiovisual material, institutional-identity media, news releases, events, speeches and telephone information services, and at facilitating favourable personal contact by administrators and others associated with the institution.

### **3.11.5 Promotional Activities**

These activities differentiate from normal advertising in that they are designed to require customer participation. Universities have their familiar 'open day', where potential students/parents can come and experience what the university has to offer. Conventions, exhibitions, trade fairs and conferences have become popular tools for promoting higher education. The University of Natal hosted a stand at the Royal Agriculture Show, which is hosted annually in Pietermaritzburg. The University was honoured to report that it won an award for the most impressive and informative site.

These promotional activities require distinctive approaches and some particular skills, both in the preparation process and in attracting passers-by to your site. The organisational skills necessary to log enquiries and respond promptly to them are

further important requirements. Perhaps the most important requirement is the ability to persuade colleagues to give up their time willingly and seek the necessary training in skills lacking (Gray, 1991:129).

### **3.12 People**

Peck et al. (2000), as reported by Sukram (2002:20), states that one of the most critical changes in marketing thought that has occurred, has been the recognition that 'people' are the brand. Hence the significant attention that is now paid to attracting, training and motivating employees who can share the values of the business and project those values at every point of delivering a service.

Thompson & Strickland (2001:351) argue that talented people in possession of superior intellectual capital are not only a resource that enables proficient strategy execution, but also a prime source of competitive advantage. Much has been written about the connection between employee satisfaction and the importance of the 'internal market' is now generally recognised.

Gray (1991:140) defines 'internal marketing' as: the marketing of the institutions services to those already using them and to those whose task it is to deliver the service. Berry (1980:24) on the other hand defines 'internal marketing' as: applying the philosophy and the practices of marketing to people who serve the external customers so that the best possible people can be employed and retained and they will so do the best possible work. This includes both the staff and the students of an educational institution

Education is described as a highly collaborative process, with students playing a pivotal role in the process. It is important to include students because of their informed opinion on the quality of the service and they can offer a valuable source of evidence as to ways in which the service might be improved (Gray 1991:143).

Robinson and Long (1988) advocate 'internal marketing' as a distinctive requirement for service industries in general and educational marketing in particular. This is defined as selling the job to employees before an organisation can sell its services to customers. They further argue that 'good marketing practice equates to

good teaching practice'. Cowell (1991:208) states that employees might be reluctant to sell a service that they do not find acceptable.

In fostering the philosophy that 'the service should be as though the provider were at the receiving end', requires proper planning such as an examination of the recruitment and selection procedures so that the right employees can be recruited. The purpose is to create a climate in which staff recognize that they all have marketing and service delivery responsibilities and to indicate ways in which these responsibilities can be fulfilled more effectively (Gray, 1991:144).

Weidemann (1989:121) states that creating a strong service oriented staff requires a comprehensive management approach. This involves specific service training and a management style that addresses staff needs. Desatnick (1987) argues that if you want employees to treat customers well, you must first treat your employees well.

### **3.13 Providing A Quality Service**

The search for quality is the most important business trend of the past two decades, as demanding customers have come to expect service that is fast, reliable and friendly. Many products today exceed minimum standards. Modern communication often encourages customers to shift their patronage from one service to another. Global competition has resulted in increased choice and has raised customer expectations of what constitutes acceptable quality. The Internet has increased the accessibility of service and as a result power has been shifted away from the organisation to the consumer, who is now able to compare products and services faster than before. These developments require organisations to offer customer service quality that differentiates them in the global and digital market place (Kunneke, 2001:63).

Weidemann (1989:114) contends that quality service can make a significant contribution to the institution's marketing effort and that good service is the key marketing edge in developing and keeping customers. He goes on to state that developing new customers is almost five times more costly than keeping present ones and through word of mouth; past satisfied customers become key marketers.



Quality represents the perceived level of performance in a service, with the emphasis on either complete satisfaction of customer's needs or pleasing customers. The quality of service is extremely important because quality varies depending on the provider of service, including the provider's skill, mood and motivation, and how much control the institution can exercise over the providers (Kotler and Fox, 1985:225). Quality does bridge the gap between perceived service and expected service and can lead to life long loyalty to the organisation.

An organization should seek to accomplish the following three objectives with regard to quality:

- a) The organisation should achieve and sustain the quality of the product or service produced so as to meet continually the purchaser's stated or implied needs.
- b) The management should ensure that the intended quality is being achieved and sustained.
- c) The organisation should provide confidence to the purchaser that the intended quality is being, or will be achieved in the delivered product or service provided (Irons, 1994:189).

In addition, Parasuraman, Zeithaml and Berry (1985), as reported by Kotler (2000:439), suggest five dimensions of quality of a service that can be perceived by customers:

- a) **Reliability** – the ability to perform the promised service dependably and accurately.
- b) **Responsiveness** – the willingness to help customers and to provide prompt service.
- c) **Assurance** – the knowledge and courtesy of employees and their ability to convey trust and confidence.
- d) **Empathy** – caring, individualised attention given to customers.
- e) **Tangibles** – appearance of physical facilities, equipments, personnel and communication materials.

Cope and Delaney (1991:63) defines quality from an educational perspective and states that it consists of an evaluation of performance in teaching, research, and service, including an assessment of the quality of students measured both upon entry and by

their performance after the completion of a program of study. The quality of an academic program may depend upon the following essential and inseparable characteristics. Cope and Delaney (1991:63) identify them as follows: -

- a) **Faculty** – the quality of the faculty is measured in a limited and practical way by the record of achievements of its members. Teaching for example is evaluated by peer reviews, student opinion, and performance of students. Research on the other hand, is evaluated by scholarship, conference presentations, honours, awards, grants and contracts.
- b) **Students** – The quality of students may be measured both before and after completion of a program of study. Some criteria that may be used for assessing quality of students are:
  - Standardized test scores.
  - Academic honours.
  - Scholarships or other financial aid based on merit.
  - Faculty estimation of it's students' level of performance.
  - Academic records.
- c) **Support** - Various academic programs require an assortment of support services and facilities for teaching and research purposes. The adequacy and quality of the following are among elements of support:
  - Lecture rooms, laboratories, and support faculties.
  - Instructional and research equipment.
  - Fieldwork sites and facilities for professional practice.

- d) **Dynamic characteristics** – a program as a whole can make a contribution that is distinct from the sum of individual contributions. These include:
- Local, regional, national and international recognition of rating, grants, and accreditation status.
  - Ability of the program to stimulate objective, imaginative inquiry and the free exchange of ideas in its field.
  - Organized department co-curriculum activities at the graduate or undergraduate level.
  - Potential of the program to generate new knowledge.
  - Ability of the program to prepare future professionals.
  - The extent to which the program's practices and course content reflect high standards.

The faculty responsible for the program has the overall responsibility and capability to assure that quality standards are met. Within the faculty there should also reside a clear sense of how any program fits in with the central mission of that institution. It is therefore imperative that an educational institution pay special attention to quality of its service provided, both for the immediate survival of its programs, and for the long-term maintenance of the institutions image (Hanna, 1989:89).

### **3.14 Conclusion**

Implementation of acceptable marketing practices is inherently difficult. Universities tend to be rather inflexible because of their autonomy and established culture. Suppliers of educational services need to know what criteria will influence their buyer's choice, what services might be falling short of expectations and what overall satisfaction or dissatisfaction students have regarding their education experience (Schmidt, 1991:127). Understanding one's present market and relative performance on key techniques should help establish an acceptable marketing practice.

However, the trend is changing and universities are becoming more aware of the overall importance of marketing and are using marketing to a greater extent. Whilst, many universities are in fact using marketing techniques such as market orientation, product, place, promotion, price, people, process, and strategic market planning, there are a few techniques that appear not to be used at all. This includes advertising research, marketing consultants, marketing audits and marketing directors.

If universities build these techniques into their marketing strategy, they will be able to face greater challenges in the future.

## **Chapter 4**

### **Research Methodology**

#### **4.1 Research Methodology**

This dissertation attempts to evaluate the current marketing practices of the University of Natal Pietermaritzburg, for self-funded teaching programmes in the School of Business.

#### **4.2 Pilot Testing**

Pilot testing was conducted on various students in order to obtain valuable insight into how the students will react while answering the questionnaire. Pilot testing is necessary so that any ambiguities regarding the validity and the clarity of each question, and the reliability of data collected is established while there is still time to make changes. The comments, suggestions and recommendations of the pilot testing were considered and the questionnaire updated in order to design an effective and user-friendly instrument.

#### **4.3. Sampling Methodology**

A sampling frame in the form of a listing was verified and supplied by the Universities admission office. A sample of 217 students was taken from a total of 501 who are currently registered for self-funded courses in the School of Business. This sample size can be verified by a sampling table produced by Sekaran (1992:253). Refer to Appendix 9 for the table. However, a final response of 194 questionnaires was collected. The sample, therefore, includes 38.7% of the population, which as a rule of thumb is a very adequate sample size, indicating a true representation of the total population.

The self-funded courses offered by the university are structured in nature, with predefined curriculum for each year of study, except the second level of the MBA degree, where students are given the choice of choosing elective courses. Since the population is already stratified into specific courses, a single course in each level of study was selected and the lecture attended to survey the students.

Initially, systematic sampling was envisaged, which entailed starting at one point of the lecture room and choosing every kth student depending on the sample requirement needed from that course. However, on arriving at the lectures, the turn out response by students was extremely disappointing and in most cases, the total numbers of students at the lectures were even below the sample requirement. Ultimately, every student that was present at the lecture was sampled.

The research instrument used was a structured questionnaire with structured responses (see Appendix 1). The questionnaire was aimed at the opinions of those students surveyed.

#### **4.4 Research Design**

Exploratory research was conducted for this study. Exploratory research is useful in identifying the main subject areas in the study. Exploration develops concepts more clearly, develops operational definitions and improves the final research design. The objectives of exploration can be achieved by using both qualitative and quantitative techniques (Cooper and Schindler, 2001:139).

In addition to exploratory research, this dissertation can also be classified as “descriptive” since this study is structured with clearly stated hypotheses and addresses the questions of “who”, “what”, “when”, “where” and “what” (Cooper and Schindler, 2001:146).

#### **4.5 Research Instrument**

Data required to achieve the objective of this research paper was collected using a structured questionnaire. The questionnaire was structured to obtain information on opinions regarding the current marketing practices of the University of Natal Pietermaritzburg, as regards self-funded courses in the School of Business.

The questionnaire was designed after reviewing the relevant literature as discussed in chapter 2 and chapter 3, and with the overall problem statement and objectives of this study in mind. The questionnaire was also designed to facilitate straight forward completion. Given the time and resource constraints, the use of a questionnaire with structured responses was considered efficient and economical. The Likert-scale-type

questions were predominately used in the questionnaire and each response was assigned a numerical score to reflect the degree of each student's attitudinal response.

The questionnaire was broken down into two sections. Section A, which dealt with the marketing practices at University of Natal and required students in most cases to tick the boxes that they felt expressed their opinion. Section A also included a question that required students to rate their selection of important factors.

Section B incorporated the student's demographics, which is relevant in drawing comparisons between different demographic factors. The candidates were asked to include information regarding their age group, year and field of study, nationality, gender and racial group. These details were used to determine differences in the opinions of students who belong to different groups (Refer to the questionnaire in Appendix 1).

#### **4.6. Data Analysis**

Data was analysed using a statistical software package called SPSS-version 11.5. Descriptive statistics such as bar and pie graphs are used to describe and compare data. When hypothesis tests are carried out, a level of significance is selected. A significance level of 5% is frequently used and as a result has been selected for this analysis. The level of significance is equivalent to the probability of rejecting a null hypothesis, which is in fact true.

The statistical procedures used in the analysis of this data include the following:

- Wilcoxon Signed Ranks Test
- The Spearman-Brown correlation formula to assess the reliability of the test
- Kruskal-Wallis one-way Analysis of Variance
- Mann-Whitney U tests
- Chi-square goodness-of-fit tests

#### **4.7 . Reliability**

The reliability of a test refers to the repeatability and stability of its scores. When a test can be split into two halves that are matched in terms of content, a reliability coefficient based on the split-half procedure can be calculated. This coefficient is a correlation coefficient and a value close to 1 indicates that the two halves are strongly correlated

and that the test is reliable. Since questions 3 and 4 in the questionnaire are very similar, they were used to gauge the reliability of the test. The Spearman-Brown formula gave a reliability coefficient of 0.8425, which indicates that similar questions received similar responses and that the test is reliable (see Appendix 8).

## **4.8. Validity**

### **4.8.1. Content Validity**

The survey instrument contained questions that cover the research topic. Pilot testing was conducted to ensure content validity and that the instrument adequately covers the topic.

### **4.8.2 Construct Validity**

It is important that a measurement technique be closely linked with known theory in the area and with other related concepts. Where such close links can be demonstrated, the instrument is said to have high construct validity (Bless and Higson-Smith, 1995:138). As mentioned earlier, the questionnaire was specifically designed to encapsulate the literature discussed in chapter 3.

### **4.8.3 Face Validity**

Face validity is established by determining on face value whether the items are logically and conceptually accurate (Page and Meyer, 2000:86). In other words, Face validity is concerned with the way the instrument appears to the participants. It is important that an instrument be tailored to the needs of the subjects for who it is intended (Bless and Higson-Smith, 1995:139). The questionnaire used was tailored to the needs of students registered for self-funded courses and was deliberately designed to be simple and easy to complete.

### **4.8.4 Criterion-related Validity**

One-way to test whether an instrument measures what it is expected to measure is to compare it to another measure, which is known to be valid. This other measure is called the criterion measure. If the data collected using the instrument in question closely matches the data collected using the criterion measure then, it can be concluded that the new instrument is also valid (Bless and Higson-Smith, 1995:137).



#### **4.9 Limitations of the Methodology**

A limitation of the study was that it focussed on a particular faculty, namely the School of Business at the University of Natal Pietermaritzburg. Therefore it restrained itself to a single School within the University, and cannot interpolate these findings to other non-business self-funded programmes.

Another potential limitation was the use of a structured questionnaire, which focussed on marketing information and some respondents might not have the necessary marketing background.

The other limitation relating to the questionnaire was that of confusion or/and ambiguity pertaining to question 2. There appeared to be the problem with ranking of the factors, despite the question specifically saying that only the three most important factors needed to be ranked. Most students ranked all fourteen factors.

# Chapter 5

## Results

### 5.1 Introduction

Evaluations based on the research findings are presented and discussed in this chapter. The software package used for the analysis is SPSS (Statistical Package for Social Scientist), version 11.5. Detailed analysis of the findings is accompanied by descriptive statistics and graphical representation.

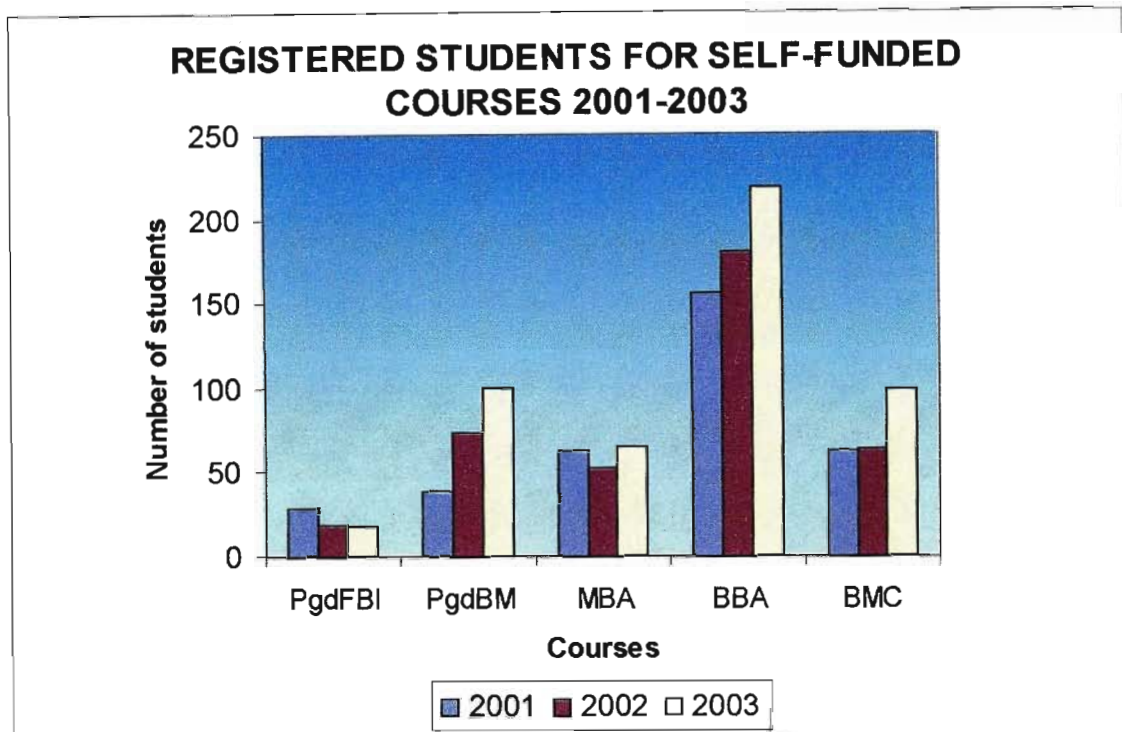
The following abbreviations have been used throughout the analysis:

Pgd	=	Post Graduate Diploma
PgdFBI	=	Post Graduate Diploma in Finance, Banking and Investments.
PgdBM	=	Post Graduate Diploma in Business Management
MBA	=	Master in Business Administration
BBA	=	Bachelor in Business Administration
BMC	-	Business Management Certificate

## 5.2 Student Registration

The graph depicts the number of students registered for self-funded courses at the University of Natal for the period 2001 to 2003.

