CRITERIA BASED ACADEMIC AND VOCATIONAL PREDICTOR ELEMENTS FOR STUDENT SELECTION IN THE NATIONAL DIPLOMA OF FOOD SERVICE MANAGEMENT PROGRAMME

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I, PAULINE ANNE KOEN do hereby declare that this dissertation represents my own work both in concept and execution.

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ABSTRACT

As tertiary institutions, technikons are in the fortunate position that there is a demand for their educational programmes among prospective students, and an equally positive demand for technikon diplomates from the relevant industries who require skilled manpower. Unfortunately resources are limited and thus technikons cannot admit all the applicants who apply for the various courses. For this reason it has become essential to select only those candidates who are most likely to complete the educational training programmes, and fit successfully into the job market. When the value and nature of technikon education are compared to those of a university education, it seems appropriate that their respective students should possess different qualities and abilities, which should be accommodated in the selection criteria governing enrolment. The selection packages at universities, which are primarily academic institutions, consider the value of matriculation certificates and representative results as a basis for selection. Technikons on the other hand, with their vocational slant and the increased practical application of their programmes, require an alternative selection process which shifts away from a purely academic focus. This study was undertaken in an attempt to establish a comprehensive selection package for a technikon-based education, focusing on the Diploma in Food Service Management.

The literature relating to educational selection programmes as well as to the contract catering industry was reviewed. Relevant academic and non-academic selection methods are highlighted. There is a discussion on the criteria required by the contract catering industry with regard to a person who will perform the role of a Food Service Manager successfully and efficiently.

The methodologies used for the analytical survey method and sampling techniques are explained in Chapter three.

The results obtained in this study demonstrated that academic selection criteria indicated a student's general level of ability, however, specific matriculation subjects showed little or no relationship to the subjects to be studied in the Food Service Management education programme. Academic performance from first year onwards correlated with further years of study, and therefore served to demonstrate the potential to predict a student's ability to sustain the entire course based on performance. Vocational criteria were identified together with personality traits representative of successful managers operating in this industry. It was postulated that, for an effective and comprehensive selection programme, academic and alternative criteria should be combined. It was finally concluded that the initial selection process into a technikon must take cognizance of the eventual industrial placement while considering the student's ability to sustain the academic component.

TABLE OF CONTENTS

PAGE

PRELIMINARIES

CHAPTER ONE

THE PROBLEM AND ITS SETTING

CHAPTER TWO

LITERATURE REVIEW

CHAPTER THREE

GENERAL PROCEDURE

CHAPTER FOUR

RESULTS

CHAPTER FIVE

GENERAL DISCUSSION AND RECOMMENDATIONS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

THE PROBLEM AND ITS SETTING

1.1 INTRODUCTION

There is at present a phenomenal growth in the Food and Contract Catering Industries in South Africa. Concomitantly, there is an accompanying shortage of skilled manpower to fill the necessary positions. This industry is labour intensive and for it to grow successfully, suitably qualified people for middle and top managerial positions are required.

Technikons are institutions offering vocationally orientated education to a society experiencing a dire manpower shortage in the technical and managerial fields (Anon, 1990c:10). Thus technikons are experiencing a demand from industry to cater for this shortage by providing suitably qualified diplomates who will also possess management skills.

Until recently technikons have been unfavourably compared to universities with regard to their educational programmes, and, owing to a direct comparison with technical colleges due to their prior associations, there has been a tendency to classify technikons as 'second class' tertiary institutions (Orpen, 1989:21). This negative perception regarding the role and position of technikons resulted in a large number of prospective students enrolling at universities without even considering the merits of a technikon education.

However, as communities' knowledge and awareness of technikon education increase, these unfavourable perceptions about technikons are changing. Resulting from this is the fact that an ever increasing number of school-leavers are now selecting technikons as the institution for their formal tertiary education. For Technikon Natal this has meant an increase of 1% per year in the student intake over the last four years (Technikon Natal, Statistical Brochure, 1987-1992), and this trend is envisaged to continue in the future.

Concurrent with the improved image of technikon education, the Department of Food and Nutrition at Technikon Natal has experienced an increasing demand for qualified manpower in the hospitality field, as this industry realizes that:

> " *The development of training is one of the critical issues in the development of the industry.* " (Anon, 1990b:20)

Furthermore, the image of the hospitality industry has improved considerably, consequently attracting the interest of more people who have become aware of the vocational avenues open within this field. It therefore follows that these people would be seeking appropriate training opportunities. (Anon, 1991b:14).

The Technikon is in a prime position to provide in these training needs. Training opportunities, however, are severely limited by the lack of appropriate facilities, staffing shortages and cut-backs in State funding, which makes it impossible to accept all the candidates that apply to study towards specific qualifications. Tertiary education also demands a great deal from the individual, and it would be a disservice to the individual and to the country to admit candidates who do not possess the skills and abilities to succeed and cope with independent study (De Klerk, 1990:2). One of the solutions that would serve in the interests of both the

technikon and the prospective student would be the ability to identify those students who would benefit most from the training, while at the same time restricting numbers and therefore accommodating the limitations imposed through physical structures and facilities.

The increased demand for skilled labour, accompanied by an increased demand for technikon education, has made it imperative that the selection of the most suitable candidates for training and ultimately for job placement, is carried out through a systematically sound procedure. Thus the establishment of a comprehensive student selection programme is vital for technikons, which will in turn result in the provision of efficient and suitably skilled staff for the related contract catering companies.

With a naturally developed affinity and productive partnership between technikons and the commercial, industrial and cultural communities (Du Preez, 1989), it seems natural that suitable selection criteria should serve both the educational institution and the industry that it services. Through the implementation of an effective student selection programme, the close partnership of technikons and the cultural, commercial and industrial communities can be strengthened. The benefits of this liaison will not only result in a decrease in costs incurred by student failure and drop-out during the educational programme, but employee competence will be increased, thereby leading to greater employer/employee satisfaction (Minutes of Meeting of Hotel and Catering Training Committee (H.C.T.C.), 1990).

The selection system implemented within the Department of Food and Nutrition at Technikon Natal has been a purely academic exercise, as student selection has been made solely on a candidate's school performance. However, it is argued that

while school performance cannot be overlooked, it is necessary to consider the individual beyond the context of a set of numbers. Moreover, and that it will become increasingly important to engage in a selection process in which criteria are used that relate to both the qualification being sought and the eventual job placement. While the concept of differentiated selection criteria has been considered for various courses at universities, it seems apparent that criteria-based selection could be of greater relevance to technikon education, as this form of education is more specific in terms of career direction and is thus in a better position to identify required job criteria.

1.2 THE PROBLEM AND ITS SETTING

1.2.1 The Statement of the Problem

The purpose of this study was to analyse the performance of Food and Nutrition students in terms of academic and employment requirements for the purpose of identifying predictors in order to formulate an effective criteria-based student selection programme at Technikon Natal.

1.3 THE SUB-PROBLEMS

1.3.1 Sub-problem One

The first sub-problem was to analyse the performance of students in terms of academic requirements for the attainment of the National Diploma in Food Service Management in order to identify elements to be used as predictors for academic success.

1.3.2 Sub-problem Two

The second sub-problem was to analyse the prospective employer needs in the field of industrial contract catering with reference to job-related skills in catering for the purpose of identifying elements to be used as predictors for job compatibility when students are selected for study towards the National Diploma in Food Service Management.

1.3.3 Sub-problem Three

The third sub-problem was to integrate the identified academic and vocational predictor elements for the purpose of formulating an effective student selection programme for the National Diploma in Food Service Management.

1.4 HYPOTHESES:

1.4.1 Hypothesis One

It was hypothesised that an analysis of the academic performance of the first, second and third year students studying towards the National Diploma in Food Service Management would reveal the academic predictor elements needed for the formulation of an effective student selection programme.

1.4.2 Hypothesis Two

It was hypothesised that an analysis of the needs as set out by employers in the field would reveal the job-related skills required in the contract catering industry, which in turn would highlight predictor elements for job compatibility.

1.4.3 Hypothesis Three

It was hypothesised that through the integration of various academic and job-related predictor elements, an effective student selection programme for Food Service Management students could be formulated.

1.5 DEFINITION OF TERMS AND ABBREVIATIONS

1.5.1 HITB

HITB refers to the Hospitality Industry Training Board. This is an organisation established to advise and standardise the operations within the hospitality industry.

1.5.2 Contract Caterer

A contract caterer is a company that provides meals to other organisations on the basis of a fixed agreement or contract. Contract caterers can provide meals for commerce, industry, mines, hospitals and educational institutions. For the purpose of this study it should not be confused with such non-profit organisations such as "Meals on Wheels".

1.5.3 Food Service Manager/Catering Manager

A Food Service Manager is the manager of one of the catering operations of a contract catering firm. This position may also be called according to the title of Catering Manager or Unit Manager; for the purpose of this study the term Food Service Manager or Catering Manager was used.

1.5.4 Hospitality industry

The hospitality industry encompasses all those industries, organisations and institutions that provide a service and/or entertainment to customers or guests. The hospitality industry includes restaurants, hotels and contract caterers.

1.5.5 SAS Computer Software

SAS Computer Software (SAS Institute Inc) refers to the statistical analysis software package that was used to capture and process the data.

1.6 DELIMITATIONS

1.6.1 Academic Programme

The Department of Food and Nutrition at Technikon Natal offers two National Diploma programmes, namely the National Diploma in Food Service Management and the National Diploma in Food. Owing to the popularity of and industrial demand for food service managers, there has been an increased demand for the Food Service Management course among prospective students, many of whom Technikon Natal has been unable to accommodate. In this study, therefore, the investigation included all students studying towards the National Diploma in Food Service Management.

The students enrolled for the Diploma of Food Service Management during the years 1988, 1989, and 1990 were identified as the sample group for the purpose of this investigation. The diploma had only been offered at Technikon Natal since 1986, and since the initial intake was relatively small, it was decided to use the 1988 first year intake and onwards as the representative sample since this gave a larger sample size. The 1988, 1989 and 1990 student groups provided information over the full three years of the diploma programme. The third year students provided their first year results from 1988, second year results from 1989 and

final year results from 1990. Second year students provided first year results from 1989 and second year results form 1990 and the first years provided their final year-end results for the year 1990. The Senior Certificate results of all three groups of students were used. For each group, only the year-end results towards the students' diploma qualification were analysed. As the year-end result is a combination of each term mark added to the year-end examination result, it was decided to use only year-end results rather than each individual semester or term result.

Selection criteria for the National Diploma in Food were not considered, as the demand for food promoters and consultants was limited at the time the study was undertaken.

1.6.2 Industrial Delimitations

Since the three largest industrial catering companies namely *Fedics Food Services*, *Hospitality* and *Supervision Food Services* employ the majority of diplomates holding a National Diploma in Food Service Management, qualified employees from these companies were involved in the research programme. The smaller independent catering operations, eg. *Feedem* and *Kings Catering* were not included in the study. The industries that were used in this study were selected based on their role as current and future employers of qualified diplomates in the fields of Food Service Management.

1.6.3 Student Involvement

Only students studying towards the National Diploma in Food Service Management were used for the study. The programme for the National Diploma in Food Service Management commenced at Technikon Natal in 1984, but only those students who were enrolled for the Diploma in Food Service Management during the years 1988, 1989 and 1990 were used for this study.

1.6.4 Academic Requirements

The instructional programme for the National Diploma in Food Service Management had to be considered and was utilised in the analyses of the academic credentials to identify predictor elements to be incorporated in the development of an effective student selection programme.

1.6.5 Job-related Skills

Skills related to job competence of a food service manager were evaluated based on the criteria required for effective functioning within the actual working environments of specific food-related industries. This study was limited to those contract catering industries which were situated within the greater Durban metropolitan area.

1.6.6 Differentiation

While it is acknowledged that a selection programme must be `fair' to all applicants, this study did not investigate differential selection criteria with regard to students coming from disadvantaged communities. However, reference is made of the credibility of differential selection criteria, but these differences arose out of the specificity of the vocation and subjects, rather than from the limitations of the applicants.

1.6.7 Career Selection

This study made no attempt to investigate prospective students' reasoning behind their selected career choice. The emphasis of the study was on identifying the particular selection criteria to be instituted by the tertiary educational institution once prospective students have selected a field of study in line with their identified career choice.

1.7 THE ASSUMPTIONS

1.7.1 Vocationally Centred Tertiary Institutions

At present tertiary education falls into two major categories, namely university and technikon education. The perception exists among the larger South African community that a technikon training is an "easy option" in terms of academic requirements and sophistication. However, rather than being compared, universities and technikons should be given recognition in terms of their

differences. Universities offer a predominantly academic, comprehensive education, whereas technikons offer vocationally directed education. In this study, cognisance was taken of the growing demand for more high level manpower, especially in the fields where vocational and technical skills or expertise are required (Du Preez, 1989). It was therefore assumed that for the purpose of this study, the choice of tertiary institutions was not influenced by the "status" of the quality of the academic qualification but rather by the person's personal vision of a future career.

1.7.2 Pre-tertiary Academic Selection

It is assumed that for admission into a tertiary institution some form of pre-selection is required to admit a first-year applicant.

1.7.3 Catering Competitors Combine Interests

The three major industrial catering companies within the Durban metropolitan area, namely *Fedics Food Services*, *Hospitality* and *Supervision Food Services*, all compete for the same market segments. The rapid expansion of the food industry has seen an even greater demand for more qualified personnel. This has led to great competition amongst the companies to employ the limited numbers of qualified diplomates that complete the National Diploma in Food Service Management each year. This study therefore assumed that although corporate rivals, these companies would act as a unified body in the interest of this research project, and in the knowledge that they would gain information that would be of mutual benefit to the members of the contract catering industry.

1.8 OVERVIEW OF THE CHAPTERS

Chapter two gives an overview of the literature related to the tremendous growth of the hospitality industry, and focuses on the problems experienced due to a lack of skilled manpower in this field. This chapter considers past and current findings on the value of technikon education, takes a look at the need for developing a competitive advantage, and subsequently covers literature related to the perceived value of a number of methods of selection and evaluation of students and prospective employees.

Chapter three explains the methodology used for the analytical survey method. The design of the questionnaire as well as its administration, sampling method and evaluation of the sample is covered in this chapter.

The results of the comparison between school achievement and academic success achieved at a tertiary institution, the findings from the questionnaire completed by personnel of the contract catering industry, and results obtained from the personality tests completed by students, are reported in Chapter four.