**Figure 9**



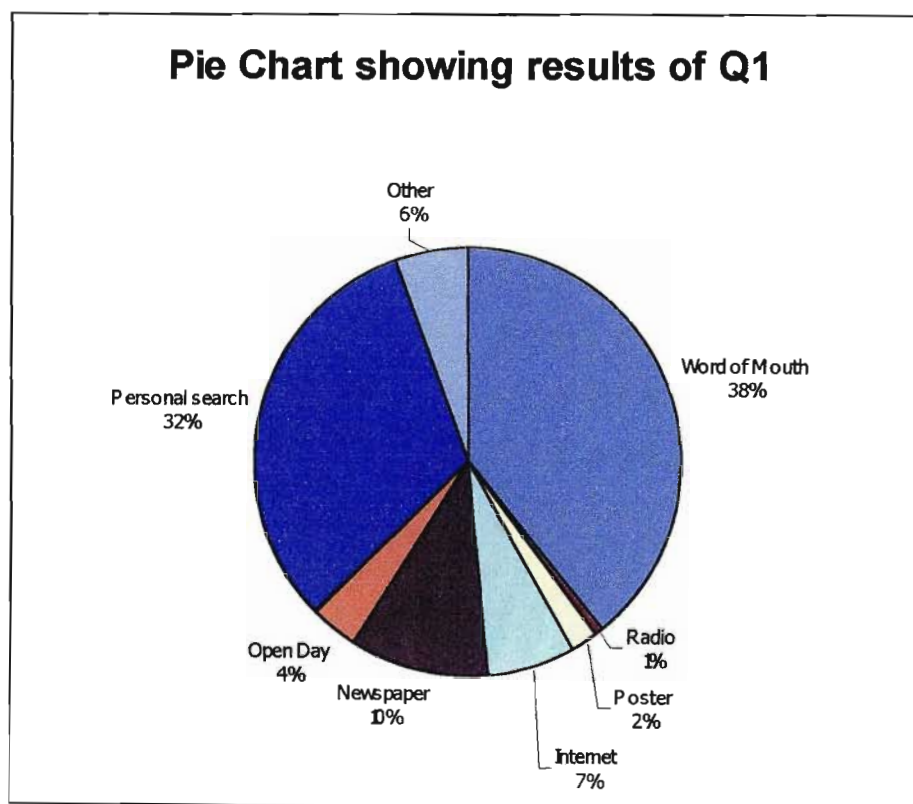
**Source: University of Natal – Student Academic Affairs Office**

Students registered for BBA increased by 16 % in 2002 and by 20% in 2003. Likewise, the number registered for BMC, MBA and PgdbM has shown steady growth over the two years. However, of concern is the PgdfBI course which reflects a drop from 19 students registered in 2002 to 18 students registered in 2003.

### 5.3 Question 1: Marketing Strategies

The subjects were asked to indicate how they heard about the programme they are currently studying. Figure 10 represents a pie chart showing the different ways students heard about their courses. The graph indicates that the most effective ways were by word of mouth and the students' personal searches. The subjects were asked to specify how they heard about their curriculum if they selected the "other" option. The most frequently recorded option under this heading was the University Prospectus.

**Figure 10**



### 5.4 Question 2: Important Factors for Selecting a University

In order to determine whether the students seemed to favour one response over another in general, a chi-square test was performed. Under the null hypothesis, this test assumed that each response was equally likely, i.e. that the responses followed a uniform distribution. A significant  $\chi^2$  statistic indicates that the null hypothesis is to be rejected and that the students favour a particular response significantly more than the rest. The significant results from these chi-square tests for the goodness-of-fit of the uniform distribution can be found in Appendix 4.

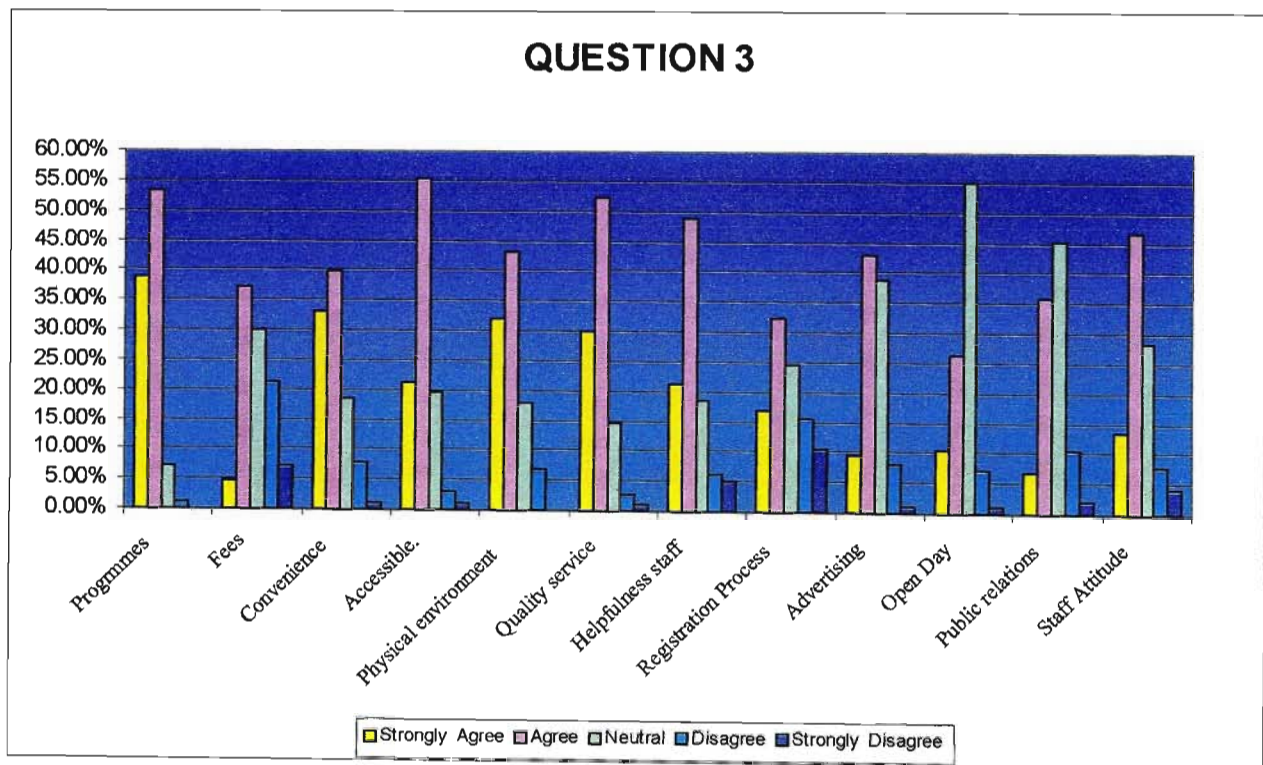
In the context of important criteria to be considered when selecting a university, the subjects deemed the quality of programmes offered; the provision of a quality service; helpfulness of the staff and the processes of the university most important.

62% of students indicated that the quality of programmes offered was in fact the most important factor when selecting a university. Although most observers chose a second and third most important factor, the results were not significantly different from each other and therefore no single category was prominent.

**5.5 Question 3: UNP’s Marketing Practices**

This question comprises positive statements about the marketing practices of UNP and the candidates were asked to indicate how strongly they agreed or disagreed with these comments.

**Figure 11**



In general, the subjects seemed to give positive feedback regarding the following features of UNP’s marketing strategies:

- The quality of programmes at UNP
- Acceptability of fees at UNP
- The convenience of evening courses

- Accessibility of courses
- The attractiveness of the physical environment at UNP
- The quality of service provided by the lecturers
- Helpfulness of staff
- The efficiency of the registration process.

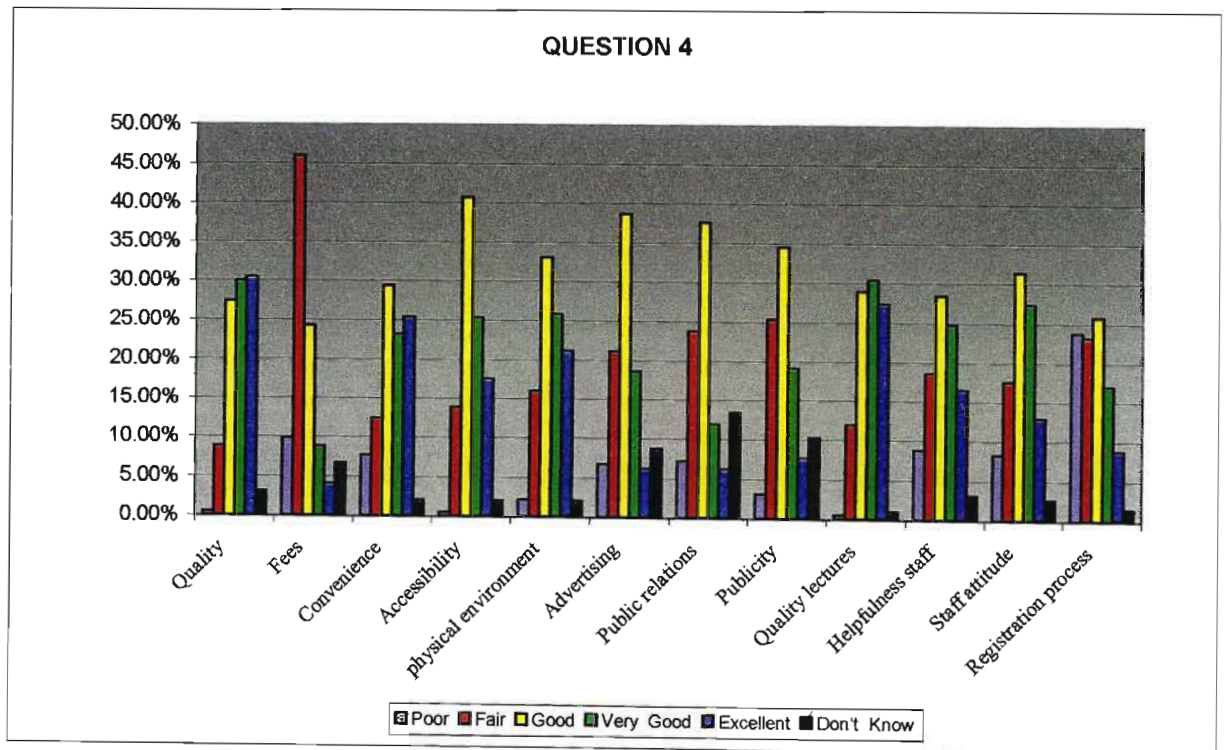
A more neutral response, which tended toward a favourable one, was given by the students regarding the following attributes of UNP:

- How informative the advertising programmes of UNP are.
- The persuasiveness of Open Day.
- The credibility of public relations.
- The positive attitude of UNP staff.

### 5.6 Question 4: Rating the Marketing Practices of UNP

Although this question was very similar to question 3 it was used because it allows for more accurate insight as to exactly how the students rate these factors on an itemised rating scale.

**Figure 12**





Positive ratings were obtained for the following features:

- Quality of programmes.
- Convenience of programmes.
- Accessibility of programmes
- Physical environment of UNP.
- Advertising of programmes.
- Public relations at UNP.
- Publicity of UNP.
- Quality of lectures.
- Helpfulness of support staff.
- Attitude of programme staff.
- The registration process at UNP.

Overall, the candidates gave a fair rating for the course fees and Open Day at UNP.

Frequency tables and central tendency calculations reflecting values for the median, mean, mode and standard deviations can be found in Appendix 3 to support these findings.

In addition, the Wilcoxon Signed Ranks Test was performed to test the hypotheses. Dummy variables were created and compared to actual scores observed to test if there were any significant differences.

In testing hypothesis 4, the following coding was used:-

Var00004 = fair

It is evident from the test results, as indicated in Appendix 10, that positive ranks were significantly higher than the variable, suggesting that the observed scores were more than fair. Based on these findings, H4 can be accepted and H0 can be rejected.

Similarly, code Var00003 = good was used to test hypothesis 3. The overall rating by students registered for self-funded courses can be concluded as being good, since the majority of the factors in question 4, had higher positive rankings than the variable. This indicates that H3 can be accepted and H0 can be rejected. However, question 4h

had an equal ranking and question 4b and 4h had a higher negative ranking, but not significant enough to alter the overall findings.

Hypothesis 2 was tested, using Var00002 = very good as the appropriate coding. The main finding was that most factors resulted in negative rankings, indicating that the observed scores were less than the variable. Therefore, H2 can be rejected and H0 accepted, since it can be concluded that the overall marketing practices is at least good but not very good for self-funded courses in the School of Business, at the University of Natal (UNP).

It therefore stands to reason that based on the above testing, H1 can be rejected and H0 accepted.



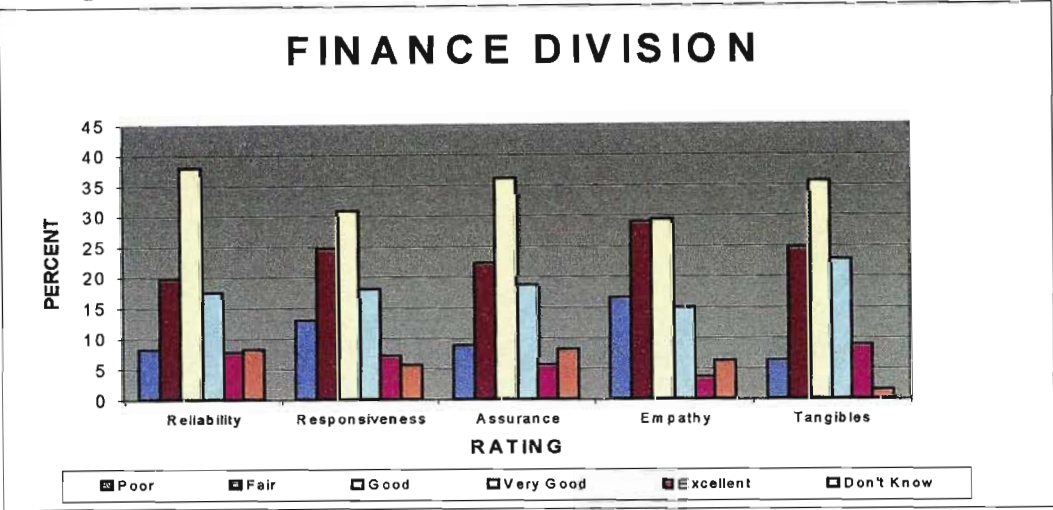
5.7 Question 5: Departments at UNP

The students were asked to rate the level of service given by different departments at UNP: the finance division, support staff, student admissions and the library. All of the departments were rated at least “good” by the students except for the rating on the empathy of the staff in the finance division. The staff in this department was rated as “fair” in this regard.

5.7.1 Finance Division

DESCRIPTIVE STATISTICS FOR FINANCE DIVISION					
	Reliability	Responsiveness	Assurance	Empathy	Tangibles
Poor	8.2	12.9	8.8	16.5	6.2
Fair	19.6	24.7	22.2	28.9	24.7
Good	38.1	30.9	36.1	29.4	35.6
Very Good	17.5	18	18.6	14.9	22.7
Excellent	7.7	7.2	5.7	3.6	8.8
Don't Know	8.2	5.7	8.2	6.2	1.5

Figure 13



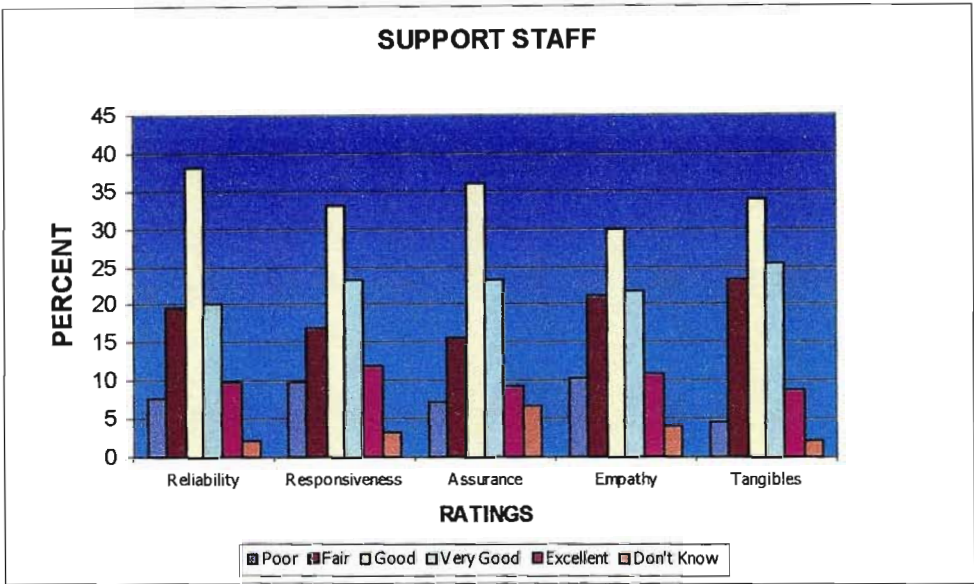
This graph indicates that a fair amount of students, namely, 38,10%, rated the factor of reliability as good; 30,90%, rated the factor of responsiveness as good; the factor of assurance was rated as good by 36,0% of the students. However, 29,40% rated the factor of empathy as good and 35,6% rated the factor of tangibles at the Finance Division to be good. The graph also indicates that a much lower percentage of students regarded these factors as excellent. Overall, an insignificantly low percentage rated these factors as poor, with a high of 16,5% indicating that empathy was poor in the division.

5.7.2 Support Staff

DESCRIPTIVE STATISTICS FOR SUPPORT STAFF

	Reliability	Responsiveness	Assurance	Empathy	Tangibles
Poor	7.7	9.8	7.2	10.3	4.6
Fair	19.6	17	15.5	21.1	23.2
Good	38.1	33	36.1	29.9	34
Very Good	20.1	23.2	23.2	21.6	25.3
Excellent	9.8	11.9	9.3	10.8	8.8
Don't Know	2.1	3.1	6.7	4.1	2.1

Figure 14

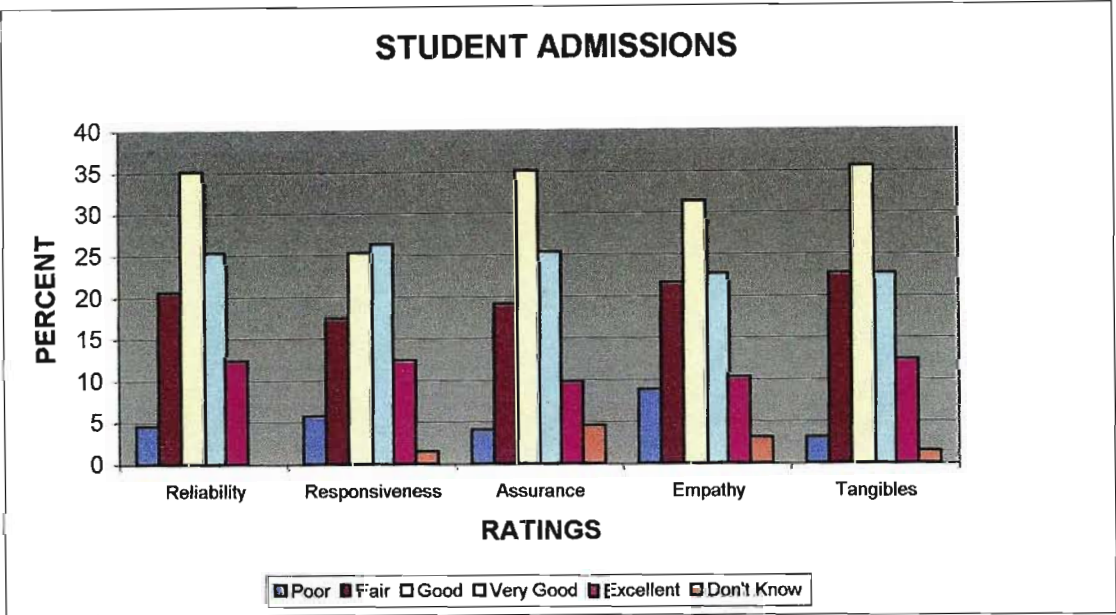


The overall rating shown on this graph reflects that 29,9% of students felt that empathy of support staff was good, with a larger percentage, namely 38,1% students were of the opinion that reliability was good. A fair amount of students, namely 25,3% found the support staff to be very good in terms of tangibles. 11,9% felt that responsiveness by the support staff was excellent and 11,9% indicated that responsiveness of support staff was excellent. Empathy was considered by 10,3 % of students to be poor.