A general discussion on the findings identified in Chapter four is provided in Chapter five. The findings based on the integration of identified academic and vocational selection criteria are discussed, followed by recommendations with regard to the methods to be employed in a suitable selection process. This chapter also highlights further areas for possible research.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The present and future job markets in South Africa call for skilled, high-level manpower in the vocational, technical and managerial fields (Du Preez, 1990a:3). According to figures provided, South Africa will be short of about 400 000 managers by the year 2000. The ratio of managers to non-managers was 1:42 in 1985 against 1:56 in 1990. By the turn of the century this ratio is expected to have reached 1:1000 (Anon, 1990b). The dire shortage of skilled managers, which is at present experienced within these fields, is exacerbated by the fact that there is an increase in the skills gap that exists among the various population groups in South Africa (Du Preez, 1989:6). Within the new educational and vocational realities of post-apartheid South Africa, the need to close this gap has become vital, and technikons are seen as tertiary institutions which have an important role to play in this regard. Instructional programmes and selection criteria should therefore be designed

- to reduce the skills gap that presently exists between population groups;
- to supply the job-market with suitably qualified personnel in the fields that have been identified; and
- to maintain the standard of tertiary education

(De Klerk, 1990:4).

Technikons offer vocationally orientated education in the technical and managerial fields, but as a result of the poor image associated with "Tech" through prior association with Technical Colleges, a number of people have opted for a university education as opposed to a technikon education (Orpen, 1989a). This contributed the current shortages in the field of management.

An alarming fact shown in recent statistics is that the total drop-out rate among students of all races is 58% for technikons (Duigan, 1993:18). This indicates that there is some disparity between the acceptability of a student for technikon education, and the kind of education the institution has to offer. With a drop-out rate standing at such a high level, the status of the institution and its course offerings become questionable. One of the aspects to consider in the improvement of the status of technikons, would be to improve the calibre of incoming students. In order to accomplish this task, it will be necessary for technikons to "match" the incoming student to the educational offering at the institution, as well as to the ultimate occupational placement in the labour market. Du Preez (1989) stated that the Technikon would be able to improve its academic performance level by means of employing appropriate selection procedures, thereby admitting a '***better***' intake of applicants. It can therefore be concluded that through an improved intake of students, there will be an improved pass rate, a reduced drop-out rate, an improved subsidy basis for the institution, and competent diplomates filling the positions in the identified labour market. This, ultimately, will result in the improved status of technikons.

2.2 EDUCATION VERSUS EMPLOYMENT AND THE CATERING INDUSTRY IN SOUTH AFRICA.

The Food Industry in South Africa is expanding at a phenomenal rate (Orpen, 1989:27). One area in this sector that is experiencing the increased demands that occur with rapid advancement, is that of the contract catering industry (Orpen, 1989:27). Not only has it grown tremendously in the past, but there is every indication that the potential for growth will be accentuated by the prospect of possible privatisation of the state controlled catering institutions. It was reported in Table Talk (Anon, 1989c) that the catering market would treble in size in three to five years if privatisation was implemented correctly. Growth in the industry increases the possibilities for improved career opportunities, job stability, improved salaries and fringe benefits and, most importantly, for job training aligned with job evaluations (Anon, 1989b).

However, for growth to occur it is necessary to have sufficiently well trained manpower and as Mr David Wigley, president of the Federated Hotel, Liquor and Catering Association (Fedhasa) stated, major problems may be imminent in the future of the contract catering industry owing to a shortage of the skilled labour necessary in this field. He pointed out that the catering industry as a whole was highly labour intensive and at present employed a large proportion of unskilled and semi-skilled people (Anon, 1989a). Owing to the size and constant growth of the industry, it has therefore become necessary to fill open positions with the labour that is available regardless of their skill level. Juergen Herchenroeder (Anon, 1992) believes that with a lack of adequate education and training for this industry people are promoted into management positions without the capabilities

to meet the requirements. It is therefore necessary for both the industry and related educational institutions to take cognisance of the fact that for effectual growth to take place, available manpower has to be trained.

Technikons are in a position to take advantage of this identified opportunity to supply the industries with the qualified manpower that they require. At present training institutions are able to supply only about two hundred fully qualified food service managers per year on a nation-wide basis. But to satisfy the demand, the number of annual graduates must increase to one thousand in the forthcoming two to three years and to three thousand a year by 1995/6 (Anon, 1989a).

The Department of Food and Nutrition at Technikon Natal is acutely aware of the shortage of suitably qualified food service managers necessary to meet the demand once growth in the contract catering industry has become a reality. However, although they are aware of the demand from industry, they are limited in terms of financing and facilities, and for these reasons can only accept a limited number of applicants. At present the selection procedure is based purely on academic criteria with little focus on the needs of the industry (Breetzke, 1990. Personal communication). Yet industry, having acknowledged the value of training institutions in supplying the market with suitably qualified manpower, has now expressed the need to be represented in the recruiting and selecting of students at the various training institutions (Minutes of a meeting of HCTC, 5 November 1990:2).

The implementation of an effective selection programme will enable the department of Food and Nutrition to select only those candidates who have the interest and ability to sustain the educational programme, and to move into positions within the hospitality industry.

2.3 SELECTION AND RECRUITMENT CRITERIA.

An overview of the literature indicated that in most organisations and institutions there is the need to select people to match an identified position to be filled (Hills, 1971; Arvey, 1979; Dale and Pires, not dated; Greenhaus and Parasuraman, 1985). As educational institutions and companies face the prospect of limited available positions and large numbers of applicants, they must establish a means of selecting the applicant that will best suit the position to be filled.

A selection programme should be sound and rational and should meet specified objectives that are readily attainable, measurable or quantifiable (Hillss, 1971; Gottfredson and Crouse, 1986). The technikon as a tertiary educational institution requires advanced level intellectual abilities and skills (De Klerk 1990:2) and offers specifically vocationally orientated education. Therefore the process of selection and recruitment becomes a dual operation which should identify students that will comply with the academic standards on the one hand, and possess the necessary vocational skills on the other.

Ultimately the educational institution and the related industries are seeking to select and recruit the same person. In a recent study it was indicated that at present there is a void between what is required by the industry and what is being supplied by the educational institutions resulting in only 7% of all entrants into the

labour market finding employment in the formal sector (Duigan, 1993:18). In recognition of this, all educational organisations should be in a position to identify and select only those candidates demonstrating and having the desired qualities required for:

(a) academic attainment;

(b) career competence.

Johan Verster (1993) put training into perspective with the following statement:

> *Effective training is not about putting people through courses, but it is about acquiring the ability to demonstrate competence in the work environment.*

The selection and recruitment process should provide the ideal opportunity for a technikon to work towards the attainment of one of their identified long-term goals, namely that of nurturing a strong partnership between technikons and the commercial, industrial and cultural communities (Du Preez, 1989). Industry has acknowledged the value of training institutions in supplying the market with suitably qualified manpower. In this light both organisations have a responsibility to the in-coming student in terms of selecting the "right" people.

If the selection programme is to meet the objectives of the educational institution and related industries, then both organisations should be involved in identifying the selection criteria. These criteria should therefore meet both the academic needs and the vocational needs necessary for the completion of a diploma as well as placement in the workforce. Hills (1971) stated that selection criteria could not be considered in isolation from one another but should be a composite of both

academic performance areas and non-academic abilities. A selection programme is therefore a very valuable tool in the entire process of both training and employing the right people for the right jobs.

In devising a selection programme, three aspects must be borne in mind:

(a) The organisations involved in the selection of students must make deliberate choices as to what shall be the most effective selection criteria.

(b) For predictive work to be effective, it is necessary to have a relationship between the predictor and what is predicted. The validity of the selection material chosen must be considered carefully.

(c) The cost of the entire selection process should be borne in mind. The greater the number of selection methods used, the greater will be the cost in terms of both time and money.

Hills (1971:684) emphasises that the cost of information gathering does not necessarily reflect the accuracy and hence the utility to a given institution. This argument therefore illustrates that the most expensive selection programmes are not necessarily the most effective.

The selection programme for prospective Food and Nutrition students at Technikon Natal considers only an applicant's matriculation results whereby each symbol is converted to a point. The final points are added together to produce a total. Although a similar selection process is in operation at a number of tertiary institutions, it has the following short-comings, particularly for technikons:

(a) It has a purely academic slant which overlooks certain attributes which do not appear on a matriculation certificate but which are necessary for differential selection (Stoker, Engelbrecht, Crowther, du Toit, Herbst, 1985).

(b) The selection programme fails to take cognisance of the requirements of the potential employers of the student when he/she qualifies.

2.4 INSTITUTIONAL COMMITMENTS.

2.4.1 General Criteria for Student Selection

Educational institutions are specific in what they offer and the type of education that they provide. It therefore seems obvious that they will each work with a rational selection programme to meet their specified objectives.

According to Hills (1971:682), each institution should identify its objectives according to:

(a) the kinds of benefits it desires, for example whether it would seek to increase its student intake, whether it would seek greater recognition in specific areas, or whether it would wish to increase its financial basis;

(b) the decision whether to adapt the programmes offered to suit the students, or whether it should restrict itself to accepting certain kinds of applicants only;

(c) what criteria to use for making admission decisions;

(d) what combination of criteria should be used if more than one is available;

(e) the position of the *'cut-off'* point, for example how many candidates may be accepted for a particular programme, and what is the minimum level of acceptance according to the identified criteria.

Technikons provide vocationally orientated tertiary education and should therefore take cognisance of the above criteria in collaboration with the relevant industries for the establishment of a suitable student selection programme. In a recent study carried out by Stoker, *et al.*, (1985), it was suggested that universities should consider differential entrance requirements for the different fields of study offered. This concept seems even more relevant in terms of technikon education owing to the vocational specificity of its educational philosophy. This philosophy encompasses the need for technikons to offer programmes in the true spirit of tertiary education, while simultaneously focusing the programmes on the needs of the community (Du Preez, 1989:15).

As Technikons have only operated from their new educational philosophy for the past decade, limited research has been done into their student selection procedures. No written evidence exists of differential selection procedures in operation at technikons within South Africa.

2.4.2 Criteria for Student Selection at Technikon Natal

Shackleford of the Department of Student Admissions at Technikon Natal (1990, personal communication), revealed that individual departments employ various processes to select their incoming first year students. These departments have consciously tried to pinpoint criteria that would meet the needs of the instructional programme but to a large extent selection is still based on subjective judgement by the academic staff. As yet there is no empirical evidence to support or reject the success of these selection processes that are currently in operation. Feedback offered at a management conference at the Cutty Sark Hotel in 1990 indicated that the majority of departments on campus were dissatisfied with their selection programmes and foresaw the improvement of student selection as one of the major challenges facing them in the nineties (Breetzke, 1990, personal communication).

Generally speaking, the problem areas to be addressed regarding all selection programmes at Technikon Natal are the following:

(a) Departments tend to focus on only ONE set of criteria. These might be matriculation results, personal attributes or particular skills required of the candidates, for example the submission of an art portfolio for admission to the art related programmes.

(b) The selection process does not accommodate the ultimate employment requirements of the future employers.

(c) The selection criteria identified fail to establish a "cut-off" point based on empirical evidence.

(d) If technology is seen as a rapidly changing environment, and technikons are educational centres that respond to accommodate their communities and this change, then selection programmes will require constant refinement to adapt to these changes in order to be sensitive to the demands of the labour market. At present little has been done to update original selection programmes and with constant change being experienced in the technological fields, the validity of current selection programmes must be questioned.

The Minutes of the Academic Board meeting held at Technikon Natal on 14 September 1990, report on the discussion of the concept of differentiated selection criteria. This differentiation was seen as a means of accommodating the disadvantaged student, rather than focusing on the differentiation between the subjects. While technikon education is vocationally orientated, the concept of differential selection criteria appears to be very attractive. Such criteria should, however, take cognisance of the demands for an efficient labour force in the place of work, rather than purely accommodating the disadvantaged student. In the light of this, Hutchinson (1990) queries the validity of matriculation results that are used as criteria for admission decisions. He argues that if differentiation is to be considered, then it follows that the academic performance and past achievement at school should only be a part of the whole selection process.

2.5 COMPETITIVE ADVANTAGE

In a fiercely competitive marketplace, success and survival demand the continual effort of an organisation to maintain a favourable position in terms of its :

. sustainability; and

. profitability.

To achieve this it must appear more attractive to its buyers than its competitors. This is known as ***competitive advantage***. Competitive advantage works in any organisation to the extent that it provides the ability to gain and maintain the lead in a competitive market (Porter, 1985: xvi). This statement has the potential to function in any organisation, be it in the educational or purely industrial field. This is particularly true of tertiary institutions that have to operate in an environment of declining state subsidies and increasing operational costs. The only difference between tertiary institutions and industry is that buyers become employers of the students and suppliers become the students themselves. The competitive advantage therefore is the ability to attract the students for the right reasons in the face of competitors.

Competitive advantage essentially grows out of the ability of a firm to create a value for its buyers that exceeds the cost of creating it. This it does through the identification and manipulation of five fundamental forces:

. potential entrants

. suppliers

. industry

. buyers

. substitutes

These five forces interrelate to determine the organisation's profitability because they influence the price, cost and required investment of a firm in the industry (Porter, 1985). For a technikon to be profitable it must be attractive to both buyers and suppliers. The "suppliers" or students will only pay for its services if they are convinced that the qualification offered is demanded by potential employers. The "buyers" or potential employers will only demand the products of the technikon if the diplomate is able to demonstrate competency in the workplace. The technikon with its own technology creates the bridge between the supplier and the buyer by adding value to the product. The status of the technikon within the community will therefore depend on how well this bridge is maintained.

As an educational institution, Technikon Natal must identify its current position and consequently strive to improve its value in terms of demands of the "buyers" in the face of competitors, for example other tertiary educational and rival institutions in the Durban area. These include the Hotel School at M.L.Sultan which offers a Diploma in Catering Management, the University of Natal offering a Degree in Dietetics, and then the more practically orientated courses offered by institutions such as Christina Martin's School of Cookery.

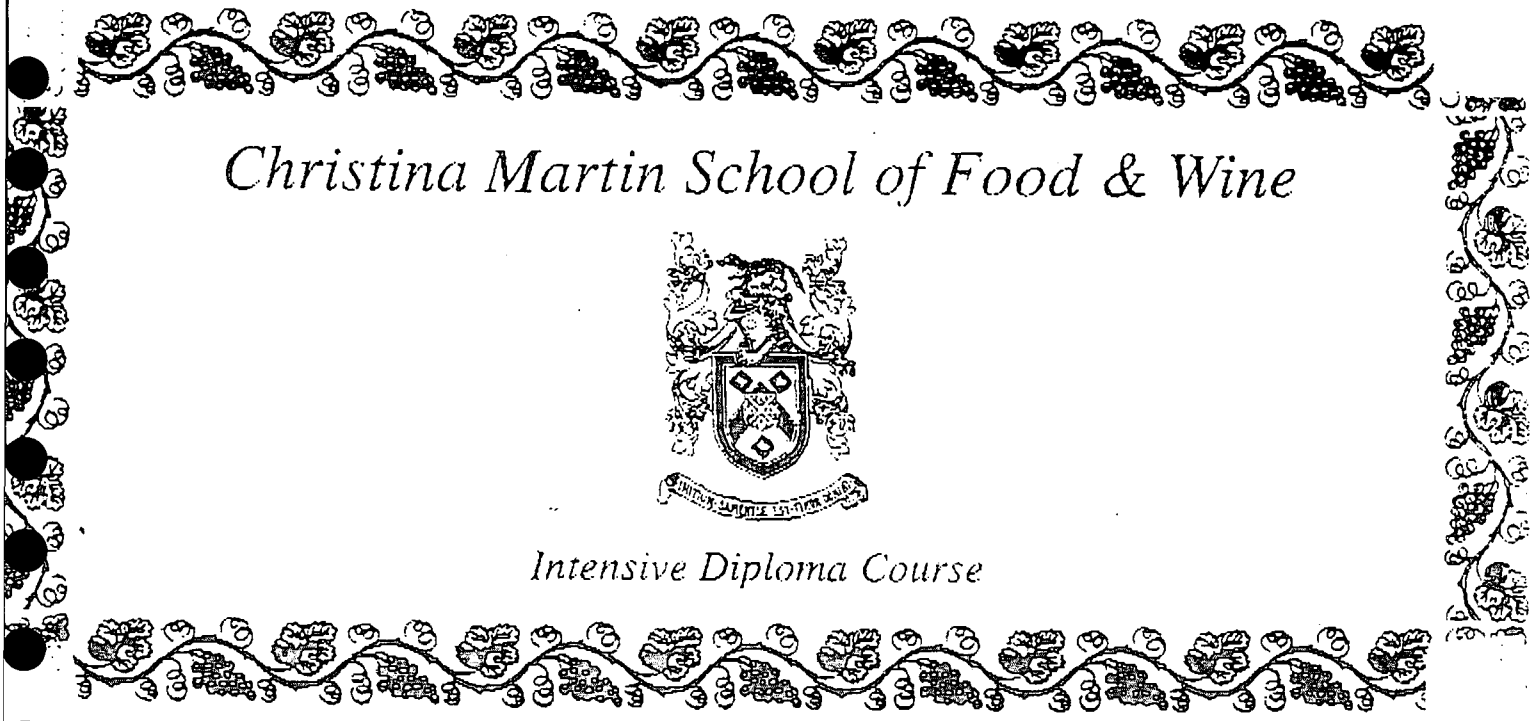


FIGURE 2.1: SAMPLE ADVERTISEMENT SHOWING A RIVAL INSTITUTION OFFERING TRAINING FOR THE FOOD SERVICE MANAGEMENT MARKET

Porter (1985) emphasises that the five forces of competitive advantage are manipulated in various ways in the effort to ensure that a company remains profitable within its given marketplace. This concept can be achieved through one of two means, namely:

. cost leadership; or

. differentiation.

2.5.1 Cost Leadership

Cost leadership means that an organisation is able to offer a product at a price lower than that of its competitors and thereby develops a distinct cost advantage. Cost is also of relevance to differentiation in that the cost incurred in creating a difference must be relative to the value of the difference as seen by the buyer.

In terms of cost leadership, technikons in general would find it difficult to utilize cost as an advantage as they are not financially autonomous (Table 2.1). They are dependent on the state for subsidisation and this in terms of resources available for education is limited (De Klerk, 1989:1).

More specifically, Technikon Natal operates on a higher fee structure than its neighbouring technikons:

TABLE 2.1:TERTIARY TUITION FEES FOR ENROLMENT AT TECHNIKONS 1994
(Student Admission Department - Technikon Natal and M.L.Sultan)

YEAR OF STUDY	TECHNIKON NATAL (National Diploma in Food Service Management)		M.L.SULTAN TECHNIKON (National Diploma in Catering Management)	
	ANNUAL	SEMESTER	ANNUAL	SEMESTER
1ST YEAR	R 4900.00		R 3720.00	R 1860.00
2ND YEAR	R 4900.00		R 3720.00	R 1860.00
3RD YEAR		R 2450.00	R 3720.00	R 1860.00

As the cost of Technikon Natal education is not cheaper than that of neighbouring institution, it is necessary to consider whether there is added value to attending the courses offered at the more expensive institution.

While the cost of the course at Technikon Natal is more expensive than that of its neighbouring institution, the fact that many prospective students are turned away each year as only limited class numbers are accepted, indicates that although the cost is higher the perceived value off-sets the cost.

Although the technikon system currently operates on a state subsidy basis it appears that the educational subsidization is set to change in the future. Figures provided in the Natal Mercury (Anon, 1991) indicate an increase in private sector funding of education from R257 million in 1987 to R554 million during the 90/91 period. The government has thus overspent the education budget by R217 million, so even with this increase in private sector funding there is still insufficient funding for education. At the moment primary, secondary and tertiary education has the backing of the state for the majority of its finances. As suggested by Retief (1991) at a national SASCE seminar held on 27 March 1991, only primary and secondary education will retain limited state funding. Tertiary institutions will have to look to other sources for financial backing and industry appears to be the most likely donor. As industries are profit orientated and answerable to shareholders, they will only be prepared to invest their funds in institutions that are accommodating their needs. For tertiary institutions to be cost effective, universities, technikons and technical colleges must:

- clearly define their respective aims and objectives in terms of education and career directions;

- overcome the wastage that is currently experienced through the duplication of facilities and programmes.

Retief (SASCE, 1991) furthermore stated that industries should only invest in those tertiary institutions that:

- offer programmes in line with the requirements of industry; that is to produce a product that industry can use;
- are cost effective.

Considering these points, it becomes even more crucial for educational institutions, in this case Technikon Natal, to consider how it can develop and maintain its competitive advantage. If the state subsidy for tertiary education is eliminated, then the possibility of cost differentiation as a competitive advantage becomes even more remote. Therefore it is necessary to increase the value of the commodity in terms of its difference or uniqueness.

2.5.2 Differentiation

Differentiation is a unique quality that an organisation or product possesses, that creates a value for its buyer which exceeds the value of any substitutes (Porter, 1985). While Technikon Natal is limited in its ability to develop a cost advantage (Table 2.1), the programme of Food Service Management still attracts full classes of students which suggests that students perceive that:

- they receive value for their money;

- the programme differentiates itself from all other programmes offered by other technikons.

There is a dire shortage of highly skilled, technologically trained manpower (Du Preez, 1989; Anon, 1990c). This situation provides the opportunity for technikons to focus on the respective uniqueness of their training and consequently a competitive advantage is created.

Differentiation allows an organisation to command a premium price, to sell more of its products at a given price or to gain additional benefits such as greater user loyalty even in periods of downturns (Porter, 1985:120). It is therefore vital that an organisation identifies its unique qualities and utilises them to ensure premium performance and maximum customer satisfaction.

Through competitive advantage Technikon Natal would be in a position to attract and select the most suitable student applicants for its diploma courses in the face of similar qualifications offered by other institutions.

2.6 ELIGIBILITY AND REQUIREMENTS

In order to select applicants to study at a technikon, it is necessary to establish criteria on which to base admission decisions. Technikon Natal employs both "formal" and "non-formal" admission criteria to identify potential students who are able to sustain the academic programme. "Formal" admission criteria are the G-rules that appear in the Technikon handbook and that pertain to all students

wishing to study at the Technikon regardless of the selected instructional programme (Technikon Natal, 1993). However, rule G 25(2) makes provision for departmental specific selection criteria and creates the opportunity for non-formal pre-requisites.

2.6.1 Formal Admission Pre-requisites

The Technikon Natal 1993 General Handbook outlines the entrance requirements for all students entering the institution for tertiary education (Technikon Natal, 1993:92-117). These rules fall under the G7 rules in the General Handbook and while all the G7 rules are significant in terms of entrance requirements to Technikon Natal, for the purpose of this study attention shall focus on the following rulings:

2.6.1.1 *Language Proficiency*

Prior to 1991 there were no G-rules governing the specific level of language proficiency requirements for each of the two official languages, namely English and Afrikaans. The implications of this were that, in practice, students from all cultural groups could be accepted, regardless of their language proficiency. As it became increasingly important to ensure that all students studying at the institution had a fair chance to sustain the academic programme (De Klerk, 1990:2), language competency became a vital consideration when selecting applicants.

An investigation into the role of language competency indicated that individual departments felt that the onus lay with them to determine the relevancy of language for each particular programme offered (Dobie, 1990). Concern was expressed about the varying language needs and about the students' linguistic ability in order to:

- understand lectures and read texts;
- perform adequately in a proposed occupation.

(Minutes - Special Academic Board, 14 Sept. 1990:8)

To accommodate the need for acceptable language proficiency levels, any prospective student is currently required to satisfy the following criteria with regard to English, failing which the student may be refused admission or may be required to pass an English proficiency test:

- English (1st language) — Higher Grade - E; Standard Grade - D
- English (2nd language) — Higher Grade - C; Standard Grade - B

(Technikon Natal, 1993:96)

2.6.1.2 *School leaver certificate*

The first objective of a technikon is education. Education provided by a technikon

is said to:

> *" ...cultivate in its technology students a technological way of thinking, together with a set of intellectual and other values required for the advancement of technology."* (SAPSE 118, 1987:27,28)

Tertiary institutions rely on some form of prediction to determine a prospective student's ability to sustain the chosen educational programme. Intellectual ability is necessary for technikon training, since the successful completion of a programme is defined as the student having passed the theoretical part of the diploma course (Stoker *et al.*, 1985:27). Thereby in order to predict and maintain intellectual standards, technikons, like universities, require of all applicants to possess a recognised matriculation or school-leavers certificate. The Technikon Natal General Handbook determines this requirement as follows:

> *G7(2) a Matriculation certificate or School-leaving Certificate issued by the Joint Matriculation Board as defined in Section 15 of Universities Act, 1955 (Act 61 of 1955, as amended) or a Senior Certificate issued by any of the examining authorities referred to in Rule G7(7)*(Technikon Natal, 1993:96).

These certificates are seen to offer some form of guarantee in terms of academic qualities and are thereby perceived as being an indicator to predict a candidate's ability to sustain an academic programme at tertiary level (Stoker *et al.*, 1985:7; Hutchison, 1990:4). Such a certificate also provides information on the subjects studied, and gives an indication of the level of competence achieved in each subject. In South Africa the qualification is known as a senior or matriculation certificate, which is required for admission into most forms of tertiary study.

These certificates are used as a means of comparison among prospective students, particularly when the number of vacancies for enrolment is limited, and they are used to select candidates based on academic merit.

Owing to the nature of technikon education, two main areas of concern should be considered when using the school-leaver's certificate as a basis for student selection to a technikon, namely:

(a) lack of standardisation of all school-leaver certificates/matriculation certificates;

(b) absence of vocational/non-formal criteria.

2.6.2 Standardisation

In response to a call from the public and private sectors in South Africa to maintain high educational standards (De Klerk, 1990:2; Retief at SASCE, 1991), selection and recruitment for further education are based on academic merit. The candidate with good results on a school-leaver's certificate will be selected over candidates with poor results.

However, as a result of a former education policy of segregation of the population groups, there is a lack of standardisation among the national matriculation certificates, making it almost impossible to compare the merits of the disadvantaged scholar with those of the advantaged (Hutchison, 1990:4). To date this system has worked in favour of the white or advantaged student. However, signals from the industrial sector call for an increase in skilled black

manpower which demands recognition of the black scholars who have been the previously disadvantaged group. This necessitates revision of past academic selection strategies.

To accommodate the problems identified above, Gous (1990:40) of the University of South Africa stated the need for flexibility within the educational systems, particularly at tertiary level. He argued that it was not only necessary to promote an educational climate that would allow for a rapidly changing society, but that tertiary institutions also required admission policies that would accommodate the entire multicultural society of South Africa (Gous, 1990:4). In the selection of students, Gous (1990) felt that tertiary institutions should identify a student's potential through the recognition of environmental, social and inner needs, while recognising the causal relationships among these variables. He believed that much could be gained through acknowledging a student's background characteristics and by identifying a student's true educational aspirations.

Acknowledging a need for flexibility within the current admission policy, the Academic Board at Technikon Natal debated possible solutions. Currently, admission requirements are seen to favour the educationally advantaged student, thereby eliminating prospective students who come from educationally disadvantaged backgrounds. Hutchison (1990) recommended the introduction of differentiated student criteria that would acknowledge the potential of the disadvantaged student. An alternative to the current system is one that takes into account a student's percentile rank at his/her school rather than considering senior certificate results as absolute values.

While this appears to be one of the solutions to be considered, it has not as yet been implemented at Technikon Natal because while it identifies a solution it also highlights two important limitations:

(a) In the selection criteria, acknowledging the potential of the disadvantaged students can only operate successfully if the disadvantaged student is to receive appropriate bridging facilities to compensate for his previous educational deprivation (Hutchison, 1990:2). This "bridge" becomes the responsibility of individual departments, imposing on them further constraints in terms of time, finance and physical resources.

(b) The nature of technikon education calls for education with a vocational orientation (SAPSE 118, 1987:28) and with this as a consideration, student selection based purely on the academic merits of a matriculation certificate is severely flawed, for

- it overlooks the vocational criteria necessary for the job;
- disadvantages the "academically weak" but vocationally competent student in favour of the academic achiever.

2.6.3 Non-formal Requirements

Non-formal entrance requirements are those criteria pertaining to individual instructional programmes at technikon, ideally based on the specificity of their vocational orientation.

As stated before, the task of technikon education is to prepare people for vocational occupations. Consequently the instructional programmes have to be designed for specific occupations (SAPSE 118, 1987:28). With the programme content being career specific, it is necessary to select the right person for the course, and therefore the selection criteria should be specific.

To make the selection criteria career specific, it is necessary to analyse the duties and responsibilities of a person in any designation, for example the catering manager, in order to identify the predictors for selecting students most suited for a programme in Food Service Management.

To identify those functions most required in terms of Food Service Management, it is necessary to identify the Key Performance Areas or KPA's of a general Food Service Manager. These required skills and areas of knowledge are presented in Appendix B.

From this comprehensive job description two main areas of responsibility can be deduced:

- Managerial Skills;
- Personal/ Physical Skills

These areas of job requirements thus need to be represented when selecting a student to study for this vocation at a technikon.

To accommodate the nature of technikon education, the G-ruling allows for individual departments to implement additional entrance requirements in accordance with the specificity of the programmes offered.

The General Handbook states:

> *G25 (2) The rules for subjects may, in addition to the general entrance requirements, require (a) pass mark(s) in a particular subject(s) for particular instructional programmes, or other requirements as stipulated for particular groups of programmes* (Technikon Natal, 1993:117)

According to the rule, the opportunity therefore exists for each department to choose predictor elements that will identify the most suitable students for the education programme, as well as for the identified job market. Although selection criteria at technikons are primarily concerned with the academic competence of the incoming student, they should also see the applicant as a whole person and the person should be selected with the eventual career in mind.