### 5.7.3 Student Admissions

DESCRIPTIVE STATISTICS FOR STUDENT ADMISSIONS					
	Reliability	Responsiveness	Assurance	Empathy	Tangibles
Poor	4.6	5.7	4.1	8.8	3.1
Fair	20.6	17.5	19.1	21.6	22.7
Good	35.1	25.3	35.1	31.4	35.6
Very Good	25.3	26.3	25.3	22.7	22.7
Excellent	12.4	12.4	9.8	10.3	12.4
Don't Know	0	1.5	4.6	3.1	1.5

Figure 15



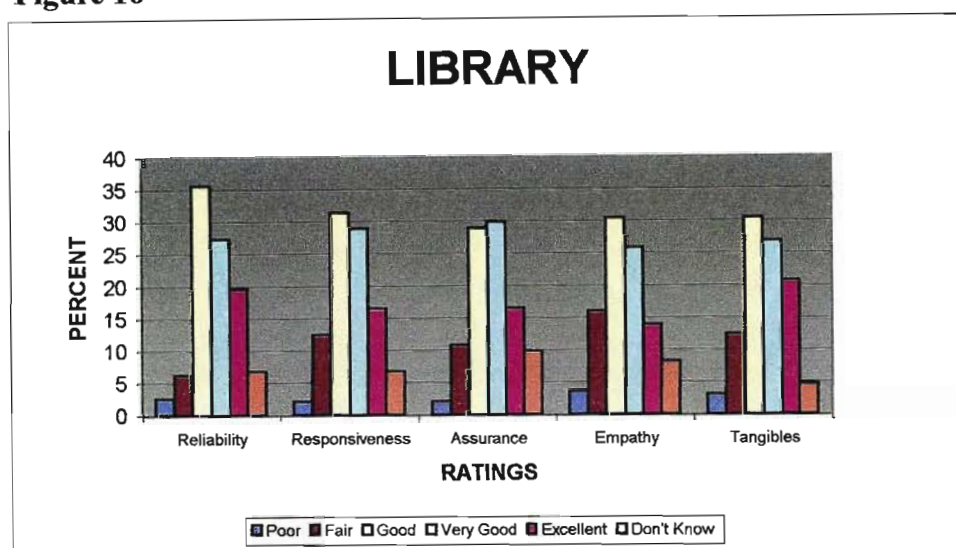
The above graph indicates that the majority of the students found the student admission staff to be good in all areas of the factors reflected in the graph. The ratings of good and very good feature quite predominantly in the graph. Very few respondents rated the staff as poor in terms of the factors given.

### 5.7.4 Library

DESCRIPTIVE STATISTICS FOR THE LIBRARY

	Reliability	Responsiveness	Assurance	Empathy	Tangibles
Poor	2.6	2.1	2.1	3.6	3.1
Fair	6.2	12.4	10.8	16	12.4
Good	35.6	31.4	28.9	30.4	30.4
Very Good	27.3	28.9	29.9	25.8	26.8
Excellent	19.6	16.5	16.5	13.9	20.6
Don't Know	6.7	6.7	9.8	8.2	4.6

Figure 16



The general consensus as reflected in the graph was that students found the Library department to be acceptable in terms of reliability; responsiveness; assurance; empathy and tangibles. What is interesting to note from this graph is that the rating for the factor “very good” almost equals the number of respondents who rated these factors as “good”. On average, 17,42 % found the Library to be excellent with a very negligible number of students who rated the Library as poor as indicated by factors in the graph.

### 5.8 Comparisons Across Demographic Categories

Nonparametric tests were performed in order to compare the responses of the different categories of students who were tested. When a subject belonged to one of two groups (e.g. gender), a Mann Whitney U test was performed to assess the significance of any differences between the two groups. In the case of 3 or more independent samples, a Kruskal-Wallis test was performed.

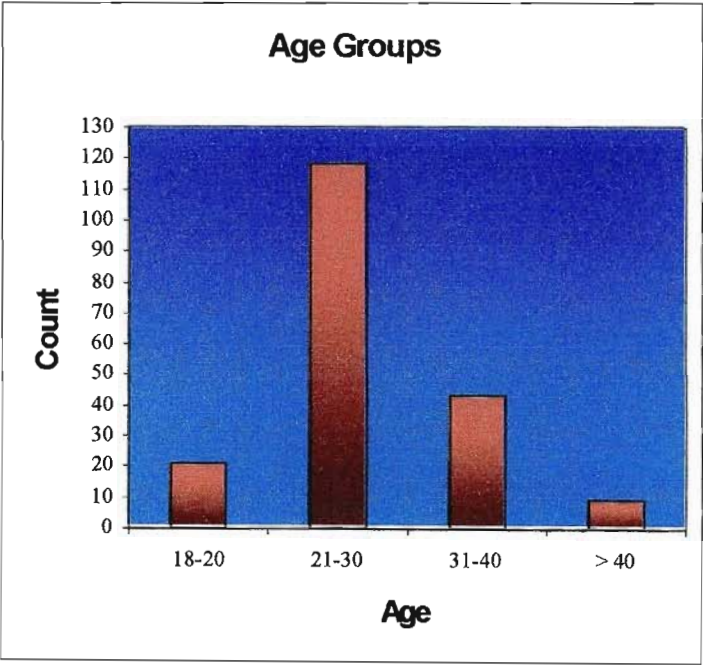


**5.8.1 Comparison of Age Groups**

The candidates to whom the questionnaire was administered were divided into the following age groups: 18-20, 21-30, 31-40 and over 40 years old. The results of the age groups were compared using Kruskal-Wallis tests to determine the significance of any differences between them.

The distribution of the ages of the subjects is presented in Figure 1.1. The majority of the students sampled were between 21 and 30 years old.

**Figure 17**



Age group 31-40 rated the advertising of educational programmes as a higher priority than age groups 21-30 and over 40. The other age groups did not differ significantly from each other in their ratings of this aspect of UNP. Refer to Appendix 4 for the test results.

The 18-20 age group considered the provision of a quality service to be less important than did members of the 21-30 and 31-40 age groups.

Significantly more 31-40 year olds than 18-20 and 21-30 year olds agreed that offering self-funded courses in the evenings contributed to convenience. This outcome was confirmed by the students' rating of the convenience in question 4.

Students who were over 40 years of age tended to agree that the self-funded programmes at UNP are easily accessible. This age group differed significantly from all other age groups, who did not feel as strongly about this.

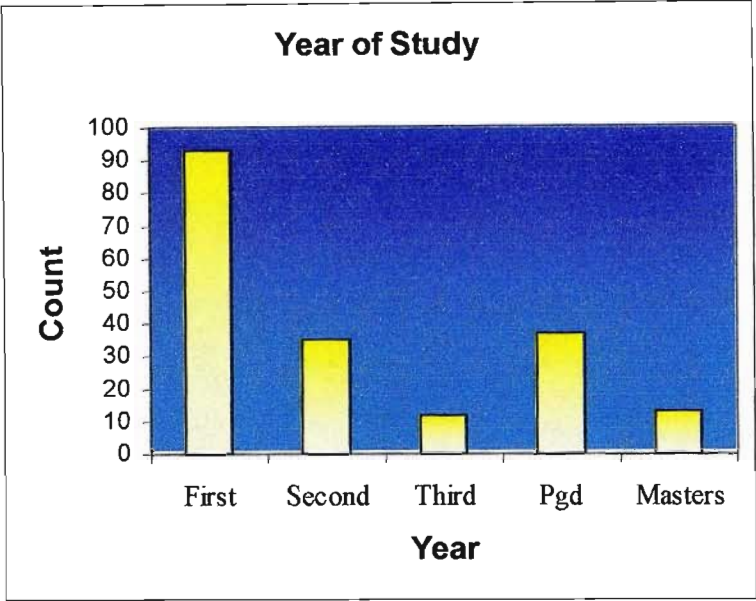
When asked to rate the accessibility of the School of Business self-funding courses, the age groups all gave a favourable rating. The 31-40 age groups rated School of Business self-funding courses at the University of Natal, Pietermaritzburg as very good in this regard and the younger age categories favoured a rating of "good".

From the above testing, it can be deduced that there is a difference of opinion about the current marketing practices of the University between different age groups, suggesting that the Hypothesis 4 can be accepted and the null hypothesis can be rejected. Refer to SPSS output analysis in Appendix 4 and Appendix 6 for verification.

**5.8.2 Comparison of Year of Study**

Candidates ranging from first year students to masters students were chosen for this study and the numbers from each year of study is represented in the graph below.

**Figure 18**



The sample was made up of first, second and third year students as well as post graduate diploma and masters students. Their opinions differed significantly for the following aspects of UNP’s marketing practices:

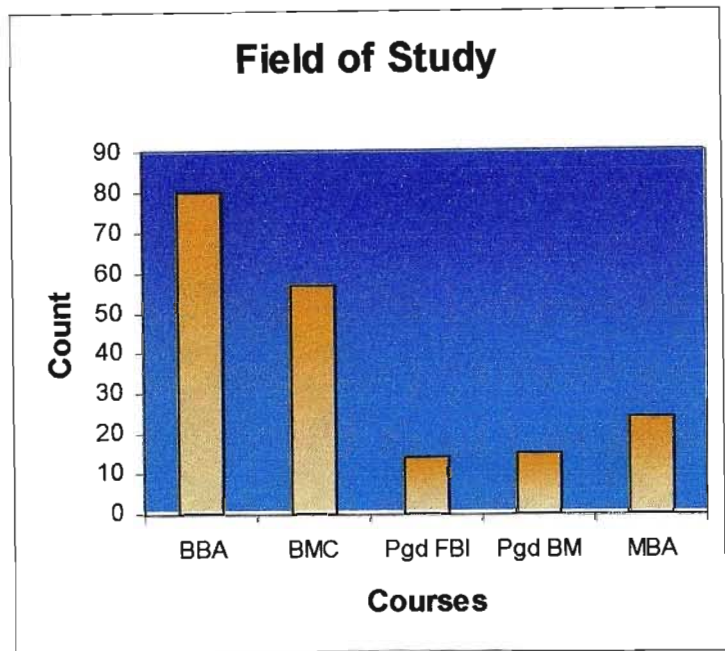
- Second year and postgraduate diploma students agreed more strongly than first year students, that offering evening courses was convenient.
- The postgraduate diploma students felt that the tangibles of the finance division of UNP were fair and the first year students gave a rating of “good”.

See Appendix 4 and Appendix 6 for test results.

**5.8.3 Comparison of Field of Study**

The number of students chosen from the various fields of study is shown in the graph below.

**Figure 19**



Students studying BBA, BMC, Pgd FBI, Pgd BM and MBA were included in this study. The following significant results were obtained:

- The BBA and MBA students strongly agreed with the fact that offering evening courses is convenient, while BMC students did not agree as strongly with this statement.
- The BMC students rated the tangibles of the finance division very positively and the Pgd BM and MBA students' ratings were not as positive, though they were not poor.
- The responsiveness of the support staff was rated very highly by the MBA students. Their rating was significantly higher than the BBA and Pgd FBI students.
- The responsiveness of the student admission staff received an average rating of very good by the BMC students. Although the ratings of other students were also positive, the rating by BMC students was significantly higher than that of the BBA and Pgd FBI students.
- Students currently registered for the MBA and BMC programmes rated the library staff very highly on their responsiveness. Their rating was significantly higher than the rating given by BBA students.

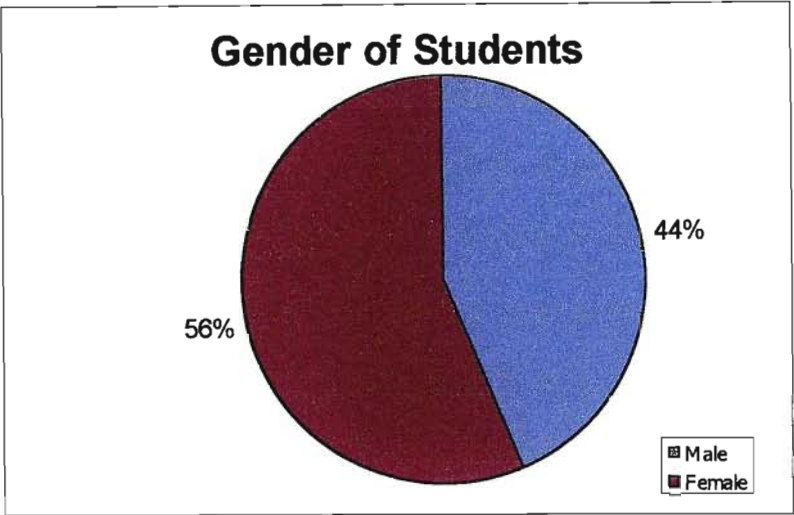


- The library staff received a high rating on empathy by the MBA students. This was significantly higher than that given by BBA and Pgd BM students.

**5.8.4 Comparison of Genders**

The pie chart below shows the ratio of male to female students sampled. 56.3% of the subjects were female and 43.7% were male.

**Figure 20**



The genders differed significantly from each other in the following ways:

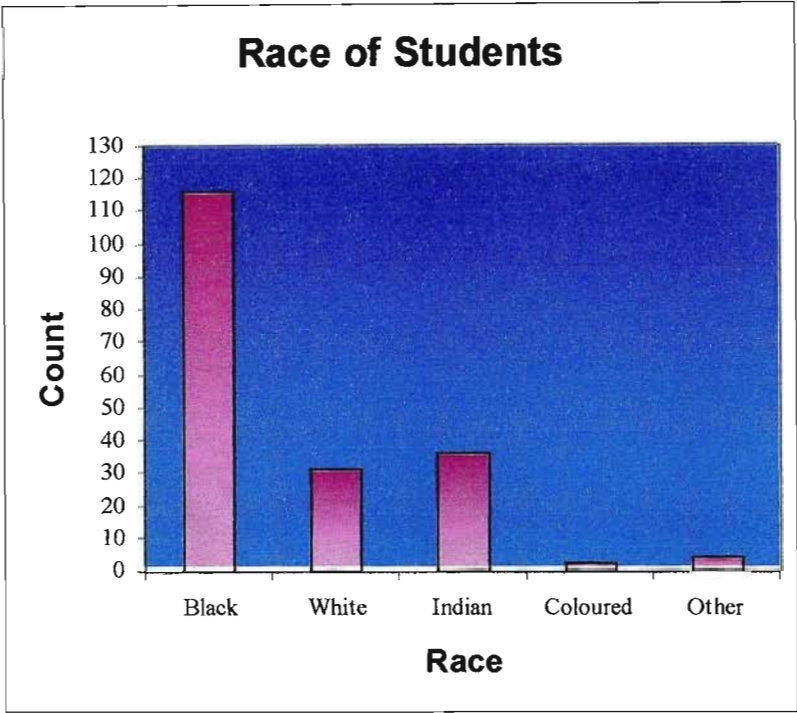
- Publicity is more important to males than to females.
- The processes of a university are a higher priority to males than to females.
- Females consider UNP to be less physically attractive than males do.
- The publicity at UNP received a more positive rating by females than by males.
- The attitude of the programme staff at UNP was rated better by females than by males
- Females gave the assurance of the student admission staff a higher rating than male students did.

Refer to the SPSS output analysis in Appendix 4 and Appendix 6 to support these findings.

**5.8.5 Comparison of Racial Groups**

The distribution of the races of the students in the sample is presented in the bar graph below. Since very few coloured students were sampled, this category was combined with the “other” category for the analysis of the data.

**Figure 21**



The students sampled belonged to the following race groups: black, white, Indian and other. The ratings of the races differed significantly in the following aspects:

- White people did not consider the quality of programmes offered to be as important as black people when selecting a university.
- Indian students considered course fees a high priority when selecting a university. This view was not shared by the other race groups.
- The physical environment seemed to be an important criterion in choosing a university for black and Indian students. White students were not in agreement in this regard.
- White and Indian students seemed to strongly agree with the notion of the convenience of having evening courses. Black students did not agree as strongly with this statement.

- White and Indian students agreed with the accessibility of UNP's self-funded courses more strongly than black students.
- Black students agreed with the attractiveness of UNP's physical environment more than white and Indian students.
- Students in the black and other race groups felt that the advertising programmes of UNP are informative. White students expressed an overall opinion of neutral.
- Black students felt that Open Day at UNP is persuasive. The other race groups gave a neutral response in this regard.
- Black students gave a higher rating on the public relations at UNP than Indian students.
- Black students rated UNP more favourably in terms of its publicity and registration process.
- The tangibles of the finance division received a higher rating by students belonging to the "other" racial group, than by Indian students.
- The responsiveness of the support staff at UNP received a better rating by the black and white students than by the Indian students.
- The assurance of the support staff was rated very good by black and white students. The Indian students rated them as good and the rating received from the other category was fair.
- Student admissions received a more positive rating for their reliability, empathy and tangibles by black students as opposed to Indian students.
- The responsiveness of student admissions was rated more favourably by black students than by white and Indian students.
- Black students gave student admissions a better rating than Indian and "other" racial groups for their assurance.
- The library staff were rated exceptionally well by white students. These students' ratings were significantly higher than black and Indian students' ratings for reliability, responsiveness, assurance and empathy. The black students rated the library staff more positively than the Indian students for their reliability and responsiveness.

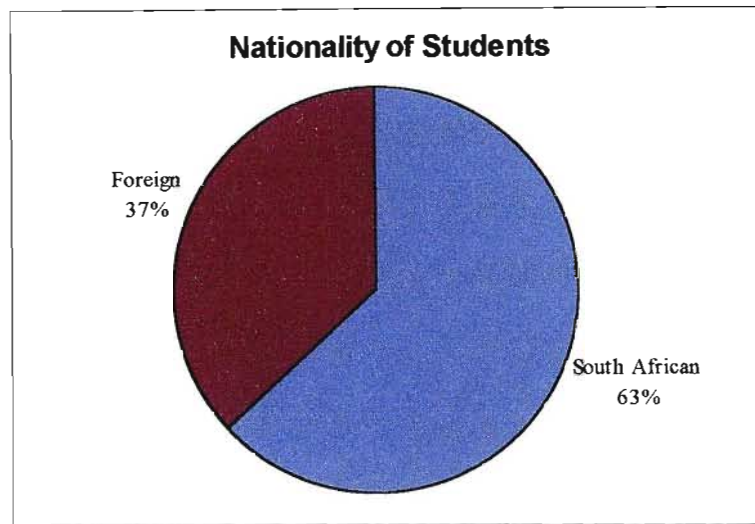
It can be concluded that:-

Refer to the SPSS output analysis in Appendix 4 and Appendix 6 to support these findings.

### 5.8.6 Comparison of Nationalities

An indication of the number of South African versus foreign students included in this study is presented in the pie chart below. 63.2% of the students were South African and 36.8% were foreign.

**Figure 22**



The students were divided into two groups according to their nationalities. These groups were South African and foreigner and they differed in their ratings in the following manner:

- Publicity was perceived as more important by foreigners than by South Africans when selecting a university.
- More South African students agreed with the convenience of offering courses in the evenings.
- The attractiveness of UNP's campus was rated higher by foreign students than by South Africans.
- More foreign students seemed to agree that UNP's Open Day is persuasive.
- The efficiency of UNP's registration process was agreed with by more foreign students than local students.
- The quality of programmes offered by UNP received a higher rating by foreign students.
- South African students gave a higher rating for the accessibility of UNP's self-funded courses.

- Foreign students gave UNP a higher rating for the following characteristics: the attractiveness of the physical environment of UNP; the publicity at UNP and UNP's registration process.
- The finance division received a higher rating by foreign students for its reliability, assurance, empathy and aesthetic appeal.
- The support staff at UNP was rated more positively by foreign students than by local students for their responsiveness, assurance and empathy.
- Student admissions received a higher rating by foreign students for their reliability, responsiveness and tangibles.

## **5.9 Conclusions**

From the above findings, it is evident that, the majority of the students found the marketing factors listed in the questionnaire to be favourable overall, ranging from fair to excellent in some cases. An insignificant number of respondents felt that some areas in the present marketing strategy such as the registration process, the cost of tuition and empathy of some staff were considered poor.

This implies that in general, students registered for self-funded courses in the School of Business, are of the opinion that the current marketing practices at the University of Natal are acceptable. Therefore, we can deduce that, the University understands the importance of marketing and is committed in ensuring that a market-driven culture is adopted, and co-ordinators/directors are committed in implementing marketing techniques and strategies that will ensure continual growth and sustainability of these programmes.

## **Chapter 6**

### **Recommendations and Conclusion**

#### **6.1 Recommendations**

Although there were no major problems emanating from students evaluation of the UNP marketing, the University of Natal needs to take cognisance of the recommendations and challenges identified below in order to sustain and improve the overall marketing efforts. In order for the University of Natal to ensure its survival, growth and constant renewal in the ever-changing demands of the marketplace, it can consider adapting the following ten-step process as described by Simerly (1989:445).

##### **6.1.1 Establish a Marketing-Related Research Base.**

For the University to be recognised as an effective marketer, it needs to become a behavioural scientist. In other words, it must constantly discover new and effective methods to study human behaviour in relation to the courses/programmes, knowledge and services it offers. In developing a research-base, the University will also be able to design marketing techniques appropriate for the special needs of the University. In addition, the University needs to implement action-oriented research methods, which will help to solve marketing problems.

##### **6.1.2 Write Advertising Copy that Emphasizes the Benefits Participants will Receive by Enrolling.**

It is important for the University of Natal to continue establishing positive images with the many key stakeholders that it serves so that they will react positively and want to register for programs. The University's adverts of "Giving you the Edge" "Power to Succeed" and "Take control of your Future" (refer to Appendix 2) is evidence of the University's attempt in establishing positive images. However, students pay high tuition fees for a program in exchange for the benefits they believe they will receive in return. The University needs to take cognisance of this principle of exchange in developing and designing its programmes and the advertising must be written to emphasize these benefits.

### **6.1.3 Integrate the Marketing Concepts into the Daily Routine.**

Successful marketing of education should not be an event. It should be a normal process and part of the University's everyday life. The University of Natal needs to encourage this attitude, to allow its staff to think strategically about marketing in relation to all programs and services. When this is achieved, staff co-ordinators and support staff will then assume the responsibility for gathering of data that will enable them to market programs and services more effectively.

### **6.1.4 Promote a Comprehensive Service Orientation.**

Many businesses in general have responded to the idea that excellence is based on a concern for people that emphasizes service to clients. Such an orientation should form the baseline for all marketing activities in an education environment. It makes it easier to market programs, the image and the tone of the University.

The University of Natal, in an attempt to promote its status as a "service orientated university", has embarked upon launching its CARE initiative campaign in 2002. CARE is a broad initiative, launched by the University of Natal's Executives, intended to improve the quality of all human interactions at the University of Natal, whether these be with staff, students, or people outside the University community. The term denotes **Courtesy, Accountability, Respect and Efficiency** (<http://care.nu.ac.za>).

### **6.1.5 Design all Marketing Activities so that They Enhance the Image of the Institution.**

The students demand excellence, the highest level of quality and credibility of programmes that they register for. It is therefore important that the University of Natal develop a clear, consistent, and positive set of images related to the institution, its programmes, staff and services it provides. The University of Natal has a reputation of being one of the best universities in the country, offering credible programmes of the highest standard and thus the University should strive to make sure that these images are clearly reflected in its marketing campaigns. The



University must be able to re-enforce these positive images and utilize them to the fullest, in order to attract potential students.

#### **6.1.6 Price Programs and Services Competitively.**

Too low a fee conveys an image of inferiority in relation to the University's competition. Too high a fee can drive away potential students. Therefore it is imperative that the University charge the right fee without jeopardising its quality standards and its reputation. As discovered from the findings, whilst, 42% were in agreement that fees at the University were acceptable, 28% disagreed with this statement. The University is committed to charging the most competitive tuition and residence fees and uses the strategy of increasing annual fees only to the extent of linking it to the annual inflation rate. The University has also implemented a debit order system to assist parents in meeting their financial obligation. It can however, be recommended that the University consider offering a discount to early settlement of full fees. This will encourage parents, donors, and sponsors to pay early, thus helping to alleviate or reduce growing bad debts at the University.

#### **6.1.7 Develop an Effective Marketing Mix of Direct Mail, Public Relations, Advertising and Personal Selling.**

Successful marketing depends on analysing the goals of programs and services, developing market niches designed to fulfil unmet needs and convincing people that they can fulfil these needs. To accomplish this task, a balance must be struck between direct mail, public relations, advertising and personal selling. From the findings, it is evident that with the self-fund courses, this balance is seriously lacking, since the majority of students found out about these courses by word of mouth and personal searches. The coordinators/directors of these programmes should therefore consider increasing their advertising budgets in order to reach a bigger target market. Especially the PGD in Finance, Banking and Investment, where student numbers are declining (refer to Chapter 5, 5.2), the co-ordinator needs to look at alternative ways by making use of more effective marketing strategies in order to increase student numbers.

#### **6.1.8 Obtain Professional Assistance with Graphic Designs.**

Most people look at an advertising piece two or three seconds before deciding either to read it or discard it. The reader's attention is attracted by the content of the

message and the appearance of the piece. In this regard the University of Natal has employed an advertising agency to assist with its advertising in general and has even won awards for some of its graphical designs (adverts in the Appendix 2).

#### **6.1.9 Track Results**

The most elaborate marketing plans and expensive advertising pieces are not effective if they do not produce the number of registrants required to break-even with respect to the programs financial goals. Therefore, the University must ensure that it develops methods to track the results of every marketing project. The University of Natal in general can achieve this by: -

- 1) Tracking all mailing lists to determine which list drew the most responses.
- 2) Lists resulting in telephone and in-person registrations must also be identified.
- 3) Design registration forms so that the mailing label, with the appropriate code, is returned with the registration, even if the respondent mails a copy of the registration form.
- 4) Registration staff must be trained to make the appropriate inquiries during telephonic registration enquiries, for example, is the caller responding to a direct-mail brochure or to a newspaper advert?
- 5) All this data must be recorded in a uniform fashion so they can be easily analysed and used to make recommendations on future marketing projects.

#### **6.1.10 Continuously Analyse the Common Marketing Mistakes so They can be Avoided.**

The University needs to establish a system that detects problems in their early stages. In this way, the University can ensure that the necessary corrective action can be taken before the organization/program suffers any negative consequences for example; the University can reward staff who detects the early warning signs of trouble with a particular programme, and by clearly communicating to staff that their involvement in all marketing activities is a high priority.

## **6.2 Challenges Facing the University of Natal**

### **6.2.1. The Pending Merger**

Tensions continue to simmer between the University of Natal and Durban Westville in the run up to the merger in January 2004. In addition to other contentious issues, the latest disagreement is on the name for the new institution.

<http://www.sundaytimes.co.za/2003/06/15/news>).

The University of Natal has invested substantial resources in building a credible and reputable brand name, which is not only recognised locally, but has earned the respect and recognition of the international arena. Should the name of the new institution not feature “University of Natal” anywhere, this will no doubt create serious brand imaging problems for the University. The University of Natal will have to implement very radical marketing campaigns in order to preserve the reputation of its brand name.

Whilst the pending merger, according to the minister of education, is meant to “foster growth and rejuvenation of higher education”, it has also caused dissatisfaction for many students and staff. The students fear that the standards will be lowered in the process of restructuring and that their degrees will not be of the highest quality (<http://www.sundaytimes.co.za>). This means that the University of Natal will have to embark on aggressive marketing strategies to convince students they will still continue to strive to offer academic excellence and services of the highest quality.

Since staff are the key factors in marketing for the University, the pending merger has left the majority of the staff feeling threaten from fear of losing their jobs, unmotivated and despondent. This makes it very difficult for staff when faced with these problems to think about marketing.

### **6.2.2 Growing Competition**

Competition amongst educational institutions is intensifying, as student numbers decline, government subsidies are curtailed and more private institutions continue to mushroom. University of Natal is in competition with 20 other universities in the country, not to mention the number of technikons and other private institutions operating. Thus competition is fierce and complex among these educational institutions and the University of Natal needs to capitalise on its competitive advantage.

Michael Porter (1979) suggests three generic competitive strategies: overall cost leadership; differentiation and market focus, to ensure sustainable competitive advantage (Fitzsimmons & Fitzsimmons, 1994: 46)

It is recommended that the University of Natal focus on differentiation and market focus as strategies necessary to deal with its competition.

The essence of differentiation strategy lies in creating a service that is perceived as being unique (Fitzsimmons & Fitzsimmons, 1994: 47). Kotler and Fox (1995:237) confirm that it is a process of designing a set of meaningful differences to distinguish the University's offer from other competing institutions. The location, quality, nature of the curriculum, performance quality, achievements of graduates, program requirements, prices charged, caring manner of staff and faculty are some of the ways that the self-funded courses offered by the University can be differentiated. As verified by the findings, many of these factors are considered favourable by the students, indicating that these factors must be used further to drive the University into the forefront of the educational environment.

The University of Natal has many distinctive competencies such as its intellectual capital, its facilities, and its reputation, its brand name and all these resources and abilities are its strengths, which will give the University a differential advantage over its competitors.

University of Natal's strength pertaining to self-funded courses as identified by the findings, such as quality of programmes offered, quality of services provided, convenience of evening lectures, helpfulness of staff, and accessibility of courses must be capitalised upon.

### **6.2.3 The Registration Process**

The findings confirm that almost a third of the sample found the registration process at the University for Self-funded Courses in the School of Business to be inefficient and 23.7% classified the registration process to be poor. This is of concern to the University and also implies that the University's marketing strategy in terms of its process needs to be reviewed.

It is therefore recommended that the University consider a “one stop registration process” for students registering for these courses, since many of the students are engaged in full-time employment, making it difficult for them to keep coming to the University to complete their registration. What is suggested is that a weekend be set aside or weekday evening be targeted to accommodate the students. In addition, all key participants, which include a representative from each stage in the registration process, are made available in one building, set out in a logical and systematic order to facilitate the whole process. This will alleviate frustration that many students experience as a result of going from building to building trying to complete their registration and often arriving when departments are closed.

In addition, it is also recommended that self-funded students be given the opportunity of orientation, so as to familiarise themselves with the campus, staff and departments. In the spirit of embracing technology, it is suggested that the University, in an attempt to out-run their competitors and continue to be seen as a market leader, should consider implementing on-line registration. This will help to reduce the long queues at registration and curtail some of the tedious paperwork. Linked to the registration process, is a need for the University to consider establishing a “call centre” – a central place that students could go to or phone in, with any query and be assessed immediately in addressing their problem and not the present situation, where student go from pillar to post and be transferred to a number of staff before someone eventually helps them. Staff at this call centre will be trained and equipped to handle and resolve every possible query and problem.

#### **6.2.4 Formal Partnerships**

It can be suggested that the University consider entering into formal partnerships with key companies in industry in an attempt to further market their self-funded courses. This could include allowing for example MBA students as part of an assignment, to research a company experiencing a problem. This will entail analysing the company, identifying the source of the problem and making recommendation to resolve it. A partnership like this will be beneficial to all parties. Students will get exposure to hands-on training; the company gets its problem resolved at no cost and the University benefits, since these companies will undertake to market these self-funded courses to their staff on behalf of the University.

### **6.3 Avenues for Further Research**

- 1) A similar study can be conducted on the University as a whole, surveying all key stakeholders.
- 2) A study evaluating the marketing practices of self-funded courses at the Durban campus could also be undertaken and comparison made to see how they differ.

### **6.4 Conclusion**

Educational institutions that understand their markets, analyse their competition, and engage in strategic planning, can usually maintain their customer strengths and build on them better than institutions that do not (Kotler & Fox, 1995:177)

The University of Natal is recognised as a market leader in the educational environment as a result of its academic excellence and its reputation. The findings of this research paper further confirm that students registered for self-funded courses at the University gave an overall positive feedback regarding the University's marketing strategies. The majority of students rated the departments at least good, with an insignificant amount rating a few factors as poor to fair. Some interesting significant differences were found in the comparisons of the demographic categories.

Whilst, it can be established that the current marketing practices at the university is acceptable to students registered for self-funded courses, the adoption of the recommendation above will certainly equip the University with a stronger foothold in the present market, allowing it to counteract many threats that it is exposed to as a result of both economic and technological developments. The University of Natal cannot afford to become complacent. The competition and rivalry at present is intensifying and only the best will survive. The key to success lies in providing student satisfaction, coupled with maximising the University's strengths and competencies.

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## Appendices

### APPENDIX 1

#### Questionnaire

Dissertation Topic: **An evaluation of the current marketing practices of the University of Natal – Pietermaritzburg (UNP) for self-funded teaching programmes in the School of Business.**

Aim: This questionnaire aims to survey the opinions of registered students on the marketing practices adopted by the University of Natal – Pietermaritzburg (UNP) for self-funded teaching programmes in the School of Business.

#### Section A – Marketing Practices

1. How did you find out about the programme that you are currently studying?  
(Please tick the appropriate boxes)

☐ Poster

☐ Newspaper

☐ Radio

☐ Internet

☐ Open Day

☐ Word of Mouth

☐ Personal Search

☐ Other – specify \_\_\_\_\_

2. From the 14 factors listed below, what are the top three factors you considered when selecting a university. Kindly rate as follows: -

1 = most important

2 = second most important

3 = third most important

	RATING
a) Quality of programmes offered.	_____
b) Course Fees	_____
c) Timing of these programmes	_____
d) Location of these programmes.	_____
e) Physical environment – cleanliness and visual appearance.	_____
f) Advertising of educational programmes.	_____
g) Personal selling of programmes.	_____
h) Public relations at the university.	_____
i) Publicity	_____
j) Providing a quality service.	_____
k) Helpfulness of staff.	_____
l) Attitude of staff.	_____
m) Processes (e.g. registration process).	_____
n) Other factors (please specify)	_____

**3. Please tick the appropriate box for each of the following statements pertaining to UNP's marketing practices.**

a) UNP offers quality programmes.

☐ strongly agree    ☐ agree    ☐ neutral    ☐ disagree    ☐ strongly disagree

b) Course fees at UNP are acceptable.

☐ strongly agree    ☐ agree    ☐ neutral    ☐ disagree    ☐ strongly disagree

c) Self-funded programmes at UNP are being offered in the evenings which make it convenient.

☐ strongly agree    ☐ agree    ☐ neutral    ☐ disagree    ☐ strongly disagree

d) Self-funded programmes at UNP are easily accessible i.e location.

☐ strongly agree    ☐ agree    ☐ neutral    ☐ disagree    ☐ strongly disagree

e) The physical environment of UNP is attractive.

☐ strongly agree    ☐ agree    ☐ neutral    ☐ disagree    ☐ strongly disagree

f) Advertising of programmes by UNP is informative.

☐ strongly agree    ☐ agree    ☐ neutral    ☐ disagree    ☐ strongly disagree

g) Open Day at UNP is persuasive.

☐ strongly agree    ☐ agree    ☐ neutral    ☐ disagree    ☐ strongly disagree

h) Public relations at UNP is credible.

☐ strongly agree    ☐ agree    ☐ neutral    ☐ disagree    ☐ strongly disagree

i) UNP lecturers provide a quality service to its students.

☐ strongly agree    ☐ agree    ☐ neutral    ☐ disagree    ☐ strongly disagree

j) Staff at UNP are helpful.

☐ strongly agree    ☐ agree    ☐ neutral    ☐ disagree    ☐ strongly disagree

k) The attitude of UNP staff is positive.

☐ strongly agree    ☐ agree    ☐ neutral    ☐ disagree    ☐ strongly disagree

l) The registration process at UNP is efficient.

☐ strongly agree    ☐ agree    ☐ neutral    ☐ disagree    ☐ strongly disagree

**4. Please rate UNP on the basis of the factors listed below by placing a tick in the appropriate box.**

a) Quality of programmes at UNP.

poor	fair	good	very good	excellent	don't know
------	------	------	-----------	-----------	------------

b) Course fees at UNP.

poor	fair	good	very good	excellent	don't know
------	------	------	-----------	-----------	------------

c) Convenience of programmes e.g. evening lectures.

poor	fair	good	very good	excellent	don't know
------	------	------	-----------	-----------	------------

d) Accessibility of programmes i.e location.

poor	fair	good	very good	excellent	don't know
------	------	------	-----------	-----------	------------

e) The physical environment of UNP.

poor	fair	good	very good	excellent	don't know
------	------	------	-----------	-----------	------------

f) Advertising of programmes by UNP.

poor	fair	good	very good	excellent	don't know
------	------	------	-----------	-----------	------------

g) Open Day at UNP.

poor	fair	good	very good	excellent	don't know
------	------	------	-----------	-----------	------------

h) Public relations at UNP.

poor	fair	good	very good	excellent	don't know
------	------	------	-----------	-----------	------------

i) Publicity at UNP.

poor	fair	good	very good	excellent	don't know
------	------	------	-----------	-----------	------------

j) Quality of lectures at UNP.

poor	fair	good	very good	excellent	don't know
------	------	------	-----------	-----------	------------

k) Helpfulness of support staff at UNP.

poor	fair	good	very good	excellent	don't know
------	------	------	-----------	-----------	------------

l) Attitude of programme staff at UNP.

poor	fair	good	very good	excellent	don't know
------	------	------	-----------	-----------	------------

m) The registration process at UNP.

poor	fair	good	very good	excellent	don't know
------	------	------	-----------	-----------	------------

5. Please rate the level of service in each of the following departments at UNP, by placing a tick in the appropriate box.