The close partnership between technikon education and the industrial sectors cannot be overlooked. This partnership is strengthened through the philosophy of co-operative practice (SAPSE 118, 1987:29), and it appears as if it will be further strengthened through an increase in industrial financing. However, industries will only finance instructional programmes that satisfy their manpower needs (SASCE, 1991). This means that there will have to be increased liaison between technikon and industry to accommodate these requirements. Industrial concerns will obviously focus on the programme content but as has been indicated by the HITB, there is also the need for the eventual employer to be involved with the initial selection of the student. This process could help to accommodate the

necessary identification of vocational skills to complement the academic needs. It will also ensure greater "buyer" satisfaction as discussed in section 2.5, as the eventual employer can now begin the screening process of future employees, thereby capitalising on the benefits of ultimately placing the right student in the right training programme. This in turn will ensure that the student moves competently into the identified workplace.

With regard to the National Diploma in Food Service Management provision should be made for selection criteria based on the vocational needs of both:

- management or leadership skills;
- manual skills.

2.6.4 Managerial and Leadership Skills.

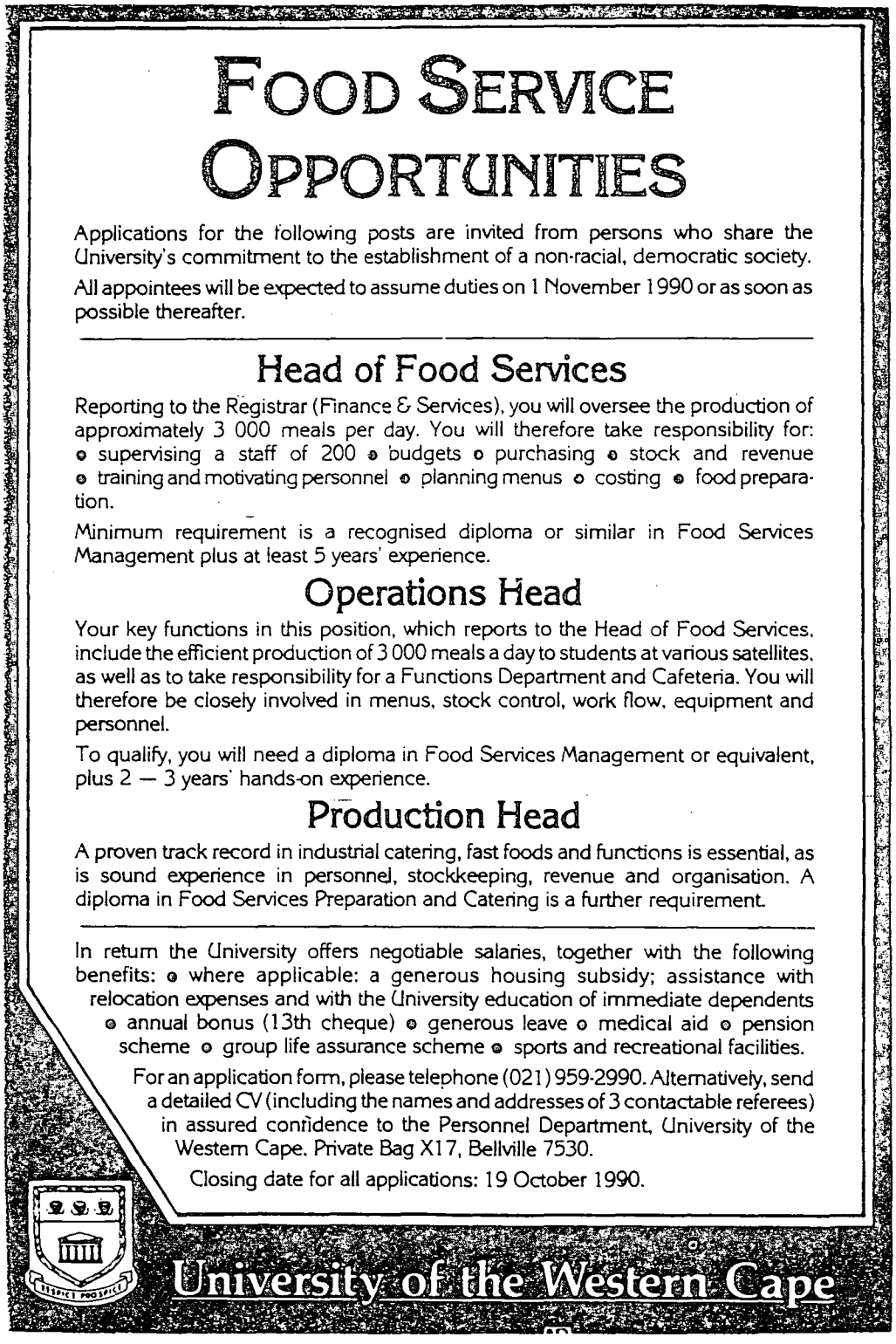
Since the Diploma in Food Service Management focuses on the specialist areas of both management and food, it is necessary to evaluate these major areas of study in order to identify the requirements for success in both fields. As a Food Service Manager, the primary focus of responsibility in a future occupation would be that of management. In considering the qualities and skills necessary for effective leadership or management, there has to be a focus on what managers do and how they do it. This is of particular relevance to Food Service Managers because they operate in an environment where effective timing and scheduling are critical.

Management theory has evolved over time and to date there are no general scientific laws that can be applied to all managerial situations, as occurs in the pure sciences. It is, however, believed that management has identifiable means of

looking at organisations, activities, performance and people in order to increase efficiency and effectiveness. There is a direct correlation between the quality of management and the success of the organisation (Stoner, 1982)

By definition management is the process of getting things done through utilising people and their skills. It is seen to have four major components, namely planning, organising, leading and controlling (Stoner, 1982:3,4). As the size and complexity of organisations increase so too does the complexity of the manager's decisions. This factor, together with a manager's ability to adapt to a constantly changing business environment, ensures that there is no substitute for a good manager. Figure 2.2 illustrates the diversity of the management function as is required in the Food Service industry. As the responsibility increases from Production Head to Food Service so too does the complexity of the main function.

Managers are involved in many facets of the managerial process. Greenhaus and Parasuraman (1985) postulate that managers are involved in nine distinct activities on a continuous basis. They state that it is only the intensity of their involvement with each of these individual activities that varies depending on their managerial level and work content. Figure 2.2 reinforces the theoretical background to this management theory.



FOOD SERVICE OPPORTUNITIES

Applications for the following posts are invited from persons who share the University's commitment to the establishment of a non-racial, democratic society.

All appointees will be expected to assume duties on 1 November 1990 or as soon as possible thereafter.

Head of Food Services

Reporting to the Registrar (Finance & Services), you will oversee the production of approximately 3 000 meals per day. You will therefore take responsibility for: • supervising a staff of 200 • budgets • purchasing • stock and revenue • training and motivating personnel • planning menus • costing • food preparation.

Minimum requirement is a recognised diploma or similar in Food Services Management plus at least 5 years' experience.

Operations Head

Your key functions in this position, which reports to the Head of Food Services, include the efficient production of 3 000 meals a day to students at various satellites, as well as to take responsibility for a Functions Department and Cafeteria. You will therefore be closely involved in menus, stock control, work flow, equipment and personnel.

To qualify, you will need a diploma in Food Services Management or equivalent, plus 2 — 3 years' hands-on experience.

Production Head

A proven track record in industrial catering, fast foods and functions is essential, as is sound experience in personnel, stockkeeping, revenue and organisation. A diploma in Food Services Preparation and Catering is a further requirement.

In return the University offers negotiable salaries, together with the following benefits: • where applicable: a generous housing subsidy; assistance with relocation expenses and with the University education of immediate dependents • annual bonus (13th cheque) • generous leave • medical aid • pension scheme • group life assurance scheme • sports and recreational facilities.

For an application form, please telephone (021) 959-2990. Alternatively, send a detailed CV (including the names and addresses of 3 contactable referees) in assured confidence to the Personnel Department, University of the Western Cape, Private Bag X17, Bellville 7530.

Closing date for all applications: 19 October 1990.

University of the Western Cape

FIGURE 2.2: ADVERTISEMENT FOR MANAGERIAL POSITIONS IN THE CONTRACT CATERING INDUSTRY

(Sunday Times - Business Times. Not dated)

The nine distinct activities proposed are:

- conflict management
- decision making
- planning and co-ordinating
- motivation
- readiness to confront uncertainty
- problem-solving
- calculated risk taking
- training
- innovativeness, creativity and lateral thinking

Greenhaus *et al.*, (1985), state that the first three listed activities form the basis of successful management. However the authors have overlooked the importance of communication with regard to management. It must be remembered that all of the above activities rely on communication and therefore it should be an essential component of the management process. It is necessary that a manager is able to interact effectively through written and verbal means with all levels of personnel, while simultaneously possessing the ability to "listen" (Gerstein and Reisman, 1983:44). Effective communication skills in the managerial process are vital, since a manager is required to be adept at liaising on all levels, for example with peers, subordinates, superiors and others.

Although the Food Service Management programme trains students to enter industry at a junior management level, with experience these same students will move up the corporate ladder to fill positions at top management. Top management is often involved with strategic planning, which includes making

decisions that will affect the entire company and its operations. While investigating the concept of strategic management, Gerstein and Reisman (1983) identified some very pertinent skills and attributes that had not been identified by Greenhaus and Parasuraman (1985), but which are vital to the effective operations carried out by any manager.

These are:

- delegation
- negotiation
- staff recruitment
- self-motivation
- emotional strength and maturity
- personal integrity
- general management knowledge
- openness to innovation and change
- empathy
- solution implementation

Today there is the concept that managers can be trained and educated as opposed to the perception that such persons simply have an innate ability. Thus the process of selecting people as managers is relatively new. Previously it was believed that, based on skill, the manager was `universal' and therefore he was able to handle any and all situations. It was also believed that the actual act of management was mysterious and no specific functions or skills could be identified (Gerstein *et al.*, 1983:33,34). However, the contrary is true. Management has proceeded to become more complex in view of the demand that managers actually specialise in more than one field. What is now required is that, in some

instances, managers possess both managerial skills and the relevant manual skills. Actual advertisements of vacant positions offered in the field of food service management (Figure 2.2) illustrate that a multiplicity of skills and aptitudes is required of the successful applicant. Although this is not directly addressed to tertiary institutions, the content of the advertisement suggests the type of training required of the programmes offered at these institutions for the potential applicant to be successful. Since students will be the prospective applicants responding to such an advertisement, it is important that they should know that their training can meet the job requirements as shown in the advertisement.

It can be seen that a person entering the field of food service management is required to have the necessary cookery and managerial skills. Therefore, in order to satisfy the job requirements, it is important that the Technikon selects only those students demonstrating potential in the necessary skills be selected for studying towards a National Diploma in Food Service Management. Thus the creation of an effective and comprehensive selection programme which will be used to evaluate prospective students in all identified skill areas has become vital.

2.6.5 Manual Skills

Appendix B provides a job description for a Catering Manager, highlighting the main responsibilities that are required of a person who fulfils that particular role. The first responsibility listed indicates the function of providing quality food and service. Within the contract catering industry, a Catering Manager not only acquires and utilises the skills required to be a competent manager, but is also required to demonstrate the ability to perform all the necessary manual skills that he or she would expect of their staff. The job of a Food Service Manager therefore

requires both intellectual and manual skills. It is for this reason that the selection programme should accommodate the needs to identify a potential student's intellectual ability as well as his/her manual dexterity. In terms of food service management, the selection programme is required to assess both the managerial qualities of an individual and the relevant practical or manual catering skills.

2.7 SELECTION METHODS

2.7.1 Introduction

If all people were similar, there would be no need for selection processes. However, as each person is unique, educators, administrators and various business organisations need to be able to select people through a process that is based on predictions about future behaviour. Predictions can occur when these people have established an appropriate data base about the candidate. Assessment devices, or selection methods, are the primary source of the data base. The power of a prediction is thus dependent on the identification of the "right" data (Shertzer and Linden, 1979:2,4).

2.7.2 Senior Certificate

In the United Kingdom grades awarded at school have been seen to be fair and objective measurements of ability and educational attainment. They are described as being `demonstrative' in that they indicate possession of certain skills and knowledge (Hills, 1971; Powell, 1973). Therefore grades have frequently

featured as the main link between people and their further education or job placement (Dale and Pires, not dated:52). Investigations carried out in South Africa have found that success at school predicted to a large extent success at a tertiary institution, particularly first year achievement (Stoker *et al.,* 1985:7). Little emphasis has been placed on predicted success beyond the first year, and it is therefore necessary to question the validity of school results when they are used as predictors of academic ability beyond first year level or even competence in the actual job market. As stated by Pienaar (1996), research has shown little correlation between success at school and success in real life.

Criticism has been voiced about basing selection solely on scholastic performance. Two areas of concern focus on the validity of selection based solely on school attainment. Firstly, Hills (1971) and Pienaar (1996) report that a vast gap exists in the efforts of the secondary school to provide technical and academic skills that are applicable to the job environment. As Gardner in Pienaar points out, the schooling system favours pupils demonstrating verbal and mathematical intelligence and overlooks individual assets which may prove more valuable in determining success after school (Pienaar, 1996).

Technikon education is classified as vocational education (SAPSE 118, 1985:27), and it is therefore vital that technikons are able to select people who have some skills pertaining to their chosen career. Secondly, the standard and importance of educational credentials vary with a range of social, economic, political, cultural and educational circumstances, something which affects South Africa as the matriculation examinations are historically segregated both provincially and culturally.

Educational or academic credentials have a function as part of a selection package. Their role and importance vary according to a wide range of social conditions and the nature of the relevant job market (Hills, 1971:62). However, they cannot be considered as the only indicators of future academic success (Powell, 1973). It is therefore vital that tertiary institutions with a vocational bias such as the technikons consider these issues when formulating a suitable selection programme.

2.7.3 General Ability (g-tests)

Cognitive testing is one of the methods that can be used to provide elements on which to base admission decisions. Such a test, known as the g-test for general abilities, assesses both academic competence and the ability to function effectively in living and working environments. It is used extensively in a number of educational and industrial selection programmes (Arvey, 1986; Hunter, 1986; Thorndike, 1986). What has to be established is how effective it is for technikon admission decisions considering that technikon education, by implication of its philosophy (SAPSE 118, 1987:1), involves more than purely academic ability. While this type of education is a composite of both academic abilities and vocational skills, it indicates that cognitive testing may have some application for the student selection process.

It is believed that for a g-test to be a good academic indicator it has to be a measure of a number of widely differing tasks (Thorndike, 1986), for example innovation, comprehension, general job knowledge and job skills. Thorndike (1986), a classical psychologist, believes that the g-factor will predict performance in all jobs, both manual and mental. He reasons that since

performance is dependent on learning competence, the level of competence in executing a task can be predicted by using values of the g-test. However, Arvey (1986) warns that although various jobs can be based on the g-factor, different jobs require different levels of g (general ability), and therefore different cutting scores are required.