**1. FINANCE DIVISION**

- a) Reliability – the ability to perform the promised service dependably and accurately.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- b) Responsiveness – the willingness to help students and to provide prompt service.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- c) Assurance – the knowledge and courtesy of staff and their ability to convey trust and confidence

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- d) Empathy – caring, individualised attention given to students.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- e) Tangibles – appearance of physical facilities, equipment, personnel and communication materials.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

**2. SUPPORT STAFF (Secretaries and Administration Staff)**

- a) Reliability – the ability to perform the promised service dependably and accurately.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- b) Responsiveness – the willingness to help students and to provide prompt service.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- c) Assurance – the knowledge and courtesy of staff and their ability to convey trust and confidence

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- d) Empathy – caring, individualised attention given to students.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- e) Tangibles – appearance of physical facilities, equipment, personnel and communication materials.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

### 3. STUDENT ADMISSIONS (Applications)

- a) Reliability – the ability to perform the promised service dependably and accurately.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- b) Responsiveness – the willingness to help students and to provide prompt service.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- c) Assurance – the knowledge and courtesy of staff and their ability to convey trust and confidence

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- d) Empathy – caring, individualised attention given to students.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- e) Tangibles – appearance of physical facilities, equipment, personnel and communication materials.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

### 4. LIBRARY

- a) Reliability – the ability to perform the promised service dependably and accurately.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- b) Responsiveness – the willingness to help students and to provide prompt service.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- c) Assurance – the knowledge and courtesy of staff and their ability to convey trust and confidence

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- d) Empathy – caring, individualised attention given to students.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

- e) Tangibles – appearance of physical facilities, equipment, personnel and communication materials.

☐ poor ☐ fair ☐ good ☐ very good ☐ excellent ☐ don't know

...../Section B

**Section B – Demographics**  
(Please tick the appropriate box)

1. What is your age? ☐ 18-20 ☐ 21-30 ☐ 31-40 ☐ >40

2. Year of study? ☐ first ☐ second ☐ third ☐ post grad. dip. ☐ masters

3. What is your field of study? ☐ BBA ☐ BMC ☐ PGD FBI ☐ PGD BM ☐ MBA

4. What is your gender? ☐ Male ☐ Female

o) Which race-group do you belong to?  
☐ Black ☐ White ☐ Indian ☐ Coloured ☐ Other

7. What is your nationality? ☐ South African ☐ Foreigner

8. Other comments  

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Thank you for your time and co-operation.



## **APPENDIX 2**



**Giving you the edge.**

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**Take control of your future.**

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**APPENDIX 3**

Frequencies

Statistics

		Q3A	Q3B	Q3C	Q3D	Q3E	Q3F
N	Valid	193	193	193	193	193	193
	Missing	1	1	1	1	1	1
Mean		1.70	2.91	2.05	2.07	1.99	2.49
Median		2.00	3.00	2.00	2.00	2.00	2.00
Mode		2	2	2	2	2	2
Std. Deviation		.640	1.052	.999	.787	.878	.817
Percentiles	25	1.00	2.00	1.00	2.00	1.00	2.00
	50	2.00	3.00	2.00	2.00	2.00	2.00
	75	2.00	4.00	3.00	2.00	2.00	3.00

Statistics

		Q3G	Q3H	Q3I	Q3J	Q3K	Q3L
N	Valid	193	193	193	193	193	193
	Missing	1	1	1	1	1	1
Mean		2.62	2.65	1.92	2.26	2.44	2.71
Median		3.00	3.00	2.00	2.00	2.00	3.00
Mode		3	3	2	2	2	2
Std. Deviation		.808	.835	.797	1.059	.994	1.245
Percentiles	25	2.00	2.00	1.00	2.00	2.00	2.00
	50	3.00	3.00	2.00	2.00	2.00	3.00
	75	3.00	3.00	2.00	3.00	3.00	4.00

Statistics

		Q4A	Q4B	Q4C	Q4D	Q4E	Q4F
N	Valid	192	193	193	193	193	193
	Missing	2	1	1	1	1	1
Mean		3.88	2.72	3.51	3.50	3.53	3.21
Median		4.00	2.00	4.00	3.00	3.00	3.00
Mode		5	2	3	3	3	3
Std. Deviation		1.029	1.282	1.255	1.006	1.104	1.275
Percentiles	25	3.00	2.00	3.00	3.00	3.00	2.00
	50	4.00	2.00	4.00	3.00	3.00	3.00
	75	5.00	3.00	5.00	4.00	4.00	4.00

Statistics

		Q4G	Q4H	Q4I	Q4J	Q4K
N	Valid	193	193	193	193	193
	Missing	1	1	1	1	1
Mean		3.95	3.25	3.33	3.74	3.30
Median		3.00	3.00	3.00	4.00	3.00
Mode		6	3	3	4	3
Std. Deviation		2.654	1.418	1.292	1.023	1.267
Percentiles	25	2.00	2.00	2.00	3.00	2.00
	50	3.00	3.00	3.00	4.00	3.00
	75	6.00	4.00	4.00	5.00	4.00

### Statistics

		Q4L	Q4M
N	Valid	193	193
	Missing	1	1
Mean		3.25	2.67
Median		3.00	3.00
Mode		3	3
Std. Deviation		1.196	1.305
Percentiles	25	2.00	2.00
	50	3.00	3.00
	75	4.00	4.00

### Frequency Table

#### Q3A

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	75	38.7	38.9	38.9
	2	103	53.1	53.4	92.2
	3	13	6.7	6.7	99.0
	4	2	1.0	1.0	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

#### Q3B

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	9	4.6	4.7	4.7
	2	72	37.1	37.3	42.0
	3	56	28.9	29.0	71.0
	4	41	21.1	21.2	92.2
	5	14	7.2	7.3	99.5
	6	1	.5	.5	100.0
Total		193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

#### Q3C

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	64	33.0	33.2	33.2
	2	77	39.7	39.9	73.1
	3	34	17.5	17.6	90.7
	4	15	7.7	7.8	98.4
	5	2	1.0	1.0	99.5
	6	1	.5	.5	100.0
Total		193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

Q3D

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	41	21.1	21.2	21.2
	2	107	55.2	55.4	76.7
	3	37	19.1	19.2	95.9
	4	6	3.1	3.1	99.0
	5	2	1.0	1.0	100.0
Total		193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

Q3E

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	62	32.0	32.1	32.1
	2	84	43.3	43.5	75.6
	3	34	17.5	17.6	93.3
	4	13	6.7	6.7	100.0
Total		193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

Q3F

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	18	9.3	9.3	9.3
	2	83	42.8	43.0	52.3
	3	74	38.1	38.3	90.7
	4	16	8.2	8.3	99.0
	5	2	1.0	1.0	100.0
Total		193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

Q3G

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	20	10.3	10.4	10.4
	2	51	26.3	26.4	36.8
	3	106	54.6	54.9	91.7
	4	14	7.2	7.3	99.0
	5	2	1.0	1.0	100.0
Total		193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

Q3H

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	13	6.7	6.7	6.7
	2	69	35.6	35.8	42.5
	3	87	44.8	45.1	87.6
	4	20	10.3	10.4	97.9
	5	4	2.1	2.1	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

Q3I

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	58	29.9	30.1	30.1
	2	101	52.1	52.3	82.4
	3	27	13.9	14.0	96.4
	4	5	2.6	2.6	99.0
	5	2	1.0	1.0	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

Q3J

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	41	21.1	21.2	21.2
	2	95	49.0	49.2	70.5
	3	34	17.5	17.6	88.1
	4	12	6.2	6.2	94.3
	5	10	5.2	5.2	99.5
	6	1	.5	.5	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

Q3K

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	26	13.4	13.5	13.5
	2	90	46.4	46.6	60.1
	3	53	27.3	27.5	87.6
	4	15	7.7	7.8	95.3
	5	8	4.1	4.1	99.5
	6	1	.5	.5	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

Q3L

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	33	17.0	17.1	17.1
	2	63	32.5	32.6	49.7
	3	46	23.7	23.8	73.6
	4	30	15.5	15.5	89.1
	5	20	10.3	10.4	99.5
	6	1	.5	.5	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

Q4A

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.5	.5	.5
	2	17	8.8	8.9	9.4
	3	53	27.3	27.6	37.0
	4	58	29.9	30.2	67.2
	5	59	30.4	30.7	97.9
	6	4	2.1	2.1	100.0
	Total	192	99.0	100.0	
Missing	System	2	1.0		
Total		194	100.0		

Q4B

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	19	9.8	9.8	9.8
	2	89	45.9	46.1	56.0
	3	47	24.2	24.4	80.3
	4	17	8.8	8.8	89.1
	5	8	4.1	4.1	93.3
	6	13	6.7	6.7	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

Q4C

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	15	7.7	7.8	7.8
	2	24	12.4	12.4	20.2
	3	57	29.4	29.5	49.7
	4	45	23.2	23.3	73.1
	5	49	25.3	25.4	98.4
	6	3	1.5	1.6	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		



**Q4D**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.5	.5	.5
	2	27	13.9	14.0	14.5
	3	79	40.7	40.9	55.4
	4	49	25.3	25.4	80.8
	5	34	17.5	17.6	98.4
	6	3	1.5	1.6	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

**Q4E**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	2.1	2.1	2.1
	2	31	16.0	16.1	18.1
	3	64	33.0	33.2	51.3
	4	50	25.8	25.9	77.2
	5	41	21.1	21.2	98.4
	6	3	1.5	1.6	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

**Q4F**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	13	6.7	6.7	6.7
	2	41	21.1	21.2	28.0
	3	75	38.7	38.9	66.8
	4	36	18.6	18.7	85.5
	5	12	6.2	6.2	91.7
	6	16	8.2	8.3	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

**Q4G**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	2.6	2.6	2.6
	2	49	25.3	25.4	28.0
	3	47	24.2	24.4	52.3
	4	20	10.3	10.4	62.7
	5	20	10.3	10.4	73.1
	6	51	26.3	26.4	99.5
	33	1	.5	.5	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

**Q4H**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	14	7.2	7.3	7.3
	2	46	23.7	23.8	31.1
	3	73	37.6	37.8	68.9
	4	23	11.9	11.9	80.8
	5	12	6.2	6.2	87.0
	6	25	12.9	13.0	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

**Q4I**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	6	3.1	3.1	3.1
	2	49	25.3	25.4	28.5
	3	67	34.5	34.7	63.2
	4	37	19.1	19.2	82.4
	5	15	7.7	7.8	90.2
	6	19	9.8	9.8	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

**Q4J**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.5	.5	.5
	2	23	11.9	11.9	12.4
	3	56	28.9	29.0	41.5
	4	59	30.4	30.6	72.0
	5	53	27.3	27.5	99.5
	6	1	.5	.5	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

**Q4K**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	17	8.8	8.8	8.8
	2	36	18.6	18.7	27.5
	3	55	28.4	28.5	56.0
	4	48	24.7	24.9	80.8
	5	32	16.5	16.6	97.4
	6	5	2.6	2.6	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

Q4L

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	16	8.2	8.3	8.3
	2	34	17.5	17.6	25.9
	3	61	31.4	31.6	57.5
	4	53	27.3	27.5	85.0
	5	25	12.9	13.0	97.9
	6	4	2.1	2.1	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

Q4M

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	46	23.7	23.8	23.8
	2	45	23.2	23.3	47.2
	3	50	25.8	25.9	73.1
	4	33	17.0	17.1	90.2
	5	17	8.8	8.8	99.0
	6	2	1.0	1.0	100.0
	Total	193	99.5	100.0	
Missing	System	1	.5		
Total		194	100.0		

**APPENDIX 4**

NPar Tests

Kruskal-Wallis Test

Ranks

	RACE	N	Mean Rank
Q2A	1	106	80.88
	2	29	104.91
	3	32	91.56
	4	5	66.50
	Total	172	
Q2B	1	76	55.28
	2	12	67.17
	3	22	57.77
	4	3	54.33
	Total	113	
Q2C	1	55	51.65
	2	11	63.55
	3	28	37.63
	4	4	64.38
	Total	98	
Q2D	1	59	48.90
	2	15	44.47
	3	22	52.23
	4	3	83.00
	Total	99	
Q2E	1	50	37.01
	2	6	59.50
	3	17	31.21
	4	2	56.00
	Total	75	
Q2F	1	44	31.18
	2	3	46.33
	3	16	33.00
	4	2	53.00
	Total	65	
Q2G	1	43	28.85
	2	2	53.00
	3	16	37.38
	4	1	8.50
	Total	62	
Q2H	1	47	29.47
	2	1	58.00
	3	16	41.44
	4	1	39.00
	Total	65	
Q2I	1	46	34.37
	2	3	43.17
	3	16	32.44
	4	2	24.25
	Total	67	
Q2J	1	67	52.15
	2	11	66.32
	3	23	46.33
	4	3	57.00
	Total	104	

**Ranks**

	RACE	N	Mean Rank
Q2K	1	52	37.15
	2	1	22.50
	3	17	34.06
	4	1	22.50
	Total	71	
Q2L	1	46	33.99
	2	4	43.00
	3	16	30.94
	4	2	57.75
	Total	68	
Q2M	1	41	32.91
	2	1	16.50
	3	17	26.32
	4	1	16.50
	Total	60	
Q3A	1	116	91.70
	2	31	108.65
	3	36	92.25
	4	6	104.83
	Total	189	
Q3B	1	116	100.09
	2	31	72.34
	3	36	96.03
	4	6	107.50
	Total	189	
Q3C	1	116	106.53
	2	31	73.68
	3	36	76.06
	4	6	96.00
	Total	189	
Q3D	1	116	105.87
	2	31	81.29
	3	36	72.24
	4	6	92.25
	Total	189	
Q3E	1	116	83.95
	2	31	109.10
	3	36	116.79
	4	6	105.00
	Total	189	
Q3F	1	116	91.17
	2	31	117.87
	3	36	93.74
	4	6	58.50
	Total	189	
Q3G	1	116	87.71
	2	31	115.37
	3	36	106.03
	4	6	64.50
	Total	189	
Q3H	1	116	91.41
	2	31	101.84
	3	36	98.51
	4	6	108.00
	Total	189	

## Ranks

	RACE	N	Mean Rank
Q3I	1	116	94.78
	2	31	93.10
	3	36	104.03
	4	6	54.83
	Total	189	
Q3J	1	116	89.06
	2	31	99.15
	3	36	107.56
	4	6	113.00
	Total	189	
Q3K	1	116	92.19
	2	31	95.10
	3	36	102.46
	4	6	104.00
	Total	189	
Q3L	1	116	84.51
	2	31	103.48
	3	36	118.35
	4	6	113.83
	Total	189	
Q4A	1	115	95.85
	2	31	100.32
	3	36	82.90
	4	6	108.17
	Total	188	
Q4B	1	116	94.97
	2	31	113.29
	3	36	80.57
	4	6	87.75
	Total	189	
Q4C	1	116	87.80
	2	31	114.90
	3	36	98.33
	4	6	111.42
	Total	189	
Q4D	1	116	90.06
	2	31	115.13
	3	36	90.81
	4	6	111.75
	Total	189	
Q4E	1	116	102.40
	2	31	92.21
	3	36	69.36
	4	6	120.17
	Total	189	
Q4F	1	116	102.08
	2	31	92.55
	3	36	74.08
	4	6	96.25
	Total	189	
Q4G	1	116	92.58
	2	31	115.73
	3	36	80.89
	4	6	119.33
	Total	189	

# Ranks

	RACE	N	Mean Rank
Q4H	1	116	101.07
	2	31	93.58
	3	36	72.96
	4	6	117.25
	Total	189	
Q4I	1	116	102.92
	2	31	86.11
	3	36	75.92
	4	6	102.25
	Total	189	
Q4J	1	116	95.91
	2	31	105.55
	3	36	79.35
	4	6	116.83
	Total	189	
Q4K	1	116	101.40
	2	31	96.61
	3	36	75.26
	4	6	81.33
	Total	189	
Q4L	1	116	98.69
	2	31	107.63
	3	36	76.46
	4	6	69.58
	Total	189	
Q4M	1	116	104.65
	2	31	91.23
	3	36	71.50
	4	6	69.00
	Total	189	
Q5A	1	116	97.35
	2	31	98.50
	3	36	82.08
	4	6	109.00
	Total	189	
Q5B	1	116	99.07
	2	31	94.82
	3	36	85.64
	4	6	73.33
	Total	189	
Q5C	1	116	100.42
	2	31	94.23
	3	36	82.11
	4	6	71.50
	Total	189	
Q5D	1	116	101.12
	2	31	90.98
	3	36	80.82
	4	6	82.50
	Total	189	
Q5E	1	116	100.30
	2	31	83.98
	3	36	81.17
	4	6	132.42
	Total	189	



## Ranks

	RACE	N	Mean Rank
Q52A	1	115	99.74
	2	30	96.77
	3	36	77.85
	4	6	67.08
	Total	187	
Q52B	1	115	101.10
	2	31	103.29
	3	36	71.00
	4	6	63.67
	Total	188	
Q52C	1	115	102.54
	2	31	98.84
	3	36	71.64
	4	6	55.17
	Total	188	
Q52D	1	115	98.40
	2	31	107.34
	3	36	73.94
	4	6	76.75
	Total	188	
Q52E	1	115	98.95
	2	31	93.08
	3	36	75.96
	4	6	127.83
	Total	188	
Q53A	1	115	104.33
	2	31	84.98
	3	36	75.31
	4	6	70.42
	Total	188	
Q53B	1	115	106.98
	2	31	82.06
	3	36	71.36
	4	6	58.42
	Total	188	
Q53C	1	115	103.42
	2	31	84.16
	3	36	79.51
	4	6	66.92
	Total	188	
Q53D	1	115	103.06
	2	31	88.42
	3	36	76.83
	4	6	67.92
	Total	188	
Q53E	1	115	102.20
	2	31	85.42
	3	36	74.07
	4	6	116.42
	Total	188	
Q54A	1	115	93.63
	2	31	118.73
	3	36	73.61
	4	6	111.33
	Total	188	

**Ranks**

	RACE	N	Mean Rank
Q54B	1	115	93.90
	2	31	119.90
	3	36	73.92
	4	6	98.17
	Total	188	
Q54C	1	115	93.57
	2	31	118.19
	3	36	78.31
	4	6	87.00
	Total	188	
Q54D	1	115	93.73
	2	31	118.02
	3	36	75.07
	4	6	104.33
	Total	188	
Q54E	1	115	90.41
	2	31	116.76
	3	36	88.32
	4	6	95.00
	Total	188	

**Test Statistics<sup>a,b</sup>**

	Q2A	Q2B	Q2C	Q2D	Q2E	Q2F	Q2G
Chi-Square	11.853	1.579	10.303	5.388	10.316	4.732	8.134
df	3	3	3	3	3	3	3
Asymp. Sig.	.008	.664	.016	.146	.016	.192	.043

**Test Statistics<sup>a,b</sup>**

	Q2H	Q2I	Q2J	Q2K	Q2L	Q2M	Q3A
Chi-Square	7.655	1.447	4.089	1.561	5.539	3.723	3.358
df	3	3	3	3	3	3	3
Asymp. Sig.	.054	.694	.252	.668	.136	.293	.340