Anastasi, Mead and Schneiders(1960:398-403) also made no differentiation with regard to mental and manual testing, but they identified the function of the aptitude test as measuring the cumulative influence of a multiplicity of daily experiences. It is usually used to predict subsequent performance. An aptitude test could then be instituted to estimate the extent to which individuals will profit from training, or to forecast the level or quality of their achievement in a new situation. In the light of these comments, the usefulness of cognitive testing in terms of its predictive nature is acknowledged. In the case of student selection, this is of vital importance in order to ascertain an applicant's potential in terms of both sustaining the academic programme and succeeding in the selected field of study.

The attainment of the National Diploma in Food Service Management involves both mental and manual skills, and for this reason the value of a g-test in selecting incoming students should be considered. However, this method of selection should not be used as the only method of selection, for as the name states, it measures **general ability** and fails to take cognisance of specific abilities and aptitudes (Lourens and Gardner in Pienaar, 1996:69,70).

2.7.4 Ability Tests

The application of ability tests, or as they are sometimes known, achievement tests, is a method of predicting performance in skill areas that are specific to a particular vocation and are not made evident through g-testing (Hunter, 1986).

Since the paper and pencil test, that is the g-test, can only measure cognitive functioning and not actual performance (Hunter, 1986:347), it will show no correlation or very low correlation between job knowledge and job performance.

Linked to this train of thought is the idea put forward by Howard Gardner (Pienaar, 1996), who maintains that intelligence is not a single capacity that allows a person to be intelligent in all situations, but rather that it is made up of a number of facets. This therefore allows each individual to posses varying strengths and weaknesses in each facet of intelligence, making it necessary to be able to identify where a person's intellectual strengths lie in order to capitalise on these for future academic and career success (Pienaar, 1996).

Considering the career orientated nature of technikon education (SAPSE 118, 1987:22), as well as the practical application of the job of a Food Service Manager (Peters and Viljoen, 1990), it becomes necessary to consider some form of assessing prospective students' ability apart from their cognitive functioning. A possible means of determining job performance is to evaluate it through work sample performance. This would entail setting up work stations where performance can be directly observed and measured and where selection can subsequently occur (Hunter, 1986).

At present the National Diploma in Food Service Management programme offered by the Department of Food and Nutrition at Technikon Natal combines both academic and practical components. It thus necessitates the inclusion of some means of identification of the relevant job-related skills combined with some means of academic appraisal. In order to accommodate this need, specific ability tests could be considered as one of the appraisal techniques to be used in formulating a selection programme for Food Service Management students.

2.7.5 The Selection Interview.

The interview technique appears to be a selection method of much contention (Mayfield, 1964; Arvey, 1979; Shertzer and Linden, 1979; Greenhaus and Parasuramon, 1985). On the one hand, Shertzer and Linden (1979) and Greenhaus and Parasuramon (1985) see the interview as a method of controlled observation where a specific form of empathising, participating and observing is introduced into the selection process; on the other hand, Mayfield (1964) acknowledges that interviews are popular as a means of selection, but he questions the reliability and validity of this practice owing to the subjectivity of the interviewer's responses. Thus the interview technique has both advantages and disadvantages, and these factors must all be carefully analysed if an interview is considered as a valid indicator of future behaviour.

The following four different types of interviewing techniques have been specifically designed to elicit particular types of responses from the interviewee:

- Structured
- Unstructured
- Behavioural
- Group

The interview will be chosen to suit the position that is to be filled and to recognise the significance of a given individual (Shertzer and Linden, 1979:375). The detail of each type of interview is outlined:

2.7.5.1 *Structured Interview*

One of the most popular means of classifying interviews is according to their `structure'. Mayfield (1964) states that if an interview is to prove successful, then the interview and questions to be asked should be structured and a team approach to interviewing should be used. A structured interview has set questions that have been previously selected to elicit specific information from all of the candidates. The candidates' responses are then comparable and classifiable (Shertzer *et al.*, 1979:376). The advantage of this method is that objectivity is promoted, which results in greater fairness to all candidates.

2.7.5.2 *Unstructured Interview*

An unstructured interview is one in which the interviewer follows no specific plan (Graham and Lilly, 1984:276). This allows for both the interviewer and interviewee to discuss matters as they enter the line of conversation within the interview. Another advantage of this type of interview is that it allows the interviewer the opportunity to observe the behaviour of the interviewee. It does however require that the interviewer is more experienced in interviewing techniques which will enable him/her to glean the relevant information from the interview.

2.7.5.3 *Behavioural Interview*

Behavioural interviews are a means of eliciting descriptions of passed experiences and skills and this can be evaluated by a trained interviewer. Unlike conventional interviews, the Behavioural interview is designed to reduce the ability of the interviewee to lie or fake information (Gerstein and Reisman, 1983).

The identifiable problem is that the person conducting the interview has to be specifically trained to conduct the interview and evaluate the interviewee's responses.

2.7.5.4 *Group Interviews*

A group interview requires that the interviewee sits before a panel of interviewers. In this instance a combination method of interviewing may be employed (Shertzer and Linden, 1979:376).

2.7.5.5 *General: Advantages and Disadvantages*

Interviews serve as an effective means of obtaining information on a variety of topics at one time and are able to consider adaption levels of the candidate. This suggests that they might be more justifiable than a comprehensive admission test which is relevant only for predicting a grade point average (Hills, 1971). Subjectivity is very often a principle element of any interview. It may play a very positive role in obtaining an overall impression of a candidate. The interviewer is able to assess the candidate's appearance, motivation, job knowledge, communication skills, personality, attitude and attributes that are not shown through a g-test or abilities test (Greenhaus and Parasuramon, 1985; Kinicki and Lockwood, 1985).

Kinicki and Lockwood (1985), however, point out the pitfall of subjectivity in terms of the interview technique. Interviewers may make crucial decisions based on impressions obtained during the first thirty seconds of meeting the applicant.

The above reason and the fact that interviewers tend to rely on impressionistic rather than concrete information as a basis for selection decisions, are the main reasons for questioning the reliability of the data collected from an interview technique. Furthermore, Gerstein *et al.* (1983) indicate that the interviews are lengthy processes that often involve a number of interviewers, as in the case of a group interview. Even if the Department of Food and Nutrition at Technikon Natal were to consider the interview as part of the final selection process, after initial `sifting' of applicants has occurred, they must weigh up the value in terms

of the cost factor with regard to time. Sixty applicants to be interviewed for approximately twenty minutes each adds up to 20 hours of interviews, excluding the time spent to devise the questions and evaluate the responses.

The interview technique is also criticised for favouring the interviewee if he or she is particularly articulate, while overlooking a competent candidate who is less articulate (Gerstein, *et al.*, 1983). However, this could be of benefit to the interviewer/s if they require an articulate applicant and are therefore trying to identify future behaviour. This could be classified as an `unmeasurable' criterion since no written test could validate it. Thus if the selection criteria involve identified `unmeasurable' variables for a given education programme or job, then the interview process can be considered as a method of providing information. It is only through understanding the interviewing procedures that one is able to recognise their value and so determine their effectiveness in the selection process.

The Department of Food Service Management of Technikon Natal, owing to its close affiliation with the regional representatives in the industry, is able to identify strongly with the jobs in which their students will eventually be employed. These jobs place a heavy emphasis on interpersonal skills, and for this reason personal appearance, communication skills and drive are credentials to be considered. With this in mind it is of value to consider a form of interviewing as a possible inclusion in the overall selection process for the programme under discussion.

2.7.6 Personality and Selection

Powell (1973) states that it is evident that academic success depends on far more than only ability and past attainment. What needs to be evaluated as a measure of potential success is a person's motivation. Motivation is considered by Powell (1973) to be a very good supplementary predictor of academic performance. Yet this is a process that is very difficult to apply for predictive purposes as the methods for establishing a person's motivation have not yet been clearly defined.

Personality can be described as a dynamic force that continually changes and develops in the context of changing psychological status and environmental experiences. The study of personality involves the assessment of three dimensions:

(a) An understanding of the environment in which the individual is to act.

(b) An understanding of the individual.

(c) An understanding of the correlation between the data obtained from the analysis of the individual and the characteristics of a theoretical model.

The Myers-Briggs model is an objective self-report personality test in which the candidate responds to forced choices which correlate with terms of social desirability. This model is based on the Jungian theory (Shertzer and Linden, 1979:326). Jung proposed four basic preference extremes that structure an

individual's personality. These are:

- (I) introversion - (E) extroversion
- (S) sensing - (I) intuition
- (T) thinking - (F) feeling
- (J) judgement - (P) perception.

The MITB or Myer Briggs Type Indicators show the respondent's preference between the two opposite scales. The four scales indicate where an individual wishes to focus his attention (E or I), the way he likes to look at things (S or I), the way that he likes to make decisions (T or F) and how he deals with the outer world (J or P). Each type indicates people with different interests and different values (Consulting Psychologist Press, 1988:6).

When these results are interpreted, cognisance must be taken of the fact that honesty or lack of honesty of the subject when completing the personality test may have influenced the results. Some answers often reveal a reflection of the reputation that the individual would like to have rather than his typical behaviour and private self-concept. Powell (1973) suggests that there is some hope of getting answers that are honest and dependable when the questions have to highlight personal interests rather than responses that could be directed towards the interests that the selectors are seeking.

Measures of personality, even if shown to be good predictors of academic performance, are unlikely to win public acceptance as predictors for the purpose of selection. To discriminate against a candidate because he has a personality that has been found unfavourable to academic success is very likely to be seen as `unfair' (Powell, 1973:17)

Personality tests are generally used for impressionistic assessment, and then they are used together with other data to provide a complete evaluation of the whole person. While Shertzer and Linden (1979) believes that the Myer-Briggs test does not put the Jungian concepts into operation successfully, he does acknowledge its uses for research and counselling. He suggests that the scores obtained be used in the light of their empirical relationships rather than for their assumed theoretical significance.

2.8 CONCLUSION

For effective student selection to occur, there is a need to establish predictive indicators to identify an applicant's potential ability in a given area of study and ultimate job placement. Career directed education is job specific and for this reason both the educational programme and the final employment of the potential student must be borne in mind during the selection process. The applicant must be evaluated on his/her ability to both sustain the educational training and successfully move into the job-market on completion of the programme. Thus predictive indicators for student selection should be based on both academic and potential vocational competence, and should be used to make selective student admission decisions.

CHAPTER THREE

GENERAL PROCEDURE

3.1 OVERVIEW

Chapter three describes the procedures needed for data collection in order to test the hypotheses. Data pertaining to the three sub-problems were collected by means of the analytical survey method (Leedy, 1989) in terms of the following:

- *Student results*. This was done in order to analyse students' academic performance in terms of their secondary schooling and their tertiary education. These data were obtained from their matriculation results and their annual programme results, as compiled per subject per year of study from first year up to third year for the years 1988, 1989 and 1990.

- *Knowledge and skills needed by a Food Service Manager within the contract catering industry.* This information was collected by means of a designed questionnaire which was completed by employees within the identified industry. The literature review provided information that was used to compile the questions in the questionnaire as well as statistical procedures for the processing of the results.

- *A Jung Personality Test* was administered to students and the data obtained were compared to data obtained from industry in order to identify any similarities or disparities with regard to required personality traits for persons filling the relevant managerial positions.

3.2 THE DATA

The data required for this research were of two kinds: primary data and secondary data. The nature of each is given below:

3.2.1 Primary data

Nel, Rädel and Loubser (1988) describe primary data as data which are collected for the specific problem in question in the research project. Primary data for this study comprised two types:

(a) Vocational characteristics relating to the candidate who will later be employed in the food service industry. This information was obtained from the three major industrial contract catering companies, namely:

- Fedics Food Services
- Hospitality
- Supervision Food Services.

Negotiation to obtain the industrial information was conducted with regional management staff in all three companies. They in turn randomly selected staff from various internal operations to complete the questionnaire.

(b) Personality traits of the food service managers in industry as well as the current food service management students. Part of the primary data included the responses of the students to the Jung Personality Test. This test was administered to the first, second and third year Food Service Management students studying at Technikon Natal during the year 1990. The test was conducted under the guidance of a registered psychologist.

3.2.2 Secondary Data

By definition, secondary data are initially collected for a purpose other than the purpose of the study in question, and such information is already in existence (Nel, *et al.,* 1988).

The following secondary data were used for the purpose of this study:

(a) The normative data and the current documentation on the philosophy of technikons, and in particular Technikon Natal (SAPSE 118).

(b) Published findings on criteria that are used for the selection of students for admission to various tertiary educational institutions both in South Africa and abroad, with particular reference to technikons.

(c) Documentation on the current criteria governing the admissibility of students to Technikon Natal (Technikon Natal - 1993 General Handbook).

(d) Current documentation on the instructional programme for the National Diploma in Food Service Management.

(e) Documentation covering the department specific selection criteria as established by the Department of Food and Nutrition, for the selection of first year Food Service Management students.

(f) The Myers-Briggs Study and Personality Tests together with Hollands typology of personal orientation, were required for the questionnaire formulation.

(g) The certified Senior Certificate results of the first, second, and third year Food Service Management students (years 1988, 1989 and 1990), together with their final year-end results for each of their years of tertiary study.

3.3 THE CRITERIA GOVERNING ADMISSIBILITY OF THE DATA.

The data required were obtained from four sources. For this data to be acceptable the following conditions had to be met:

(a) The questionnaire underwent a pretest to ensure that no problem areas had been overlooked during the final formulation of the questionnaire.

(b) The questionnaire was completed under the guidance of either a Human Resource Manager or a District Manager within each of the identified companies.

(c) It was a requirement that the Senior Certificates submitted by the students be certified in order to ensure the admissibility of the results.

(d) All annual year-end results of students were used only after the Head of the Department of Food and Nutrition had approved the results for publication.

(e) The Jung Personality Test was conducted under the supervision of a registered psychologist.

3.4 THE RESEARCH METHODOLOGY

3.4.1 Introduction

The objective of this study was to identify, with reference to both the relevant academic and vocational fields, key success factors that would be needed as predictor elements in the establishment of a student selection programme for first year food Service Management applicants.

The data needed for this investigation were obtained mainly through using the Analytical Method.

3.4.2 Academic Results

The results of the academic performance of the Food Service Management students ranging from their Senior Certificate through to their annual results for the first, second and third year during the years 1988, 1989 and 1990 were collected to be correlated in terms of:

(a) matric subject choice to subject competence and achievement of tertiary study in Food Service Management (Appendix E,F and G);

(b) results in matriculation subjects compared to results achieved in tertiary study.