**Test Statistics<sup>a,b</sup>**

	Q3B	Q3C	Q3D	Q3E	Q3F	Q3G	Q3H
Chi-Square	7.267	15.900	15.815	14.431	10.071	12.022	1.708
df	3	3	3	3	3	3	3
Asymp. Sig.	.064	.001	.001	.002	.018	.007	.635

**Test Statistics<sup>a,b</sup>**

	Q3I	Q3J	Q3K	Q3L	Q4A	Q4B	Q4C
Chi-Square	5.124	4.724	1.296	13.016	2.645	6.878	7.206
df	3	3	3	3	3	3	3
Asymp. Sig.	.163	.193	.730	.005	.450	.076	.066

**Test Statistics<sup>a,b</sup>**

	Q4D	Q4E	Q4F	Q4G	Q4H	Q4I	Q4J
Chi-Square	6.520	12.199	7.846	8.702	8.928	8.288	5.499
df	3	3	3	3	3	3	3
Asymp. Sig.	.089	.007	.049	.034	.030	.040	.139

**Test Statistics<sup>a,b</sup>**

	Q4K	Q4L	Q4M	Q5A	Q5B	Q5C	Q5D
Chi-Square	7.023	8.096	12.373	2.959	2.798	4.560	4.618
df	3	3	3	3	3	3	3
Asymp. Sig.	.071	.044	.006	.398	.424	.207	.202

**Test Statistics<sup>a,b</sup>**

	Q5E	Q52A	Q52B	Q52C	Q52D	Q52E	Q53A
Chi-Square	8.032	6.573	11.834	13.085	8.529	7.785	11.192
df	3	3	3	3	3	3	3
Asymp. Sig.	.045	.087	.008	.004	.036	.051	.011

**Test Statistics<sup>a,b</sup>**

	Q53B	Q53C	Q53D	Q53E	Q54A	Q54B	Q54C
Chi-Square	18.102	9.135	8.982	9.953	13.084	12.809	9.825
df	3	3	3	3	3	3	3
Asymp. Sig.	.000	.028	.030	.019	.004	.005	.020

**Test Statistics<sup>a,b</sup>**

	Q54D	Q54E
Chi-Square	11.227	6.718
df	3	3
Asymp. Sig.	.011	.081

a. Kruskal Wallis Test

b. Grouping Variable: RACE

## NPar Tests

### Mann-Whitney Test

**Ranks**

	AGE	N	Mean Rank	Sum of Ranks
Q2F	1	3	24.00	72.00
	2	39	21.31	831.00
	Total	42		

Test Statistics<sup>b</sup>

	Q2F
Mann-Whitney U	51.000
Wilcoxon W	831.000
Z	-.393
Asymp. Sig. (2-tailed)	.694
Exact Sig. [2*(1-tailed Sig.)]	.747 <sup>a</sup>

- a. Not corrected for ties.
- b. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q2F	1	3	16.50	49.50
	3	20	11.33	226.50
	Total	23		

Test Statistics<sup>b</sup>

	Q2F
Mann-Whitney U	16.500
Wilcoxon W	226.500
Z	-1.413
Asymp. Sig. (2-tailed)	.158
Exact Sig. [2*(1-tailed Sig.)]	.230 <sup>a</sup>

- a. Not corrected for ties.
- b. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q2F	1	3	4.17	12.50
	4	5	4.70	23.50
	Total	8		

Test Statistics<sup>b</sup>

	Q2F
Mann-Whitney U	6.500
Wilcoxon W	12.500
Z	-.394
Asymp. Sig. (2-tailed)	.693
Exact Sig. [2*(1-tailed Sig.)]	.786 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q2F	2	39	34.35	1339.50
	3	20	21.53	430.50
	Total	59		

Test Statistics<sup>a</sup>

	Q2F
Mann-Whitney U	220.500
Wilcoxon W	430.500
Z	-2.890
Asymp. Sig. (2-tailed)	.004

a. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q2F	2	39	21.74	848.00
	4	5	28.40	142.00
	Total	44		

Test Statistics<sup>b</sup>

	Q2F
Mann-Whitney U	68.000
Wilcoxon W	848.000
Z	-1.179
Asymp. Sig. (2-tailed)	.238
Exact Sig. [2*(1-tailed Sig.)]	.293 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q2F	3	20	11.48	229.50
	4	5	19.10	95.50
	Total	25		

Test Statistics<sup>b</sup>

	Q2F
Mann-Whitney U	19.500
Wilcoxon W	229.500
Z	-2.317
Asymp. Sig. (2-tailed)	.020
Exact Sig. [2*(1-tailed Sig.)]	.035 <sup>a</sup>

- a. Not corrected for ties.
- b. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q2J	1	10	54.35	543.50
	2	65	35.48	2306.50
	Total	75		

Test Statistics<sup>a</sup>

	Q2J
Mann-Whitney U	161.500
Wilcoxon W	2306.500
Z	-2.789
Asymp. Sig. (2-tailed)	.005

- a. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q2J	1	10	25.20	252.00
	3	25	15.12	378.00
	Total	35		

Test Statistics<sup>b</sup>

	Q2J
Mann-Whitney U	53.000
Wilcoxon W	378.000
Z	-2.857
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.007 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q2J	1	10	9.55	95.50
	4	6	6.75	40.50
	Total	16		

Test Statistics<sup>b</sup>

	Q2J
Mann-Whitney U	19.500
Wilcoxon W	40.500
Z	-1.242
Asymp. Sig. (2-tailed)	.214
Exact Sig. [2*(1-tailed Sig.)]	.263 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q2J	2	65	35.38	2300.00
	4	6	42.67	256.00
	Total	71		

Test Statistics<sup>b</sup>

	Q2J
Mann-Whitney U	155.000
Wilcoxon W	2300.000
Z	-.922
Asymp. Sig. (2-tailed)	.357
Exact Sig. [2*(1-tailed Sig.)]	.424 <sup>a</sup>

- a. Not corrected for ties.
- b. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q2J	2	65	46.43	3018.00
	3	25	43.08	1077.00
	Total	90		

Test Statistics<sup>a</sup>

	Q2J
Mann-Whitney U	752.000
Wilcoxon W	1077.000
Z	-.620
Asymp. Sig. (2-tailed)	.536

- a. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q2J	2	65	35.38	2300.00
	4	6	42.67	256.00
	Total	71		

Test Statistics<sup>b</sup>

	Q2J
Mann-Whitney U	155.000
Wilcoxon W	2300.000
Z	-.922
Asymp. Sig. (2-tailed)	.357
Exact Sig. [2*(1-tailed Sig.)]	.424 <sup>a</sup>

- a. Not corrected for ties.
- b. Grouping Variable: AGE

NPar Tests



## Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q3C	1	21	81.45	1710.50
	2	118	67.96	8019.50
	Total	139		

Test Statistics<sup>a</sup>

	Q3C
Mann-Whitney U	998.500
Wilcoxon W	8019.500
Z	-1.483
Asymp. Sig. (2-tailed)	.138

a. Grouping Variable: AGE

## NPar Tests

### Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q3C	1	21	42.93	901.50
	3	43	27.41	1178.50
	Total	64		

Test Statistics<sup>a</sup>

	Q3C
Mann-Whitney U	232.500
Wilcoxon W	1178.500
Z	-3.354
Asymp. Sig. (2-tailed)	.001

a. Grouping Variable: AGE

## NPar Tests

### Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q3C	1	21	17.52	368.00
	4	9	10.78	97.00
	Total	30		

Test Statistics<sup>b</sup>

	Q3C
Mann-Whitney U	52.000
Wilcoxon W	97.000
Z	-2.006
Asymp. Sig. (2-tailed)	.045
Exact Sig. [2*(1-tailed Sig.)]	.056 <sup>a</sup>

a. Not corrected for ties.  
b. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q3C	2	118	87.64	10342.00
	3	43	62.77	2699.00
	Total	161		

Test Statistics<sup>a</sup>

	Q3C
Mann-Whitney U	1753.000
Wilcoxon W	2699.000
Z	-3.181
Asymp. Sig. (2-tailed)	.001

a. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q3C	2	118	65.19	7692.00
	4	9	48.44	436.00
	Total	127		

Test Statistics<sup>a</sup>

	Q3C
Mann-Whitney U	391.000
Wilcoxon W	436.000
Z	-1.387
Asymp. Sig. (2-tailed)	.166

a. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

**Ranks**

	AGE	N	Mean Rank	Sum of Ranks
Q3C	3	43	26.23	1128.00
	4	9	27.78	250.00
	Total	52		

**Test Statistics<sup>b</sup>**

	Q3C
Mann-Whitney U	182.000
Wilcoxon W	1128.000
Z	-.311
Asymp. Sig. (2-tailed)	.756
Exact Sig. [2*(1-tailed Sig.)]	.794 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: AGE

**NPar Tests**

**Mann-Whitney Test**

**Ranks**

	AGE	N	Mean Rank	Sum of Ranks
Q3D	1	21	78.17	1641.50
	2	118	68.55	8088.50
	Total	139		

**Test Statistics<sup>a</sup>**

	Q3D
Mann-Whitney U	1067.500
Wilcoxon W	8088.500
Z	-1.114
Asymp. Sig. (2-tailed)	.265

a. Grouping Variable: AGE

**NPar Tests**

**Mann-Whitney Test**

**Ranks**

	AGE	N	Mean Rank	Sum of Ranks
Q3D	1	21	37.43	786.00
	3	43	30.09	1294.00
	Total	64		

Test Statistics<sup>a</sup>

	Q3D
Mann-Whitney U	348.000
Wilcoxon W	1294.000
Z	-1.695
Asymp. Sig. (2-tailed)	.090

a. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q3D	1	21	18.24	383.00
	4	9	9.11	82.00
	Total	30		

Test Statistics<sup>b</sup>

	Q3D
Mann-Whitney U	37.000
Wilcoxon W	82.000
Z	-2.859
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.008 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q3D	2	118	82.69	9757.50
	3	43	76.36	3283.50
	Total	161		

Test Statistics<sup>a</sup>

	Q3D
Mann-Whitney U	2337.500
Wilcoxon W	3283.500
Z	-.850
Asymp. Sig. (2-tailed)	.395

a. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q3D	2	118	66.09	7799.00
	4	9	36.56	329.00
	Total	127		

Test Statistics<sup>a</sup>

	Q3D
Mann-Whitney U	284.000
Wilcoxon W	329.000
Z	-2.551
Asymp. Sig. (2-tailed)	.011

a. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q3D	3	43	28.38	1220.50
	4	9	17.50	157.50
	Total	52		

Test Statistics<sup>b</sup>

	Q3D
Mann-Whitney U	112.500
Wilcoxon W	157.500
Z	-2.237
Asymp. Sig. (2-tailed)	.025
Exact Sig. [2*(1-tailed Sig.)]	.049 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q4C	1	21	61.83	1298.50
	2	118	71.45	8431.50
	Total	139		

Test Statistics<sup>a</sup>

	Q4C
Mann-Whitney U	1067.500
Wilcoxon W	1298.500
Z	-1.039
Asymp. Sig. (2-tailed)	.299

a. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q4C	1	21	25.55	536.50
	3	43	35.90	1543.50
	Total	64		

Test Statistics<sup>a</sup>

	Q4C
Mann-Whitney U	305.500
Wilcoxon W	536.500
Z	-2.151
Asymp. Sig. (2-tailed)	.031

a. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q4C	1	21	13.90	292.00
	4	9	19.22	173.00
	Total	30		

Test Statistics<sup>b</sup>

	Q4C
Mann-Whitney U	61.000
Wilcoxon W	292.000
Z	-1.568
Asymp. Sig. (2-tailed)	.117
Exact Sig. [2*(1-tailed Sig.)]	.137 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

**Ranks**

	AGE	N	Mean Rank	Sum of Ranks
Q4C	2	118	76.28	9001.50
	3	43	93.94	4039.50
	Total	161		

**Test Statistics<sup>a</sup>**

	Q4C
Mann-Whitney U	1980.500
Wilcoxon W	9001.500
Z	-2.192
Asymp. Sig. (2-tailed)	.028

a. Grouping Variable: AGE

**NPar Tests**

**Mann-Whitney Test**

**Ranks**

	AGE	N	Mean Rank	Sum of Ranks
Q4C	2	118	62.79	7409.50
	4	9	79.83	718.50
	Total	127		

**Test Statistics<sup>a</sup>**

	Q4C
Mann-Whitney U	388.500
Wilcoxon W	7409.500
Z	-1.380
Asymp. Sig. (2-tailed)	.168

a. Grouping Variable: AGE

**NPar Tests**

**Mann-Whitney Test**

**Ranks**

	AGE	N	Mean Rank	Sum of Ranks
Q4C	3	43	26.22	1127.50
	4	9	27.83	250.50
	Total	52		

**Test Statistics<sup>b</sup>**

	Q4C
Mann-Whitney U	181.500
Wilcoxon W	1127.500
Z	-.302
Asymp. Sig. (2-tailed)	.762
Exact Sig. [2*(1-tailed Sig.)]	.775 <sup>a</sup>

- a. Not corrected for ties.
- b. Grouping Variable: AGE

**NPar Tests**

**Mann-Whitney Test**

**Ranks**

	AGE	N	Mean Rank	Sum of Ranks
Q4D	1	21	52.60	1104.50
	2	118	73.10	8625.50
	Total	139		

**Test Statistics<sup>a</sup>**

	Q4D
Mann-Whitney U	873.500
Wilcoxon W	1104.500
Z	-2.279
Asymp. Sig. (2-tailed)	.023

- a. Grouping Variable: AGE

**NPar Tests**

**Mann-Whitney Test**

**Ranks**

	AGE	N	Mean Rank	Sum of Ranks
Q4D	1	21	22.48	472.00
	3	43	37.40	1608.00
	Total	64		

**Test Statistics<sup>a</sup>**

	Q4D
Mann-Whitney U	241.000
Wilcoxon W	472.000
Z	-3.124
Asymp. Sig. (2-tailed)	.002

- a. Grouping Variable: AGE

**NPar Tests**

**Mann-Whitney Test**



Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q4D	1	21	13.93	292.50
	4	9	19.17	172.50
	Total	30		

Test Statistics<sup>b</sup>

	Q4D
Mann-Whitney U	61.500
Wilcoxon W	292.500
Z	-1.611
Asymp. Sig. (2-tailed)	.107
Exact Sig. [2*(1-tailed Sig.)]	.137 <sup>a</sup>

- a. Not corrected for ties.
- b. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q4D	2	118	76.37	9012.00
	3	43	93.70	4029.00
	Total	161		

Test Statistics<sup>a</sup>

	Q4D
Mann-Whitney U	1991.000
Wilcoxon W	9012.000
Z	-2.184
Asymp. Sig. (2-tailed)	.029

- a. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q4D	2	118	63.58	7503.00
	4	9	69.44	625.00
	Total	127		

Test Statistics<sup>a</sup>

	Q4D
Mann-Whitney U	482.000
Wilcoxon W	7503.000
Z	-.487
Asymp. Sig. (2-tailed)	.627

a. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	AGE	N	Mean Rank	Sum of Ranks
Q4D	3	43	26.93	1158.00
	4	9	24.44	220.00
	Total	52		

Test Statistics<sup>b</sup>

	Q4D
Mann-Whitney U	175.000
Wilcoxon W	220.000
Z	-.466
Asymp. Sig. (2-tailed)	.641
Exact Sig. [2*(1-tailed Sig.)]	.668 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: AGE

NPar Tests

Mann-Whitney Test

Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q3C	1	93	69.80	6491.00
	2	35	50.43	1765.00
	Total	128		

Test Statistics<sup>a</sup>

	Q3C
Mann-Whitney U	1135.000
Wilcoxon W	1765.000
Z	-2.758
Asymp. Sig. (2-tailed)	.006

a. Grouping Variable: YRSTUDY

NPar Tests

Mann-Whitney Test

**Ranks**

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q3C	1	93	53.98	5020.00
	3	12	45.42	545.00
	Total	105		

**Test Statistics<sup>a</sup>**

	Q3C
Mann-Whitney U	467.000
Wilcoxon W	545.000
Z	-.961
Asymp. Sig. (2-tailed)	.336

a. Grouping Variable: YRSTUDY

**NPar Tests**

**Mann-Whitney Test**

**Ranks**

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q3C	1	93	69.52	6465.00
	4	37	55.41	2050.00
	Total	130		

**Test Statistics<sup>a</sup>**

	Q3C
Mann-Whitney U	1347.000
Wilcoxon W	2050.000
Z	-2.043
Asymp. Sig. (2-tailed)	.041

a. Grouping Variable: YRSTUDY

**NPar Tests**

**Mann-Whitney Test**

**Ranks**

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q3C	1	93	55.25	5138.00
	5	13	41.00	533.00
	Total	106		

**Test Statistics<sup>a</sup>**

	Q3C
Mann-Whitney U	442.000
Wilcoxon W	533.000
Z	-1.655
Asymp. Sig. (2-tailed)	.098

a. Grouping Variable: YRSTUDY

NPar Tests

Mann-Whitney Test

Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q3C	2	35	23.21	812.50
	3	12	26.29	315.50
	Total	47		

Test Statistics<sup>a</sup>

	Q3C
Mann-Whitney U	182.500
Wilcoxon W	812.500
Z	-.729
Asymp. Sig. (2-tailed)	.466

a. Grouping Variable: YRSTUDY

NPar Tests

Mann-Whitney Test

Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q3C	2	35	34.01	1190.50
	4	37	38.85	1437.50
	Total	72		

Test Statistics<sup>a</sup>

	Q3C
Mann-Whitney U	560.500
Wilcoxon W	1190.500
Z	-1.055
Asymp. Sig. (2-tailed)	.292

a. Grouping Variable: YRSTUDY

NPar Tests

Mann-Whitney Test

Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q3C	2	35	23.80	833.00
	5	13	26.38	343.00
	Total	48		

Test Statistics<sup>a</sup>

	Q3C
Mann-Whitney U	203.000
Wilcoxon W	833.000
Z	-.616
Asymp. Sig. (2-tailed)	.538

a. Grouping Variable: YRSTUDY

## **APPENDIX 5**

NPar Tests

Mann-Whitney Test

Ranks

fieldstudy	N	Mean Rank	Sum of Ranks
Q3C 1	80	61.81	4944.50
Q3C 2	57	79.10	4508.50
Q3C Total	137		
Q5E 1	80	63.71	5097.00
Q5E 2	57	76.42	4356.00
Q5E Total	137		
Q52B 1	79	64.10	5064.00
Q52B 2	57	74.60	4252.00
Q52B Total	136		
Q52C 1	79	61.77	4880.00
Q52C 2	57	77.82	4436.00
Q52C Total	136		
Q53B 1	79	58.85	4649.00
Q53B 2	57	81.88	4667.00
Q53B Total	136		
Q54B 1	79	61.69	4873.50
Q54B 2	57	77.94	4442.50
Q54B Total	136		
Q54D 1	79	64.39	5086.50
Q54D 2	57	74.20	4229.50
Q54D Total	136		

Test Statistics<sup>a</sup>

	Q3C	Q5E	Q52B	Q52C	Q53B	Q54B	Q54D
Mann-Whitney U	1704.500	1857.000	1904.000	1720.000	1489.000	1713.500	1926.500
Wilcoxon W	4944.500	5097.000	5064.000	4880.000	4649.000	4873.500	5086.500
Z	-2.635	-1.914	-1.581	-2.430	-3.472	-2.454	-1.475
Asymp. Sig. (2-tailed)	.008	.056	.114	.015	.001	.014	.140

a. Grouping Variable: fieldstudy

NPar Tests

Mann-Whitney Test

Ranks

	fieldstudy	N	Mean Rank	Sum of Ranks
Q3C	1	80	46.99	3759.50
	3	14	50.39	705.50
	Total	94		
Q5E	1	80	48.09	3847.50
	3	14	44.11	617.50
	Total	94		
Q52B	1	79	47.50	3752.50
	3	14	44.18	618.50
	Total	93		
Q52C	1	79	47.04	3716.00
	3	14	46.79	655.00
	Total	93		
Q53B	1	79	47.61	3761.00
	3	14	43.57	610.00
	Total	93		
Q54B	1	79	46.12	3643.50
	3	14	51.96	727.50
	Total	93		
Q54D	1	79	45.92	3628.00
	3	14	53.07	743.00
	Total	93		

Test Statistics<sup>a</sup>

	Q3C	Q5E	Q52B	Q52C	Q53B	Q54B	Q54D
Mann-Whitney U	519.500	512.500	513.500	550.000	505.000	483.500	468.000
Wilcoxon W	3759.500	617.500	618.500	655.000	610.000	3643.500	3628.000
Z	-.456	-.521	-.437	-.033	-.536	-.775	-.941
Asymp. Sig. (2-tailed)	.649	.602	.662	.973	.592	.438	.347

a. Grouping Variable: fieldstudy

NPar Tests

Mann-Whitney Test



**Ranks**

fieldstudy	N	Mean Rank	Sum of Ranks
Q3C 1	80	47.54	3803.00
4	15	50.47	757.00
Total	95		
Q5E 1	80	48.99	3919.50
4	15	42.70	640.50
Total	95		
Q52B 1	79	45.28	3577.50
4	15	59.17	887.50
Total	94		
Q52C 1	79	46.44	3669.00
4	15	53.07	796.00
Total	94		
Q53B 1	79	47.09	3720.50
4	15	49.63	744.50
Total	94		
Q54B 1	79	46.61	3682.00
4	15	52.20	783.00
Total	94		
Q54D 1	79	47.24	3732.00
4	15	48.87	733.00
Total	94		

**Test Statistics<sup>a</sup>**

	Q3C	Q5E	Q52B	Q52C	Q53B	Q54B	Q54D
Mann-Whitney U	563.000	520.500	417.500	509.000	560.500	522.000	572.000
Wilcoxon W	3803.000	640.500	3577.500	3669.000	3720.500	3682.000	3732.000
Z	-.403	-.839	-1.860	-.894	-.345	-.761	-.218
Asymp. Sig. (2-tailed)	.687	.401	.063	.372	.730	.447	.827

a. Grouping Variable: fieldstudy

**NPar Tests**

**Mann-Whitney Test**

**Ranks**

	fieldstudy	N	Mean Rank	Sum of Ranks
Q3C	1	80	53.59	4287.50
	5	24	48.85	1172.50
	Total	104		
Q5E	1	80	54.86	4389.00
	5	24	44.63	1071.00
	Total	104		
Q52B	1	79	48.30	3815.50
	5	24	64.19	1540.50
	Total	103		
Q52C	1	79	48.18	3806.50
	5	24	64.56	1549.50
	Total	103		
Q53B	1	79	49.80	3934.50
	5	24	59.23	1421.50
	Total	103		
Q54B	1	79	47.87	3782.00
	5	24	65.58	1574.00
	Total	103		
Q54D	1	79	47.24	3732.00
	5	24	67.67	1624.00
	Total	103		

**Test Statistics<sup>a</sup>**

	Q3C	Q5E	Q52B	Q52C	Q53B	Q54B	Q54D
Mann-Whitney U	872.500	771.000	655.500	646.500	774.500	622.000	572.000
Wilcoxon W	1172.500	1071.000	3815.500	3806.500	3934.500	3782.000	3732.000
Z	-.725	-1.509	-2.346	-2.429	-1.416	-2.627	-3.014
Asymp. Sig. (2-tailed)	.468	.131	.019	.015	.157	.009	.003

a. Grouping Variable: fieldstudy

**NPar Tests**

**Mann-Whitney Test**

**Ranks**

	fieldstudy	N	Mean Rank	Sum of Ranks
Q3C	2	57	37.33	2128.00
	3	14	30.57	428.00
	Total	71		
Q5E	2	57	37.98	2165.00
	3	14	27.93	391.00
	Total	71		
Q52B	2	57	37.69	2148.50
	3	14	29.11	407.50
	Total	71		
Q52C	2	57	37.76	2152.50
	3	14	28.82	403.50
	Total	71		
Q53B	2	57	39.11	2229.00
	3	14	23.36	327.00
	Total	71		
Q54B	2	57	37.12	2116.00
	3	14	31.43	440.00
	Total	71		
Q54D	2	57	36.09	2057.00
	3	14	35.64	499.00
	Total	71		

**Test Statistics<sup>a</sup>**

	Q3C	Q5E	Q52B	Q52C	Q53B	Q54B	Q54D
Mann-Whitney U	323.000	286.000	302.500	298.500	222.000	335.000	394.000
Wilcoxon W	428.000	391.000	407.500	403.500	327.000	440.000	499.000
Z	-1.152	-1.702	-1.444	-1.511	-2.652	-.961	-.075
Asymp. Sig. (2-tailed)	.249	.089	.149	.131	.008	.337	.941

a. Grouping Variable: fieldstudy

**NPar Tests**

**Mann-Whitney Test**

**Ranks**

	fieldstudy	N	Mean Rank	Sum of Ranks
Q3C	2	57	38.26	2181.00
	4	15	29.80	447.00
	Total	72		
Q5E	2	57	39.05	2226.00
	4	15	26.80	402.00
	Total	72		
Q52B	2	57	35.43	2019.50
	4	15	40.57	608.50
	Total	72		
Q52C	2	57	37.26	2124.00
	4	15	33.60	504.00
	Total	72		
Q53B	2	57	38.78	2210.50
	4	15	27.83	417.50
	Total	72		
Q54B	2	57	37.78	2153.50
	4	15	31.63	474.50
	Total	72		
Q54D	2	57	37.37	2130.00
	4	15	33.20	498.00
	Total	72		

**Test Statistics<sup>a</sup>**

	Q3C	Q5E	Q52B	Q52C	Q53B	Q54B	Q54D
Mann-Whitney U	327.000	282.000	366.500	384.000	297.500	354.500	378.000
Wilcoxon W	447.000	402.000	2019.500	504.000	417.500	474.500	498.000
Z	-1.472	-2.117	-.878	-.627	-1.866	-1.050	-.707
Asymp. Sig. (2-tailed)	.141	.034	.380	.531	.062	.294	.479

a. Grouping Variable: fieldstudy

**NPar Tests**

**Mann-Whitney Test**

### Ranks

	fieldstudy	N	Mean Rank	Sum of Ranks
Q3C	2	57	46.00	2622.00
	5	24	29.13	699.00
	Total	81		
Q5E	2	57	45.98	2621.00
	5	24	29.17	700.00
	Total	81		
Q52B	2	57	39.13	2230.50
	5	24	45.44	1090.50
	Total	81		
Q52C	2	57	40.04	2282.00
	5	24	43.29	1039.00
	Total	81		
Q53B	2	57	43.35	2471.00
	5	24	35.42	850.00
	Total	81		
Q54B	2	57	39.89	2273.50
	5	24	43.65	1047.50
	Total	81		
Q54D	2	57	37.86	2158.00
	5	24	48.46	1163.00
	Total	81		

### Test Statistics<sup>a</sup>

	Q3C	Q5E	Q52B	Q52C	Q53B	Q54B	Q54D
Mann-Whitney U	399.000	400.000	577.500	629.000	550.000	620.500	505.000
Wilcoxon W	699.000	700.000	2230.500	2282.000	850.000	2273.500	2158.000
Z	-3.132	-3.073	-1.140	-.591	-1.440	-.683	-1.906
Asymp. Sig. (2-tailed)	.002	.002	.254	.554	.150	.495	.057

a. Grouping Variable: fieldstudy

### NPar Tests

### Mann-Whitney Test

**Ranks**

	fieldstudy	N	Mean Rank	Sum of Ranks
Q3C	3	14	15.29	214.00
	4	15	14.73	221.00
	Total	29		
Q5E	3	14	15.21	213.00
	4	15	14.80	222.00
	Total	29		
Q52B	3	14	12.07	169.00
	4	15	17.73	266.00
	Total	29		
Q52C	3	14	13.75	192.50
	4	15	16.17	242.50
	Total	29		
Q53B	3	14	13.79	193.00
	4	15	16.13	242.00
	Total	29		
Q54B	3	14	15.46	216.50
	4	15	14.57	218.50
	Total	29		
Q54D	3	14	16.07	225.00
	4	15	14.00	210.00
	Total	29		

**Test Statistics<sup>b</sup>**

	Q3C	Q5E	Q52B	Q52C	Q53B	Q54B	Q54D
Mann-Whitney U	101.000	102.000	64.000	87.500	88.000	98.500	90.000
Wilcoxon W	221.000	222.000	169.000	192.500	193.000	218.500	210.000
Z	-.187	-.137	-1.847	-.796	-.782	-.304	-.684
Asymp. Sig. (2-tailed)	.852	.891	.065	.426	.434	.761	.494
Exact Sig. [2*(1-tailed Sig.)]	.880 <sup>a</sup>	.914 <sup>a</sup>	.077 <sup>a</sup>	.451 <sup>a</sup>	.477 <sup>a</sup>	.780 <sup>a</sup>	.533 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: fieldstudy

**NPar Tests**

**Mann-Whitney Test**

**Ranks**

	fieldstudy	N	Mean Rank	Sum of Ranks
Q3C	3	14	22.07	309.00
	5	24	18.00	432.00
	Total	38		
Q5E	3	14	20.79	291.00
	5	24	18.75	450.00
	Total	38		
Q52B	3	14	14.71	206.00
	5	24	22.29	535.00
	Total	38		
Q52C	3	14	15.21	213.00
	5	24	22.00	528.00
	Total	38		
Q53B	3	14	15.86	222.00
	5	24	21.63	519.00
	Total	38		
Q54B	3	14	16.29	228.00
	5	24	21.38	513.00
	Total	38		
Q54D	3	14	15.86	222.00
	5	24	21.63	519.00
	Total	38		

**Test Statistics<sup>b</sup>**

	Q3C	Q5E	Q52B	Q52C	Q53B	Q54B	Q54D
Mann-Whitney U	132.000	150.000	101.000	108.000	117.000	123.000	117.000
Wilcoxon W	432.000	450.000	206.000	213.000	222.000	228.000	222.000
Z	-1.188	-.575	-2.094	-1.931	-1.632	-1.499	-1.620
Asymp. Sig. (2-tailed)	.235	.566	.036	.053	.103	.134	.105
Exact Sig. [2*(1-tailed Sig.)]	.287 <sup>a</sup>	.601 <sup>a</sup>	.043 <sup>a</sup>	.071 <sup>a</sup>	.128 <sup>a</sup>	.180 <sup>a</sup>	.128 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: fieldstudy

**NPar Tests**

**Mann-Whitney Test**

**Ranks**

	fieldstudy	N	Mean Rank	Sum of Ranks
Q3C	4	15	22.00	330.00
	5	24	18.75	450.00
	Total	39		
Q5E	4	15	21.20	318.00
	5	24	19.25	462.00
	Total	39		
Q52B	4	15	19.73	296.00
	5	24	20.17	484.00
	Total	39		
Q52C	4	15	17.90	268.50
	5	24	21.31	511.50
	Total	39		
Q53B	4	15	18.33	275.00
	5	24	21.04	505.00
	Total	39		
Q54B	4	15	16.33	245.00
	5	24	22.29	535.00
	Total	39		
Q54D	4	15	15.33	230.00
	5	24	22.92	550.00
	Total	39		

**Test Statistics<sup>b</sup>**

	Q3C	Q5E	Q52B	Q52C	Q53B	Q54B	Q54D
Mann-Whitney U	150.000	162.000	176.000	148.500	155.000	125.000	110.000
Wilcoxon W	450.000	462.000	296.000	268.500	275.000	245.000	230.000
Z	-.995	-.552	-.120	-.953	-.781	-1.690	-2.099
Asymp. Sig. (2-tailed)	.320	.581	.904	.341	.435	.091	.036
Exact Sig. [2*(1-tailed Sig.)]	.399 <sup>a</sup>	.618 <sup>a</sup>	.921 <sup>a</sup>	.368 <sup>a</sup>	.484 <sup>a</sup>	.116 <sup>a</sup>	.044 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: fieldstudy



**APPENDIX 6**

Frequencies

Statistics

		AGE	YRSTUDY	fieldstudy	GENDER	RACE	NATIONALIT Y
N	Valid	191	190	190	190	189	190
	Missing	3	4	4	4	5	4
Mean		2.21	2.17	2.19	1.56	1.66	1.37
Median		2.00	2.00	2.00	2.00	1.00	1.00
Mode		2	1	1	2	1	1
Std. Deviation		.694	1.389	1.386	.497	.963	.484

Frequency Table

AGE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	21	10.8	11.0	11.0
	2	118	60.8	61.8	72.8
	3	43	22.2	22.5	95.3
	4	9	4.6	4.7	100.0
	Total	191	98.5	100.0	
Missing	System	3	1.5		
Total		194	100.0		

YRSTUDY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	93	47.9	48.9	48.9
	2	35	18.0	18.4	67.4
	3	12	6.2	6.3	73.7
	4	37	19.1	19.5	93.2
	5	13	6.7	6.8	100.0
	Total	190	97.9	100.0	
Missing	System	4	2.1		
Total		194	100.0		

fieldstudy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	80	41.2	42.1	42.1
	2	57	29.4	30.0	72.1
	3	14	7.2	7.4	79.5
	4	15	7.7	7.9	87.4
	5	24	12.4	12.6	100.0
	Total	190	97.9	100.0	
Missing	System	4	2.1		
Total		194	100.0		

**GENDER**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	83	42.8	43.7	43.7
	2	107	55.2	56.3	100.0
	Total	190	97.9	100.0	
Missing	System	4	2.1		
Total		194	100.0		

**RACE**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	116	59.8	61.4	61.4
	2	31	16.0	16.4	77.8
	3	36	18.6	19.0	96.8
	4	2	1.0	1.1	97.9
	5	4	2.1	2.1	100.0
	Total	189	97.4	100.0	
Missing	System	5	2.6		
Total		194	100.0		

**NATIONALITY**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	120	61.9	63.2	63.2
	2	70	36.1	36.8	100.0
	Total	190	97.9	100.0	
Missing	System	4	2.1		
Total		194	100.0		

**APPENDIX 7**

NPar Tests

Mann-Whitney Test

Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q3C	3	12	25.08	301.00
	4	37	24.97	924.00
	Total	49		

Test Statistics<sup>a</sup>

	Q3C
Mann-Whitney U	221.000
Wilcoxon W	924.000
Z	-.025
Asymp. Sig. (2-tailed)	.980

a. Grouping Variable: YRSTUDY

NPar Tests

Mann-Whitney Test

Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q3C	3	12	13.21	158.50
	5	13	12.81	166.50
	Total	25		

Test Statistics<sup>b</sup>

	Q3C
Mann-Whitney U	75.500
Wilcoxon W	166.500
Z	-.148
Asymp. Sig. (2-tailed)	.882
Exact Sig. [2*(1-tailed Sig.)]	.894 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: YRSTUDY

NPar Tests

Mann-Whitney Test

Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q3C	4	37	25.80	954.50
	5	13	24.65	320.50
	Total	50		

Test Statistics<sup>a</sup>

	Q3C
Mann-Whitney U	229.500
Wilcoxon W	320.500
Z	-.271
Asymp. Sig. (2-tailed)	.787

a. Grouping Variable: YRSTUDY

NPar Tests

Mann-Whitney Test

Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q5E	1	93	67.02	6233.00
	2	35	57.80	2023.00
	Total	128		

Test Statistics<sup>a</sup>

	Q5E
Mann-Whitney U	1393.000
Wilcoxon W	2023.000
Z	-1.301
Asymp. Sig. (2-tailed)	.193

a. Grouping Variable: YRSTUDY

NPar Tests

Mann-Whitney Test

Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q5E	1	93	53.15	4942.50
	3	12	51.88	622.50
	Total	105		

Test Statistics<sup>a</sup>

	Q5E
Mann-Whitney U	544.500
Wilcoxon W	622.500
Z	-.142
Asymp. Sig. (2-tailed)	.887

a. Grouping Variable: YRSTUDY

NPar Tests

Mann-Whitney Test

### Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q5E	1	93	71.95	6691.00
	4	37	49.30	1824.00
	Total	130		

### Test Statistics<sup>a</sup>

	Q5E
Mann-Whitney U	1121.000
Wilcoxon W	1824.000
Z	-3.237
Asymp. Sig. (2-tailed)	.001

a. Grouping Variable: YRSTUDY

## NPar Tests

### Mann-Whitney Test

#### Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q5E	1	93	55.24	5137.50
	5	13	41.04	533.50
	Total	106		

### Test Statistics<sup>a</sup>

	Q5E
Mann-Whitney U	442.500
Wilcoxon W	533.500
Z	-1.625
Asymp. Sig. (2-tailed)	.104

a. Grouping Variable: YRSTUDY

## NPar Tests

### Mann-Whitney Test

#### Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q5E	2	35	23.24	813.50
	3	12	26.21	314.50
	Total	47		

### Test Statistics<sup>a</sup>

	Q5E
Mann-Whitney U	183.500
Wilcoxon W	813.500
Z	-.666
Asymp. Sig. (2-tailed)	.506

a. Grouping Variable: YRSTUDY

NPar Tests

Mann-Whitney Test

Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q5E	2	35	39.24	1373.50
	4	37	33.91	1254.50
	Total	72		

Test Statistics<sup>a</sup>

	Q5E
Mann-Whitney U	551.500
Wilcoxon W	1254.500
Z	-1.125
Asymp. Sig. (2-tailed)	.260

a. Grouping Variable: YRSTUDY

NPar Tests

Mann-Whitney Test

Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q5E	2	35	25.19	881.50
	5	13	22.65	294.50
	Total	48		

Test Statistics<sup>a</sup>

	Q5E
Mann-Whitney U	203.500
Wilcoxon W	294.500
Z	-.572
Asymp. Sig. (2-tailed)	.567

a. Grouping Variable: YRSTUDY

NPar Tests

Mann-Whitney Test

Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q5E	3	12	30.21	362.50
	4	37	23.31	862.50
	Total	49		



Test Statistics<sup>a</sup>

	Q5E
Mann-Whitney U	159.500
Wilcoxon W	862.500
Z	-1.534
Asymp. Sig. (2-tailed)	.125

a. Grouping Variable: YRSTUDY

NPar Tests

Mann-Whitney Test

Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q5E	3	12	14.54	174.50
	5	13	11.58	150.50
	Total	25		

Test Statistics<sup>b</sup>

	Q5E
Mann-Whitney U	59.500
Wilcoxon W	150.500
Z	-1.038
Asymp. Sig. (2-tailed)	.299
Exact Sig. [2*(1-tailed Sig.)]	.320 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: YRSTUDY

NPar Tests

Mann-Whitney Test

Ranks

	YRSTUDY	N	Mean Rank	Sum of Ranks
Q5E	4	37	25.43	941.00
	5	13	25.69	334.00
	Total	50		

Test Statistics<sup>a</sup>

	Q5E
Mann-Whitney U	238.000
Wilcoxon W	941.000
Z	-.058
Asymp. Sig. (2-tailed)	.953

a. Grouping Variable: YRSTUDY

**APPENDIX 8**

## Reliability

The Spearman-Brown value I used was for unequal "halves". The 13 items in part 1 corresponded to items in question 4 (a-m) and the 12 in part 2 were from question 3 (a-l).