3.4.3 Questionnaire

A questionnaire was completed by regional staff as well as by catering management staff of the three major industrial contract catering companies (section 1.6.2) in the greater Durban metropolitan region. On the recommendation of industry it became necessary to observe both regional management and the actual catering managers, rather than focusing solely on catering managers. This was done in order to identify any discrepancies in the importance accorded to the various required skills. Whereas regional staff are responsible for identifying and recruiting the 'right' person for the job of a Food Service Manager, they are not necessarily involved in the actual function of the position, and therefore are basing their selection on observed rather than actual experience. In this study it was therefore vital to establish those skill areas that are seen as being common to both regional management and Food Service Managers and, equally important, to identify those skill areas where differences occur.

The questionnaire was distributed and completed under the supervision of the Human Resources Manager or the District Manager respectively. These "supervisors" were briefed in respect of the procedure that was required for the questionnaire completion prior to the distribution of the questionnaires. As the Catering Mangers are scattered over a great distance, the District Managers were responsible for distributing and collecting the completed questionnaires as they are in contact with the Catering Manager on a regular basis.

In the design of the questionnaire a number of influential factors had to be considered:

3.4.3.1 *The South African situation*

(a) *Racial*

South Africa has a multicultural society where, owing to political policies, the various population groups were treated as individual entities for a long time. It has been argued that an education system must not only provide flexibility in a rapidly changing society, but it must establish admission policies which are fair to everyone in a multicultural environment (Gous, 1990). Therefore it was necessary to identify the extent of the educational differences among the various population groups, so that they could be accommodated in appropriate selection criteria.

(b) *Education*

Concurrent with the political policies of segregation and of separate development has been the policy of separate education. This system has resulted in the majority of the South African population being exposed to a disadvantaged education, which has ultimately restricted the growth of the industrial sector where vacant managerial positions could not be filled due to a lack of sufficient suitably qualified persons (Verster, 1993:67) Industry has tried to compensate for this lack of skilled manpower by in-service `training' and by promoting people through the corporate ranks, often far too quickly (Anon, 1992). While many of these `trained' people function in the practical situation, they very often lack basic literacy skills as the initial schooling offered to, especially

many black South Africans was provided by unqualified teachers and resulted in many pupils leaving school prior to receiving a Senior Certificate (Duigan, 1993). These factors were borne in mind when the questionnaires were designed.

(c) *Language*

South Africa has a heterogeneous population with a number of languages being spoken in a number of regions. In pre-democratic South Africa the country had two official languages only - English and Afrikaans - with various African languages used by the majority of the population. The constitution now makes provision for 11 official languages. Zulu is the predominant black language spoken in Natal, with English being the main language spoken along the coastal regions and Afrikaans predominating in the Northern Natal areas.

The segregation of the education system on a racial and cultural basis has entrenched the concept of separate language mediums in the school system. This has proved to be a problem at tertiary level where an institution may choose to offer its education programmes in one particular language medium while some of its students are proficient in another. For the purpose of this study it was therefore vital to establish the language medium/s predominating in the workplace; the level of proficiency required in particular languages at managerial level; and the current proficiency levels of the first and second languages of the students.

As has been stated, effective communication skills in terms of management are vital since a manager is required to be adept at liaising on all levels, that is with peers, subordinates, superiors and others (Gerstein and Reisman, 1983:44).

3.4.3.2 *Industrial Contract Catering*

(a) *Gender*

In the contract catering industry the majority of people employed in the position of Catering Manager is male. The need for male candidates is not owing to a sexist policy, but, as indicated by Mrs Watermeyer (personal communication, 1990) of Hospitality, for the following reasons:

> *The majority of black employees still hold their traditional values of the male and female roles; and therefore in the workplace they hold a male superior in higher esteem than a female in authority, resulting in a much better employer/employee relationship. Secondly, a lot of the catering units are located in rural areas of the country and for this reason most catering companies prefer to send a male rather than a female, for personal safety reasons.*

At Technikon Natal, however, it is predominantly female students who apply for and are enrolled in food related courses, and at present this institution is supplying the industry with approximately 90% qualified female catering managers to 10% male (Appendix H). This ratio is changing in favour of the male, but it is a very slow process as it involves a change in the attitude of society that has for a long time regarded food and its preparation to be an occupation held by the female gender.

If technikons are to be pro-active, the movement of women into top managerial positions should not be overlooked. According to Mr Manning, a Management Consultant, the number of women in the South African workforce has doubled since the end of World War 2, and if the drastic shortage of managers is to be addressed, the present inequalities experienced by women in the workplace will have to be rectified (Anon, 1990c:10). Mike Davies of Supervision Food Services quantified the need for female Food Service Managers, by saying that 70% of the Managers in that company was of the female gender (Anon, 1990a). With these considerations in mind, technikons should look towards an equalizing of the current gender disparity, rather than a complete reversal of the ratios.

(b) *Hierarchical Positions*

The catering industry, broadly speaking, can be divided into two broad categories with regard to an employee's position within the company, namely regional management and catering managers. Regional management can be defined as employees who strategically plan and manage the operations of the company as a whole. These people are centrally located and control operations for a designated region.

Catering managers can be seen as the "hands-on" employees. These people hold a managerial position and are in control of the catering staff, activities and resources. They are responsible for the effective and efficient operations of an entire catering unit. Rather than being centralized, the catering manager is decentralized and only has control over a specified unit. The catering manager is required to run the unit in conjunction with regional office policies and therefore his autonomy is restricted.

Through telephonic correspondence with Ms Hartley (1991) and her associates at Fedics Food Services, it was established that the classification of "large" and "small" used to designate the size of an industrial catering unit could not be quantified owing to a lack of standardisation amongst the variables. These variables include the number of staff employed, the number of meals served per day and even the number of days per week that the unit operates. For the purpose of this study the following classification was used:

- Large Industrial - supply > 1000 meals per day
- Small Industrial - supply < 1000 meals per day
- Institutional
- Commercial/retail.

(c) *Managerial Skill*

The responsibilities of a Food Service Manager are very varied, since the task description combines the skills of a **manager** with the practical skills of a **caterer** (Appendix B and Figure 2.2).

For the purpose of this study the various practical skills required for the job of a caterer had to be identified. Information in this regard was obtained from direct contact with personnel from the catering companies in the Durban metropolitan region, namely:

- Ms C. Hartley of Fedics Food Services;
- Mrs J. Watermeyer of Hospitality;
- Mr P. Smith and Ms G. Clemes of Supervision Food Services.

The information obtained from these persons was supported by the researcher's personal experiences within the catering environment, as well as by inputs from lecturers in the Departments Food and Food Service Management.

Secondly, the managerial activities represent a large portion of a catering manager's job. A number of reference sources was used to compile a comprehensive framework of managerial tasks (Gerstein and Reisman, 1983:43-46; Greenhaus and Parasuramon, 1985; Porter, 1985).

(d) *Personality Traits*

Holland in Shertzer and Linden., 1979:272, believed that a person's career choice was an extension of their personality and reflected their personal behavioural styles and interests in the context of the working environment. As interests and personality traits form the basis for behaviour and career selection, the Myers-Briggs behavioural characteristics theory and the Hollands typology of personal orientation were used to establish questions in this regard. The reference material that was used included studies by Shertzer and Linden, 1979:274 and Keirsey and Bates, 1984.

3.4.4 Selection Criteria of Industry

Selection procedures are of value to most organisations if they are not in the position to accept all applicants. For the purpose of this study it was necessary to establish the types of procedures used in the contract catering industry as well as the value of these procedures in order to assess their value in the establishment of

a student selection programme for Technikon Natal. As the Technikon services the contract catering industry, it seems obvious that it should take cognisance of the industry's requirements in order to select a student who, after training, will be in demand in the relevant industry. For this reason it may be of value to both Technikon Natal and the contract catering industry to pool their ideas and experience in selection methods and institute similar procedures.

As the matching of people to positions has been common practice for some time (Gerstein and Reisman, 1983), and as there is a vast number of selection procedures available, it was necessary to identify those methods most appropriate for the selection of Food Service Managers within the contract catering industry. It was argued that, if it was possible to identify appropriate Food Service Managers for industry, then this should provide information as to the procedure for selection of suitable Food Service Management students. The questionnaire was designed to elicit information from the industry to identify required skills necessary to be a Food Service Manager, and then to highlight the value of the interview as a selection procedure.

3.4.5 Pretest of Questionnaire

Owing to the costs involved in research, it is necessary to pretest the planned operation on a small sample group in order to identify and rectify any problem areas before undertaking the full scale operation. This pretest ensures success by reducing the chances of failure, as Churchill in (Nel *et al.*, 1988) stated:

The researcher who avoids a questionnaire pretest and tabulation of replies is either naive or a fool. The pretest is the most inexpensive insurance the researcher can buy to assure the success of the questionnaire and the research project.

A pretest was therefore carried out on a sample of the population group in order to determine whether the questionnaire was appropriate for this study. The pretest was also instituted in order to establish whether the respondents would be able to understand and respond to the questions. Furthermore, it was necessary to find out whether the responses could be captured and translated as data for the purpose of this study.

As a basic requirement for a questionnaire is that it should be impersonal (i.e. objective), it is important that the target group be considered during the questionnaire design. As some of the Catering Managers that would be used in the study had had little formal education, a differential scale was utilised to facilitate the completion of the questionnaire. A pretest or pilot study was carried out on a small group of Catering Managers and regional staff in the contract catering industry to establish the appropriateness of the questionnaire.

3.4.6 Personality Test

Both personality and interests determine to a certain extent a person's career choice and ultimately their effectiveness in that job (Shertzer and Linden, 1979:273/4). With this in mind it became necessary to identify personality traits and interests relevant for the role of an effective Food Service Manager. Questions based on the Hollands Theology and the Myers-Briggs Test which are

both a means of identifying personality traits, were included in the questionnaire. Furthermore, the Jung Personality Test was administered to all the Food Service Management students (1988, 1989 and 1990) in order to compare their personality traits as students with what those that are required or identified in the actual work environment. The tests that were applied were selected on the recommendation of a registered psychologist who, by the nature of his work, is constantly involved with student selection. The results of these tests are presented in Tables 4.11.1, 4.11.2 and 4.11.3.

3.5 SPECIFIC TREATMENT OF EACH SUB-PROBLEM

3.5.1 Sub-problem One: Academic Requirements

3.5.1.1 *Introduction*

The first sub-problem was to analyse the performance of students in terms of academic requirements for the attainment of the National Diploma in Food Service Management in order to identify elements to be used as predictors for academic success.

The literature shows that various appraisal and selection techniques are available to analyse ability and to select the most appropriate applicant from a group of people. In the educational environment appraisal data help educationists to determine the relationship amongst abilities, educational practices and to predict and control learning (Shertzer and Linden., 1979:8). Criteria for admission to higher levels of education have often been based on prior educational competence. Dale and Pires, not dated), thus accredited the school examination system with the

function of providing data for linking people and jobs through educational qualifications. Educational credentials always comprise a part of the process of appraising and selecting people for positions of employment. However, with the evidence that vocational skills are by no means learned exclusively in school, it is argued that educational credentials cannot be used solely as a means of admitting or rejecting candidates for further study. These credentials should, however, be included as a part of the selection package (Collins, 1979).

While at present the entrance into a South African tertiary institution is based predominantly on the results of the Senior Certificate examination, research has shown that success at school has to be extended to a fairly large degree to ensure achievement at tertiary level (Stoker *et al.*, 1985:7). This particular study, while focusing on technikon education, also looked towards achievement in the latter years of tertiary study; i.e. the students' ability to sustain the entire programme rather than achieving success only during the first year.

The data gathered and treated for sub-problem one were based on the students' academic educational credentials and provided relevant information on two aspects:

1. The matriculation subjects which should be used as predictors for selection and admission of students into the first year of study towards the National Diploma in Food Service Management.

2. Indicators of students' academic potential to sustain the second and third years of study towards obtaining a National Diploma in Food Service Management.

3.5.1.2 *The Data Needed*

The data needed for testing hypothesis one were in the form of secondary data obtained from the student record cards. These cards provided information regarding each student's matriculation results as well as the final results in each subject over the three year period needed to complete the Food Service Management diploma. For the purpose of this study the documentation covered the years 1988, 1989 and 1990. Dependent and independent variables that were considered were as follows:

INDEPENDENT VARIABLES

Independent variables related to the scholastic ability of each individual scholar prior to their enrolment at Technikon Natal. The independent variable changed throughout the study and with each successive year the dependent variable became the independent variable, for example subjects passed in matric became the independent variable whereas the subject choice in the first year of study became the dependent variable.

Aspects of each student's matric results considered for this study included:

(a) The subjects studied:

English (first language)
English (second Language)
Afrikaans (first language)
Afrikaans (second language)
French
Zulu
Mathematics
Biology
Science
Accountancy
Home Economics
History
Speech and Drama
Economics
Business Economics
Art
Geography
Typing
Technical Drawing
Biblical Studies
Metal Work

(b) The percentage symbol awarded per subject;

(c) The level (Higher Grade, Standard Grade, Lower Grade) at which the final result was awarded;

(d) The overall aggregate.

The information was obtained from certified Senior Certificates presented to Technikon Natal.

DEPENDENT VARIABLES

The dependent variables related to the academic achievement of each individual student involved in this study. The following were considered:

(a) The student's subjects over a three year period of study as shown in Table 3.1

(b) The final percentage result per subject for each individual year of study.

TABLE 3.1: DIPLOMA IN FOOD SERVICE MANAGEMENT - SUBJECTS OVER THE THREE YEAR PROGRAMME (Source: Technikon Natal 1990. Departmental Handbook, Food and Nutrition).

First Year	Second Year	Third Year
Food Service Management 1	Food Service Management 2	Food Service Management 3
Food 1 (Includes Nutrition)	Food 2	Food 3
Applied Science 1	Microbiology : Food 2	Applied Psychology 1
Physiology	Hospitality Training 1	Applied Sociology 1
Communications: Food 1	Hospitality Studies 1	First Aid
	Nutrition 2	

A peculiarity exists in this study concerning the alternating role of the dependent and independent variables when determining

a) ***admissibility*** and

b) ***performance***.

When considering the value of matriculation subjects to be used as criteria for ***admissibility***, the matriculation subjects were the independent variables and the students' first year results became the dependent variables.

For the purpose of determining a students' ***performance*** during the instructional programme, the first year results became the independent variables and the second year results became the dependent variables. Similarly for identifying a student's ***performance*** through to the third year of study, the second year results became the independent variables and the third year results were then used as the dependent variables.

3.5.1.3 *The Location of the Data*

The necessary student information concerning both their matriculation results and their year-end results was made available through Technikon Natal's main frame computer system. The information has been tabulated to indicate the relationship between the dependent and independent variables over the years 1988, 1989 and 1990. The information is presented in Tables 4.1, 4.2 and 4.3.