\*\*\*\*\* Method 1 (space saver) will be used for this analysis \*\*\*\*\*

RELIABILITY ANALYSIS - SCALE (SPLIT)

Reliability Coefficients

N of Cases =	193.0	N of Items =	25
Correlation between forms =	.7275	Equal-length Spearman-Brown =	.8423
Guttman Split-half =	.8215	Unequal-length Spearman-Brown =	.8425
13 Items in part 1		12 Items in part 2	
Alpha for part 1 =	.8550	Alpha for part 2 =	.7960

## **APPENDIX 9**

**APPENDIX 9**

**TABLE FOR DETERMINING SAMPLE SIZE FROM A GIVEN POPULATION**

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10 000	370
150	108	750	254	15 000	375
160	113	800	260	20 000	377
170	118	850	265	30 000	379
180	123	900	269	40 000	380
190	127	950	274	50 000	381
200	132	1000	278	75 000	382
210	136	1100	285	1 000 000	384

N IS POPULATION SIZE

S IS SAMPLE SIZE

Sekaran, U. 1992. **Research Methods for Business: A Skill-Building Approach.** 2nd Edition. New York: John Wiley. p. 253.

## **APPENDIX 10**

# Ranks

		N	Mean Rank	Sum of Ranks
Q4A - VAR00002	Negative Ranks	71 <sup>a</sup>	73.51	5219.50
	Positive Ranks	63 <sup>b</sup>	60.72	3825.50
	Ties	58 <sup>c</sup>		
	Total	192		
Q4B - VAR00002	Negative Ranks	155 <sup>d</sup>	90.11	13967.50
	Positive Ranks	21 <sup>e</sup>	76.60	1608.50
	Ties	17 <sup>f</sup>		
	Total	193		
Q4C - VAR00002	Negative Ranks	96 <sup>g</sup>	83.80	8044.50
	Positive Ranks	52 <sup>h</sup>	57.34	2981.50
	Ties	45 <sup>i</sup>		
	Total	193		
Q4D - VAR00002	Negative Ranks	107 <sup>j</sup>	75.86	8116.50
	Positive Ranks	37 <sup>k</sup>	62.80	2323.50
	Ties	49 <sup>l</sup>		
	Total	193		
Q4E - VAR00002	Negative Ranks	99 <sup>m</sup>	78.34	7755.50
	Positive Ranks	44 <sup>n</sup>	57.74	2540.50
	Ties	50 <sup>o</sup>		
	Total	193		
Q4F - VAR00002	Negative Ranks	129 <sup>p</sup>	77.67	10019.00
	Positive Ranks	28 <sup>q</sup>	85.14	2384.00
	Ties	36 <sup>r</sup>		
	Total	193		
Q4G - VAR00002	Negative Ranks	101 <sup>s</sup>	81.24	8205.50
	Positive Ranks	72 <sup>t</sup>	95.08	6845.50
	Ties	20 <sup>u</sup>		
	Total	193		
Q4H - VAR00002	Negative Ranks	133 <sup>v</sup>	82.66	10994.00
	Positive Ranks	37 <sup>w</sup>	95.70	3541.00
	Ties	23 <sup>x</sup>		
	Total	193		
Q4I - VAR00002	Negative Ranks	122 <sup>y</sup>	77.13	9410.00
	Positive Ranks	34 <sup>z</sup>	83.41	2836.00
	Ties	37 <sup>aa</sup>		
	Total	193		
Q4J - VAR00002	Negative Ranks	80 <sup>bb</sup>	75.11	6008.50
	Positive Ranks	54 <sup>cc</sup>	56.23	3036.50
	Ties	59 <sup>dd</sup>		
	Total	193		
Q4K - VAR00002	Negative Ranks	108 <sup>ee</sup>	79.97	8637.00
	Positive Ranks	37 <sup>ff</sup>	52.65	1948.00
	Ties	48 <sup>gg</sup>		
	Total	193		
Q4L - VAR00002	Negative Ranks	111 <sup>hh</sup>	75.32	8360.50
	Positive Ranks	29 <sup>ii</sup>	52.05	1509.50
	Ties	53 <sup>jj</sup>		
	Total	193		



Ranks

	N	Mean Rank	Sum of Ranks
Q4M - VAR00002 Negative Ranks	141 <sup>kk</sup>	85.96	12120.00
Positive Ranks	19 <sup>ll</sup>	40.00	760.00
Ties	33 <sup>mm</sup>		
Total	193		

- a. Q4A < VAR00002
- b. Q4A > VAR00002
- c. VAR00002 = Q4A
- d. Q4B < VAR00002
- e. Q4B > VAR00002
- f. VAR00002 = Q4B
- g. Q4C < VAR00002
- h. Q4C > VAR00002
- i. VAR00002 = Q4C
- j. Q4D < VAR00002
- k. Q4D > VAR00002
- l. VAR00002 = Q4D
- m. Q4E < VAR00002
- n. Q4E > VAR00002
- o. VAR00002 = Q4E
- p. Q4F < VAR00002
- q. Q4F > VAR00002
- r. VAR00002 = Q4F
- s. Q4G < VAR00002
- t. Q4G > VAR00002
- u. VAR00002 = Q4G
- v. Q4H < VAR00002
- w. Q4H > VAR00002
- x. VAR00002 = Q4H
- y. Q4I < VAR00002
- z. Q4I > VAR00002
- aa. VAR00002 = Q4I
- bb. Q4J < VAR00002
- cc. Q4J > VAR00002
- dd. VAR00002 = Q4J
- ee. Q4K < VAR00002
- ff. Q4K > VAR00002
- gg. VAR00002 = Q4K
- hh. Q4L < VAR00002
- ii. Q4L > VAR00002
- jj. VAR00002 = Q4L
- kk. Q4M < VAR00002
- ll. Q4M > VAR00002
- mm. VAR00002 = Q4M

Test Statistics<sup>b</sup>

	Z	Asymp. Sig. (2-tailed)
Q4A - VAR00002	-1.674 <sup>a</sup>	.094
Q4B - VAR00002	-9.397 <sup>a</sup>	.000
Q4C - VAR00002	-5.087 <sup>a</sup>	.000
Q4D - VAR00002	-6.164 <sup>a</sup>	.000
Q4E - VAR00002	-5.543 <sup>a</sup>	.000
Q4F - VAR00002	-6.879 <sup>a</sup>	.000
Q4G - VAR00002	-1.064 <sup>a</sup>	.287
Q4H - VAR00002	-5.946 <sup>a</sup>	.000
Q4I - VAR00002	-5.987 <sup>a</sup>	.000
Q4J - VAR00002	-3.547 <sup>a</sup>	.000
Q4K - VAR00002	-6.807 <sup>a</sup>	.000
Q4L - VAR00002	-7.360 <sup>a</sup>	.000
Q4M - VAR00002	-9.827 <sup>a</sup>	.000

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

# Ranks

		N	Mean Rank	Sum of Ranks
Q4A - VAR00003	Negative Ranks	18 <sup>a</sup>	41.75	751.50
	Positive Ranks	121 <sup>b</sup>	74.20	8978.50
	Ties	53 <sup>c</sup>		
	Total	192		
Q4B - VAR00003	Negative Ranks	108 <sup>d</sup>	65.20	7041.50
	Positive Ranks	38 <sup>e</sup>	97.09	3689.50
	Ties	47 <sup>f</sup>		
	Total	193		
Q4C - VAR00003	Negative Ranks	39 <sup>g</sup>	60.58	2362.50
	Positive Ranks	97 <sup>h</sup>	71.69	6953.50
	Ties	57 <sup>i</sup>		
	Total	193		
Q4D - VAR00003	Negative Ranks	28 <sup>j</sup>	40.48	1133.50
	Positive Ranks	86 <sup>k</sup>	63.04	5421.50
	Ties	79 <sup>l</sup>		
	Total	193		
Q4E - VAR00003	Negative Ranks	35 <sup>m</sup>	48.20	1687.00
	Positive Ranks	94 <sup>n</sup>	71.26	6698.00
	Ties	64 <sup>o</sup>		
	Total	193		
Q4F - VAR00003	Negative Ranks	54 <sup>p</sup>	51.28	2769.00
	Positive Ranks	64 <sup>q</sup>	66.44	4252.00
	Ties	75 <sup>r</sup>		
	Total	193		
Q4G - VAR00003	Negative Ranks	54 <sup>s</sup>	39.35	2125.00
	Positive Ranks	92 <sup>t</sup>	93.54	8606.00
	Ties	47 <sup>u</sup>		
	Total	193		
Q4H - VAR00003	Negative Ranks	60 <sup>v</sup>	46.08	2765.00
	Positive Ranks	60 <sup>w</sup>	74.92	4495.00
	Ties	73 <sup>x</sup>		
	Total	193		
Q4I - VAR00003	Negative Ranks	55 <sup>y</sup>	49.34	2713.50
	Positive Ranks	71 <sup>z</sup>	74.47	5287.50
	Ties	67 <sup>aa</sup>		
	Total	193		
Q4J - VAR00003	Negative Ranks	24 <sup>bb</sup>	44.33	1064.00
	Positive Ranks	113 <sup>cc</sup>	74.24	8389.00
	Ties	56 <sup>dd</sup>		
	Total	193		
Q4K - VAR00003	Negative Ranks	53 <sup>ee</sup>	63.83	3383.00
	Positive Ranks	85 <sup>ff</sup>	73.04	6208.00
	Ties	55 <sup>gg</sup>		
	Total	193		
Q4L - VAR00003	Negative Ranks	50 <sup>hh</sup>	64.48	3224.00
	Positive Ranks	82 <sup>ii</sup>	67.73	5554.00
	Ties	61 <sup>jj</sup>		
	Total	193		

Ranks

		N	Mean Rank	Sum of Ranks
Q4M - VAR00003	Negative Ranks	91 <sup>kk</sup>	75.14	6837.50
	Positive Ranks	52 <sup>ll</sup>	66.51	3458.50
	Ties	50 <sup>mm</sup>		
	Total	193		

- a. Q4A < VAR00003
- b. Q4A > VAR00003
- c. VAR00003 = Q4A
- d. Q4B < VAR00003
- e. Q4B > VAR00003
- f. VAR00003 = Q4B
- g. Q4C < VAR00003
- h. Q4C > VAR00003
- i. VAR00003 = Q4C
- j. Q4D < VAR00003
- k. Q4D > VAR00003
- l. VAR00003 = Q4D
- m. Q4E < VAR00003
- n. Q4E > VAR00003
- o. VAR00003 = Q4E
- p. Q4F < VAR00003
- q. Q4F > VAR00003
- r. VAR00003 = Q4F
- s. Q4G < VAR00003
- t. Q4G > VAR00003
- u. VAR00003 = Q4G
- v. Q4H < VAR00003
- w. Q4H > VAR00003
- x. VAR00003 = Q4H
- y. Q4I < VAR00003
- z. Q4I > VAR00003
- aa. VAR00003 = Q4I
- bb. Q4J < VAR00003
- cc. Q4J > VAR00003
- dd. VAR00003 = Q4J
- ee. Q4K < VAR00003
- ff. Q4K > VAR00003
- gg. VAR00003 = Q4K
- hh. Q4L < VAR00003
- ii. Q4L > VAR00003
- jj. VAR00003 = Q4L
- kk. Q4M < VAR00003
- ll. Q4M > VAR00003
- mm. VAR00003 = Q4M

Test Statistics<sup>c</sup>

	Z	Asymp. Sig. (2-tailed)
Q4A - VAR00003	-8.914 <sup>a</sup>	.000
Q4B - VAR00003	-3.445 <sup>b</sup>	.001
Q4C - VAR00003	-5.138 <sup>a</sup>	.000
Q4D - VAR00003	-6.321 <sup>a</sup>	.000
Q4E - VAR00003	-6.113 <sup>a</sup>	.000
Q4F - VAR00003	-2.067 <sup>a</sup>	.039
Q4G - VAR00003	-6.454 <sup>a</sup>	.000
Q4H - VAR00003	-2.326 <sup>a</sup>	.020
Q4I - VAR00003	-3.268 <sup>a</sup>	.001
Q4J - VAR00003	-8.152 <sup>a</sup>	.000
Q4K - VAR00003	-3.108 <sup>a</sup>	.002
Q4L - VAR00003	-2.756 <sup>a</sup>	.006
Q4M - VAR00003	-3.514 <sup>b</sup>	.000

- a. Based on negative ranks.
- b. Based on positive ranks.
- c. Wilcoxon Signed Ranks Test

# Ranks

		N	Mean Rank	Sum of Ranks
Q4A - VAR00004	Negative Ranks	1 <sup>a</sup>	27.50	27.50
	Positive Ranks	174 <sup>b</sup>	88.35	15372.50
	Ties	17 <sup>c</sup>		
	Total	192		
Q4B - VAR00004	Negative Ranks	19 <sup>d</sup>	33.50	636.50
	Positive Ranks	85 <sup>e</sup>	56.75	4823.50
	Ties	89 <sup>f</sup>		
	Total	193		
Q4C - VAR00004	Negative Ranks	15 <sup>g</sup>	36.50	547.50
	Positive Ranks	154 <sup>h</sup>	89.72	13817.50
	Ties	24 <sup>i</sup>		
	Total	193		
Q4D - VAR00004	Negative Ranks	1 <sup>j</sup>	40.50	40.50
	Positive Ranks	165 <sup>k</sup>	83.76	13820.50
	Ties	27 <sup>l</sup>		
	Total	193		
Q4E - VAR00004	Negative Ranks	4 <sup>m</sup>	34.50	138.00
	Positive Ranks	158 <sup>n</sup>	82.69	13065.00
	Ties	31 <sup>o</sup>		
	Total	193		
Q4F - VAR00004	Negative Ranks	13 <sup>p</sup>	44.50	578.50
	Positive Ranks	139 <sup>q</sup>	79.49	11049.50
	Ties	41 <sup>r</sup>		
	Total	193		
Q4G - VAR00004	Negative Ranks	5 <sup>s</sup>	26.50	132.50
	Positive Ranks	139 <sup>t</sup>	74.15	10307.50
	Ties	49 <sup>u</sup>		
	Total	193		
Q4H - VAR00004	Negative Ranks	14 <sup>v</sup>	44.00	616.00
	Positive Ranks	133 <sup>w</sup>	77.16	10262.00
	Ties	46 <sup>x</sup>		
	Total	193		
Q4I - VAR00004	Negative Ranks	6 <sup>y</sup>	37.00	222.00
	Positive Ranks	138 <sup>z</sup>	74.04	10218.00
	Ties	49 <sup>aa</sup>		
	Total	193		
Q4J - VAR00004	Negative Ranks	1 <sup>bb</sup>	29.00	29.00
	Positive Ranks	169 <sup>cc</sup>	85.83	14506.00
	Ties	23 <sup>dd</sup>		
	Total	193		
Q4K - VAR00004	Negative Ranks	17 <sup>ee</sup>	36.50	620.50
	Positive Ranks	140 <sup>ff</sup>	84.16	11782.50
	Ties	36 <sup>gg</sup>		
	Total	193		
Q4L - VAR00004	Negative Ranks	16 <sup>hh</sup>	39.00	624.00
	Positive Ranks	143 <sup>ii</sup>	84.59	12096.00
	Ties	34 <sup>jj</sup>		
	Total	193		

Ranks

		N	Mean Rank	Sum of Ranks
Q4M - VAR00004	Negative Ranks	46 <sup>kk</sup>	48.50	2231.00
	Positive Ranks	102 <sup>ll</sup>	86.23	8795.00
	Ties	45 <sup>mm</sup>		
	Total	193		

- a. Q4A < VAR00004
- b. Q4A > VAR00004
- c. VAR00004 = Q4A
- d. Q4B < VAR00004
- e. Q4B > VAR00004
- f. VAR00004 = Q4B
- g. Q4C < VAR00004
- h. Q4C > VAR00004
- i. VAR00004 = Q4C
- j. Q4D < VAR00004
- k. Q4D > VAR00004
- l. VAR00004 = Q4D
- m. Q4E < VAR00004
- n. Q4E > VAR00004
- o. VAR00004 = Q4E
- p. Q4F < VAR00004
- q. Q4F > VAR00004
- r. VAR00004 = Q4F
- s. Q4G < VAR00004
- t. Q4G > VAR00004
- u. VAR00004 = Q4G
- v. Q4H < VAR00004
- w. Q4H > VAR00004
- x. VAR00004 = Q4H
- y. Q4I < VAR00004
- z. Q4I > VAR00004
- aa. VAR00004 = Q4I
- bb. Q4J < VAR00004
- cc. Q4J > VAR00004
- dd. VAR00004 = Q4J
- ee. Q4K < VAR00004
- ff. Q4K > VAR00004
- gg. VAR00004 = Q4K
- hh. Q4L < VAR00004
- ii. Q4L > VAR00004
- jj. VAR00004 = Q4L
- kk. Q4M < VAR00004
- ll. Q4M > VAR00004
- mm. VAR00004 = Q4M

Test Statistics<sup>b</sup>

	Z	Asymp. Sig. (2-tailed)
Q4A - VAR00004	-11.582 <sup>a</sup>	.000
Q4B - VAR00004	-7.019 <sup>a</sup>	.000
Q4C - VAR00004	-10.575 <sup>a</sup>	.000
Q4D - VAR00004	-11.316 <sup>a</sup>	.000
Q4E - VAR00004	-10.973 <sup>a</sup>	.000
Q4F - VAR00004	-9.890 <sup>a</sup>	.000
Q4G - VAR00004	-10.270 <sup>a</sup>	.000
Q4H - VAR00004	-9.587 <sup>a</sup>	.000
Q4I - VAR00004	-10.159 <sup>a</sup>	.000
Q4J - VAR00004	-11.419 <sup>a</sup>	.000
Q4K - VAR00004	-9.947 <sup>a</sup>	.000
Q4L - VAR00004	-10.058 <sup>a</sup>	.000
Q4M - VAR00004	-6.517 <sup>a</sup>	.000

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test