3.5.1.4 *Treatment of the data*

(a) Matriculation results - Symbols

Under the auspices of the Department of Education and Culture: House of Assembly, the Natal Education Department issued the annual Senior Certificates with the final results for each subject written, represented by a symbol rather than a specific percentage. For the purpose of this study it became necessary to convert the symbols into the appropriate percentages. The breakdown was provided by the Executive Director of Education: Natal Education Department.

Table 3.2 presents the matric symbols and their representative percentages (mean value).

TABLE 3.2 SUBJECT AND AGGREGATE SYMBOLS FOR FINAL MATRICULATION RESULTS (Source: Executive Director of Education - Natal Education Department, Pietermaritzburg)

SYMBOL	SUBJECT (%)	MEAN VALUE TAKEN FOR STUDY (%)
A	80 - 100	90
B	70 - 79	75
C	60 - 69	65
D	50 - 59	55
E	40 - 49	45
F	33.3 - 39	36
FF	30 - 33	32
G	25 - 29	27
GG	20 - 24	22
H	0 - 19	10

As is indicated in Table 3.2, the percentage breakdowns occur as a category breakdown rather than specifics. Therefore, in all instances the mean of each percentage category was used as the final result to correspond to the representative symbol, for example:

Symbol A (80 - 100%) becomes 90%

In order to avoid the use of decimals, the percentages were rounded off to the nearest number.

(b) Matriculation Results - Grades

Subjects were further subdivided according to the `academic level' at which the subject was studied and the examination written. Generally, the education system at secondary school level makes provision for three levels at which a matriculation subject can be written, i.e. Higher, Standard and Lower Grades. The system attempts to accommodate the fact that individual students function optimally at different academic levels, e.g. pupils who do not cope at Higher Grade level may move to an easier level, i.e. Standard Grade, or subsequently to Lower Grade. Table 3.3 indicates the grading system. Each level is represented by a different value, indicating the maximum total mark that can be attained per subject (i.e. per examination question paper written) at each level:

TABLE 3.3 GRADING OF MATRIC SUBJECT LEVEL

GRADE	TOTAL * (PER SUBJECT)
HIGHER GRADE (HG)	400
STANDARD GRADE(SG)	300
LOWER GRADE (LG)	300

* TOTAL refers to the total number of marks that may be obtained in an examination paper that is written at a selected level.

As many matriculation certificates carry both Higher and Standard Grade symbols, the problem of the comparability of these grades arises. According to Dr M.B. Schroenn (1991) (Natal Education Department - personal communication), there is no formal system to equate the various grades against each other.

For the purpose of this study it was necessary to balance the grades for comparative purposes. To attain this end all Standard Grade results were multiplied by 0.75 to represent the equivalent percentage as a Higher Grade result. The basis for this was taken from Table 3.3. No Lower Grade subjects were present in the sample of students used for this study. The educational system indicates failure of a student in subjects, where for Higher Grade the final percentage is below 40% and for Standard Grade the final percentage is below 33.3%. For English and Afrikaans as a second language, the Higher Grade pass mark is also 33.3%. In this study all matriculation results for the sample were used, no results were excluded based on the pass/failure percentages.

(c) Technikon year-end results

All Food Service Management year-end results, for first, second and third year of study (1988, 1989 and 1990), towards the Diploma were used, provided they met the criteria as a `pass' mark. The cut-off point was established at 50% and if the results obtained in more than one question paper constituted the **final result**, then the student had to pass both papers.

Final result = year mark (0.4) + final exam mark (0.6)

All the results, both matriculation results and annual tertiary examination results, were correlated on computer using a Statistical Analysis Systems (SAS Institute Inc)(Appendix E,F,G).

(d) **Significance of Results**

As students involved in this study had completed different subject combinations at matriculation level, it resulted in an extensive list of possible matriculation subjects with only a very few of those being common to the majority of the students. Cognisance was taken of the fact that ultimately, the fewer the number of results per subject, the less would be the relevance or significance of each subject in terms of the correlation with the larger group. In order to obtain the fairest result that would have the greatest significance, it was necessary to correlate the matriculation subjects with one another. This determined the largest sample size with common subjects and also increased the level of significance of the relationship between these subjects. The results of the final correlation are presented in Table 4.1.

3.5.2 Sub-problem Two: Prospective Employer Needs

3.5.2.1 *Introduction*

Technikons' main educational task is to provide education and training in order to supply the labour market with people who possess particular skills and adequate technological and practical knowledge to ensure that they practise their occupations effectively and productively (SAPSE-118, 1987:22). With this philosophy in mind, it becomes evident that a method of differential selection

criteria with a vocational slant is an attractive and plausible alternative to the present `academically loaded' entrance requirements. In order to establish a differential selection programme, close association with the relevant industries is necessary. Through close cooperation between technikons and the relevant industries, the people involved in developing a selection programme will be able to identify the employers' needs in terms of job related skills which are necessary for job compatibility within the various disciplines.

3.5.2.2 *The Data Needed*

The data needed to test the second hypothesis were:

(a) Responses to questions designed to identify all the vocational criteria necessary for the effective and efficient functioning of a Food Service Manager.

(b) Personality traits of Food Service Management students obtained by means of the Jung Personality Test.

3.5.2.3 *The Means of Obtaining the Data*

(a) Questionnaire objectives

The data were collected by means of a questionnaire (Appendix D), completed by regional management staff and Catering Managers of both sexes and all population groups working for the identified contract catering companies. Ninety

questionnaires were distributed and eighty three respondents returned the questionnaires resulting in a 92% response to the questionnaire. The following industrial contract catering companies were used for this study:

- Fedics Food Services
- Hospitality
- Supervision Food Services.

Only those industries located and servicing institutions and organisations in the greater Durban/Kwa Zulu regions were used. A letter soliciting the companies' staff participation was forwarded through the correct channels prior to the completion of the questionnaire in order to:

- inform the companies of the nature of the research project;
- request their participation;
- finalise the date for the completion of the questionnaire.

(Appendix C)

The questionnaire was designed to elicit the following information:

- to identify the **skills or vocational criteria** needed for the job of a Contract Catering Manager;

- to establish which vocational criteria were **important to the industry as a whole.**

It was argued that the identification of the vocational criteria required for the design of a student selection programme, would provide the necessary guidelines to formulate the **selection methods** to be used in the selection process.

In order to collect the information that was identified in the points mentioned above, the following areas for data collection were established:

- biographical data
- vocational attributes of a Food Service Manager:
  - managerial and catering
  - personality and interests
- language
- selection methods.

(b) Questionnaire Design

Q1. Gender

Question one was included in order to:

- ascertain the male, female ratio in the industry;
- identify whether the gender of the employee had any effect on the criteria identified in question ten, or whether all identified criteria would apply to all catering managers regardless of their gender.

(Table 4.5)

Q2. Race Group

Question two identified the cultural diversity of the population of this sample. These results should be used to address the cultural differences that need to be included in the formulation of a selection programme for all students.

(Table 4.5)

Q3. Home Language

Question three indicated the language diversity in the region being studied. The results from question three were used in conjunction with those from question thirteen and question fourteen in order to determine whether it would be necessary to consider language proficiency at school level in the selection criteria.

(Table 4.5)

Q4 and Q5. Position

Owing to the diversity of positions held within management and the need to question both regional management and Catering Managers, question four broadly categorized the managers and question five identified the specific job/designations.

(Table 4.5)

Q6. Food Service Management Operation

Responses to this question indicated the type of unit that the Food Service Manager controls, and subsequently guided the respondents' answers to question ten, where the importance of certain job-related attributes was identified.

(Table 4.5)

Q7 and Q8. Years Experience/Prior Position

The longer a person has worked in a given environment, the greater should be his insight into the industry and related jobs. For this reason question seven and question eight were asked in order to identify how past experience and past employment might influence the rating of vocational skills identified in question ten.

(Table 4.5)

Q9. Educational Qualification

Question nine was used to establish qualification levels within the industry. These results would provide valuable insight into the success of on-the-job training as opposed to formal tertiary education when considered in conjunction with the responses to question ten.

(Table 4.5)

Q10. Vocational Attributes

Owing to the extent of the skills necessary for the job of a Food Service Manager, question ten was designed to identify and rank all the possible attributes.
(Table 4.6)

Q11 and Q12. Personality/Interests

Questions eleven and twelve were included to identify those interests and personality traits that serve effectively in the vocation of a Contract Caterer
(Table 4.7).

Q13 and Q14. Language and Communication

Questions thirteen and fourteen investigated the role of language and communication used by a Catering Manager in the greater Natal region. These questions

- identified the relevance of regional languages within the region of study
  (Table 4.8);
- provided information on the various language forms that are used at different levels within the identified organisations
  (Table 4.9).

Q15 to Q18 ascertained:

- who are responsible for selecting staff;
- the types of selection methods used, and their effectiveness

(Table 4.10).

Q15. Staff Recruitment

Not all staff are involved in the recruitment and selection of personnel, but those who are must be in a position to recognise what type of person they should employ for the position of a food service manager. Question fifteen ascertained that the people recruiting and selecting food service management staff were from regional management and held positions that had little background to the food service industry.

Table 4.10 shows that of the 83 respondents only 13 people are involved in the selection and recruitment of staff.

Q16 and Q17. Selection Methods

Question sixteen identified the various methods employed in the selection process and in question seventeen the methods identified in question sixteen were ranked according to their perceived importance. (Table 4.10)

Q18. Interview

Question eighteen was included to ascertain the perceived value of the interviewing technique as a method of selection for the purpose of selecting a Food Service Manager.
(Table 4.10).

3.5.2.3 Jung Personality Test

Since the literature indicated that personality is linked to an individual's level of motivation and subsequent level of performance (Powell, 1973), and since some prior findings on personalities in the Food Service Industry had been published (Macdaid, G.; McCaully, M.; Kainz, R., 1986) it was decided to implement the Jung Personality test on the student sample.

The Jung Personality Test was made available by the Department of Student Counselling at the Berea Campus of Technikon Natal. Responses to this test were collected from the sample of first (1990), second (1989) and third year (1988) students studying towards Food Service Management at Technikon Natal during 1990. These tests were conducted under the supervision of a registered psychologist.

The results were coded and entered onto computer for analysis (Tables 4.11, 4.12, 4.13, 4.14), using the SAS (Institute INC.) computer software package.

3.5.3 Sub-problem Three: Integration of predictor elements.

3.5.3.1 *Introduction*

Sub-problem three involved the integration of the results pertaining to sub-problems one and two. Only once the initial results had been processed was it possible to combine the composite of the first and second sub-problems in terms of identified academic and vocational criteria. The implications of this are discussed in Chapter five.

3.6 STATISTICAL TREATMENT OF THE DATA

Chapter three discussed the methods that were employed to elicit the results necessary to identify information relevant to this study. To compare students' matriculation results with those obtained in the first year, and subsequently to compare first year with second and second with third, a multiple regression model was fitted using the forward selection stepwise procedure.

The initial process involved the correlation of all the matriculation subjects that had been written by the sample group. The total number of subjects was twenty one. The correlation was carried out in order to determine the subjects that showed a linear relationship and that could therefore be employed in the regression analysis. The correlation also eliminated all those subjects that did not have a linear relationship and would have no value in terms of their predictive nature when used in the stepwise regression analysis procedure. The initial sample of twenty one subjects was refined to four. In terms of a cut-off point the value of 0.05 significance level was used.

Once the correlated matriculation subjects had been identified, multiple regression was applied using the stepwise regression analysis procedure. This method works by inserting variables in turn until the regression equation is achieved. R squared and R squared adjusted were used to check that the optimum subset of variables was selected in the model. Since regression is used to predict a dependent variable using the independent variables, it was noted in this study that the dependent variable was each of the subjects from each year of study that was compared separately to all the subjects from the preceding year, for example;

DEPENDENT VARIABLE:	Food Theory 2 (Second Year Subject)
INDEPENDENT VARIABLES:	Afrikaans (B) (First Year Subjects)
	African language
	English (A)
	Physiology
	Science
	Management 1
	Food Service 1
	Food Practical 1
	Food Theory 1

In order for the regression equation to be satisfied one or more of the independent variables together predict a prospective student's result by means of the outcome of an R squared value. The closer the r value is to 1 (or 100%) the greater is the relationship between the dependent and the independent variables. The regression correlation between dependent and independent variables is presented in Tables 4.1, 4.2, 4.3 and 4.4.

CHAPTER FOUR

RESULTS

4.1 OVERVIEW

In Chapter three the methods for capturing data pertaining to each sub-problem were identified and discussed. This chapter looks at the results produced through those methods to determine the outcome and report these results.

4.2 THE RESULTS: SUB-PROBLEM ONE

The first sub-problem was to identify those matric and technikon subjects that could be used:

(a) as selection criteria for acceptance into the National Diploma in Food Service Management,

(b) to predict sustainability during the three year programme.

4.2.1 Matriculation Results prior to Registration at Technikon Natal

An analysis of the matric subjects written by a total of eighty-eight first, second and third year students of 1988, 1989 and 1990 was done (section 3.5.1.2 (a)) as indicated in Chapter 3. The results showed that twenty-one totally different

matriculation subjects were listed. However, once a multiple correlation exercise was carried out, only four subjects had relevance in terms of predictability of potential for acceptance and performance in the Diploma of Food and Nutrition at Technikon Natal (Table 4.1).

The four identified subjects were:

- English - first language
- Afrikaans - second language
- Home Economics
- Biology

The four subjects identified were common to a sample number of 51; however, the minimum of 0.05 was not observed. The importance of this observation is discussed in Chapter five.

Actual Value

When reading Table 4.1, the actual value (r) must be measured against the value of 1. The closer the actual value is to 1, the greater is the correlation between the items, in this case subjects being compared.

TABLE 4.1

THE SENIOR CERTIFICATE SUBJECTS THAT DEMONSTRATED THE HIGHEST SIGNIFICANCE LEVELS FROM THE SAMPLE OF STUDENTS STUDYING FOR THE NATIONAL DIPLOMA IN FOOD SERVICE MANAGEMENT(1988, 1989 AND 1990)

n (SAMPLE SIZE) = 51

SUBJECT		AFRIKAANS (second language)	ENGLISH (first language)	HOME ECONOMICS	BIOLOGY
AFRIKAANS	r =	1.000			
	p =	0.000			
ENGLISH	r =	0.1165	1.000		
	p =	0.4156	0.000		
HOME ECONOMICS	r =	0.2081	0.3044	1.000	
	p =	0.1429	0.0299	0.000	
BIOLOGY	r =	0.1312	0.2234	0.4974	1.000
	p =	0.3589	0.1150	0.0002	0.000

Significance Value

The significance value must be less than 0.05 as this represents the 5% level of acceptability within which the two items may not have a relationship.

The overall correlation results in Table 4.1 are extremely low. However, there is a strong correlation between Home Economics and Biology with a significance value of 0.0002.

Of twenty one subjects listed (section 3.5.1.2 (a)), only four subjects: English, Afrikaans, Biology and Home Economics showed some significance. It was therefore decided that these four subjects would be used as the dependent variable in the multiple regression correlation in Table 4.2.

4.2.1.1 *First Year*

The first regression correlation shown in Table 4.2 was carried out with the selected matriculation subjects representing the independent variable and the results from the first year of study towards the diploma representing the dependent variable. In carrying out a multiple regression correlation with dependent and independent variables, the strength of the relationship between the two variables being compared is illustrated. In Table 4.2. the subjects with the greatest relationship are listed at the top and the lowest at the bottom. The R-squared written next to each subject shows the value of the relationship between the identified dependent and independent variables. The closer the R-squared is to 100%, the greater is the relationship between the dependent and independent variables.

The results shown in Table 4.2 indicate that performance in school subjects has little value when selecting students in terms of their performance with regard to the identified future course content. The greatest R-squared value is 54% for the first year subject of Afrikaans(B), which is Afrikaans studied as a second language. This is followed with quite a dramatic drop to the next subject which is an African language and has an R-squared value of 26%. Some concern must be expressed with regard to the subject of Management. Management is considered

to be a major subject of the Diploma in Food Service Management, but in this study no academic predictor for acceptance based on school performance or subject choice was identified.

TABLE 4.2

A MUTIPLE REGRESSION USING SENIOR CERTIFICATE RESULTS
AND FIRST YEAR RESULTS (YEARS 1987 AND 1988)
FOR THE NATIONAL DIPLOMA IN FOOD SERVICE MANAGEMENT

YEAR OF STUDY	DEPENDENT VARIABLE 1988 1ST YEAR SUBJECTS	INDEPENDENT VARIABLE 1987 SENIOR CERTIFICATE SUBJECTS	R-SQUARED %	R-SQUARED ADJUSTED%
FIRST YEAR	AFRIKAANS (B)	ENGLISH (1) AFRIKAANS (2)	54	52
	AFRICAN LANGUAGE	HOME ECONOMICS AFRIKAANS (2)	26	23
	SCIENCE	HOME ECONOMICS	22	21
	FOOD THEORY (1)	HOME ECONOMICS AFRIKAANS (2)	21	19
	FOOD PRACTICAL (1)	ENGLISH (1) AFRIKAANS (2)	20	16
	PHYSIOLOGY	BIOLOGY	19	17
	FOOD SERVICE	HOME ECONOMICS	13	11
	ENGLISH (A)	ENGLISH (1)	10	8
	MANAGEMENT 1.	0	0	0

KEY	
	AFRIKAANS B = AFRIKAANS (SECOND AFRIKAANS 2 = LANGUAGE) ENGLISH A = ENGLISH (FIRST ENGLISH 1 = LANGUAGE)

An unexpected observation was made with regard to the subject Food Practical in that while it may be expected that a subject such as Home Economics should be effective in terms of predicting success, it was observed that both languages English (1) and Afrikaans (2) played a part, however small, possibly indicating the relevance of communication in all forms - spoken, written and demonstration.

4.2.1.2 *Second Year*

Table 4.3 is a replication of Table 4.2. However, the dependent and independent variables have changed. In this instance the 1988 dependent variable becomes the 1989 independent variable with the second year subjects representing the dependent variables.

The overall results shown in Table 4.3 indicate a higher correlation between a student's performance in first year and their achievement in second year when compared to the results of the first year shown in Table 4.2. The results are not consistently significant for all subjects. The greatest correlation in the second year was found in terms of Food Service 2 with a result of 73% identified through the first year subjects Science, Management I and Food Theory I. The lowest form of predictability was evident with the dependent variable Food Practical II with a result of 25% based on the independent variable Food Theory I.

From these results (Table 4.3) it must be noted that Management I occurs as a predictor with regard to the success achieved in a considerable number of the second year subjects, for example Food Service, Hospitality Training, Microbiology and Nutrition. While this can be seen as beneficial when

considering the sustainability of a student in completing the Food Service Management programme, it also stresses the concern raised that students are accepted into the programme without ascertaining their management potential (Table 4.2).

TABLE 4.3

A MUTIPLE REGRESSION USING FIRST AND SECOND YEAR RESULTS (YEARS 1988 AND 1989) OF STUDENTS STUDYING FOR THE NATIONAL DIPLOMA IN FOOD SERVICE MANAGEMENT

YEAR OF STUDY	DEPENDENT VARIABLE 1989 2ND YEAR SUBJECTS	INDEPENDENT VARIABLE 1988 1ST YEAR SUBJECTS	R-SQUARED %	R-SQUARED ADJUSTED %
SECOND YEAR	FOOD SERVICE (2)	SCIENCE MANAGEMENT (1) FOOD THEORY(1)	73	70
	HOSPITALITY STUDIES	AFRIKAANS (B) FOOD SERVICE(1)	64	61
	HOSPITALITY TRAINING	AFRIKAANS (B) MANAGEMENT 1.	63	61
	MICROBIOLOGY	SCIENCE MANAGEMENT 1.	58	56
	NUTRITION	SCIENCE MANAGEMENT 1.	50	46
	MANAGEMENT 2.	FOOD THEORY 1.	35	33
	FOOD THEORY	FOOD SERVICE 1.	33	31
	FOOD PRACTICAL	FOOD THEORY 1.	25	23

KEY	AFRIKAANS B = AFRIKAANS (SECOND LANGUAGE)

Food Theory plays a predictive role in terms of Food Service, Management 2 and Food Practical. It shows vastly diverse results combined with the other subjects, from an R-squared of 73% for Food Service down to an R-squared of 25% for Food Practical.

Languages, particularly Afrikaans, featured strongly with a certain degree of predictability for the subjects Hospitality Studies and Hospitality Training. These subject combinations indicated R-squared values of 64% and 63% respectively.

4.2.1.3 *Third Year*

The R-squared relationship between success in the second year and performance in the third year (Table 4.4) was the most significant between Sociology and the independent variables Food Practical II and Management II with a result of 86%. The lowest predictable result was 51% for Psychology based on the independent variable Nutrition II.

One commonality displayed between second and third year was that Food Theory in each of the years acted to an extent to indicate a positive relationship in terms of performance and sustainability of the students in the subject Food Service.

The correlation between the dependent variable Management III and the independent variable Microbiology cannot be explained. This appears to be unusual as in theory and the practice of both subjects there appears to be no direct relationship.

Sociology shows a R-squared value of 86% with relation to Food Practical and Management II, which indicates certain human elements and how they interact with the work environment. This is experienced in the Food Practical programme and is also taught under 'personnel management' in the Management II programme.

From the results in Tables 4.2, 4.3 and 4.4 it can be seen that over a three year period, third year indicates the highest values in terms of predicting performance based on the previous years' results.

What is of great significance when comparing Tables 4.2, 4.3 and 4.4, is that the level of correlation over the three years of study increases, reaching its highest level in the third year (Table 4.4). This suggests that it is possible to consider a student's ability to sustain the programme by monitoring his or her performance in the identified subjects.

TABLE 4.4

A MULTIPLE REGRESSION USING SECOND AND THIRD YEAR RESULTS (YEARS 1989 AND 1990) OF STUDENTS STUDYING FOR THE NATIONAL DIPLOMA IN FOOD SERVICE MANAGEMENT

YEAR OF STUDY	DEPENDENT VARIABLE 1990 3RD YEAR SUBJECTS	INDEPENDENT VARIABLE 1989 2ND YEAR SUBJECTS	R-SQUARED %	R-SQUARED ADJUSTED %
THIRD YEAR	SOCIOLOGY	FOOD PRACTICAL MANAGEMENT 2.	86	82
	MANAGEMENT 3.	MICROBIOLOGY	68	64
	FOOD SERVICE 3	FOOD THEORY 2.	65	62
	PSYCHOLOGY	NUTRITION	51	45

4.3 RESULTS: SUB-PROBLEM TWO

4.3.1 Questionnaire

The results pertaining to the second sub-problem were collected by means of a questionnaire distributed to various employees within the contract catering industry. The results for each of the questions are reported as follows:

DEMOGRAPHIC DATA

The results to questions one to ten appear in Table 4.5.

Q1 With regard to question one, the data for questions two to ten were split according to the gender for comparative purposes. Forty four questionnaires were completed by females and thirty nine by male.

Q2 The results show that the majority (59%) of respondents was white. The next largest group was Asians (22%), followed by Blacks (12%) and Coloureds at (6%). One peculiarity that became evident from these results is that significantly more Asian females (84%) than males (16%) are employed in the food service industry.

Q3 The results revealed that English is the most common home language (83%) with Zulu being the second contender at (9%). The reasons for these findings point at a number of factors, namely:

- traditionally Natal is a province where the majority of the white population group speaks English;

- English is the medium of instruction in the black schools, so while their traditional language may be an African one, they are able to communicate in English;
- the Asian community in South Africa traditionally communicates through the medium of English, even as their home language.

Q4 and 5

Of the 92 respondents, 34 represented regional management staff, and 58 were Catering Managers. A significant finding, was that of the 34 regional management staff only 4 were female, showing a greater prevalence of males in senior positions in industry. These results compared to the results from questions eight and nine which looked at years' experience within the industry and qualification respectively, indicated a very favourable predisposition in terms of the male gender. The number of years' experience is similar for both male and female, as the sample both males (23%) and females (23%) had between 2 and 5 years' experience within the industry. Those with 5 years and more showed favour in terms of the female gender (27%) and the males at slightly less with (24%). It therefore appears that despite the fact that, on average, females appear to have served longer in the related industry, there appears to be a tendency not to appoint them in Senior Management positions.

Q6 The results showed that the size and type of contract varied considerably in terms of where the majority of respondents was based:

- Industry - Large (supply > 1000 meals/day) = 11 %

- Industry - Small (supply < 1000 meals/day) = 56 %
- Institutional = 20 %
- Commercial/Retail = 6 %
- Other = 7 %

Q7 and Q8

The number of years' experience varied from one to forty five. Among the male gender, the largest number of the sample (18) indicated that they had been in the industry between two and five years. There was then a dramatic decline to only 4 men having five to ten years' experience within the industry. The results showed that there were more males (7) with twenty or more years' experience compared to females at only (2). In general the female gender showed a greater general retention within the industry. Eighteen (18) females had two to five years' experience, and this group showed only a marginal decline to (14) with five to ten years' experience.

Q9 In question nine the aspect of qualification was investigated. Table 4.5 shows that overall the status in terms of qualification, was that 81% of the entire sample possessed a Senior Certificate or an additional tertiary qualification. When the question of gender was analysed in terms of the qualification standing, it appeared that of the total sample 14% females held a technikon diploma, a degree or post-degree qualification, whereas 13% males held similar qualifications. In terms of the significance of a technikon diploma or post-tertiary qualification, males represented 9% and females 11%.

TABLE 4.5

DETAILS OF THE DEMOGRAPHIC DATA OF RESPONDENTS IN INDUSTRY TO QUESTIONS 1 TO 9 (n = 83)

GENDER Q1	RACE Q2	NUMBER	LANGUAGE Q3	NUMBER	POSITION Q4	NUMBER	DESIGNATION Q5	NUMBER	CONTRACT TYPE Q6	NUMBER	YEARS EXPERIENCE Q7	NUMBER	PRIOR POSITION Q8	NUMBER	HIGHEST QUALIFICATION Q9	NUMBER
MALE	WHITE	28	ENGLISH	31	REGIONAL MANAGER	21	AREA MANAGER	7	INDUSTRIAL (LARGE)	4	1 YEAR AND LESS	0	STUDENT	1	LOWER THAN STANDARD TEN	5
	BLACK	7	AFRIKAANS	1			PERSONNEL MANAGER	1							SENIOR CERT.	14
	ASIAN	3	ZULU	7	CATERING MANAGER	18	OPERATIONS MANAGER	4	INDUSTRIAL (SMALL)	7	2 - 5 YEARS	18	ASSISTANT CATERING MANAGER	4	TECHNICAL CERT.	6
	COLOURED	1	OTHER	0			SPECIAL PROJECTS	3	INSTITUTIONAL	6	5 - 10 YEARS	4			TECHNIKON DIP.	7
							DIRECTOR	2							POST TECHNIKON DIPLOMA	1
							CATERING MANAGER	18	RETAIL	0	10 - 20 YEARS	8	OTHER	21	UNIVERSITY DEGREE	
							OTHER	1	OTHER	1	20 YEARS OR MORE	7			POST GRADUATE QUALIFICATION	2
									REGIONAL OFFICE	21					OTHER	2
		39		39		39		36		39		37		26		38
	RACE	NUMBER	LANGUAGE	NUMBER	POSITION	NUMBER	DESIGNATION	NUMBER	CONTRACT TYPE	NUMBER	YEARS EXPERIENCE	NUMBER	PRIOR POSITION	NUMBER	HIGHEST QUALIFICATION	NUMBER
	WHITE	21	ENGLISH	38	REGIONAL MANAGER	4	AREA MANAGER	0	INDUSTRIAL (LARGE)	2	1 YEAR AND LESS	2	STUDENT	3	LOWER THAN STANDARD TEN	9
	BLACK	3	AFRIKAANS	2			PERSONNEL MANAGER	1							SENIOR CERT.	9
	ASIAN	16	ZULU	1	CATERING MANAGER	40	OPERATIONS MANAGER	1	INDUSTRIAL (SMALL)	24	2 - 5 YEARS	18	ASSISTANT CATERING MANAGER	22	TECHNICAL CERT.	7
	COLOURED	4	OTHER	3			SPECIAL PROJECTS	1	INSTITUTIONAL	5	5 - 10 YEARS	14			TECHNIKON DIP.	9
							DIRECTOR	0							POST TECHNIKON DIPLOMA	0
							CATERING MANAGER	40	RETAIL	3	10 - 20 YEARS	5	OTHER	9	UNIVERSITY DEGREE	1
							OTHER	1	OTHER	3	20 YEARS OR MORE	2			POST GRADUATE QUALIFICATION	1
									REGIONAL OFFICE	4					OTHER	6
		44		44		44		44		41		41		34		42
								*		**		***		****		*****

* 3 CANDIDATES DID NOT RESPOND
** 3 CANDIDATES DID NOT RESPOND
*** 5 CANDIDATES DID NOT RESPOND
**** 23 CANDIDATES DID NOT RESPOND
***** 3 CANDIDATES DID NOT RESPOND

Q10 The aim of this question was to ascertain industry's perception of the necessary skills to succeed as a catering manager. The results have been listed in order of identified priorities as expounded by the respondents (Table 4.6).

Q11 and 12

These two questions were included to ascertain the perceived personality traits characteristic of Catering Managers within the industry. This information was then compared to results of personality tests (section 4.4) conducted with the students included in the sample, and subsequently with other research data in this field collected in the United States of America (Macdaid, McCaulley and Kainz, 1986).

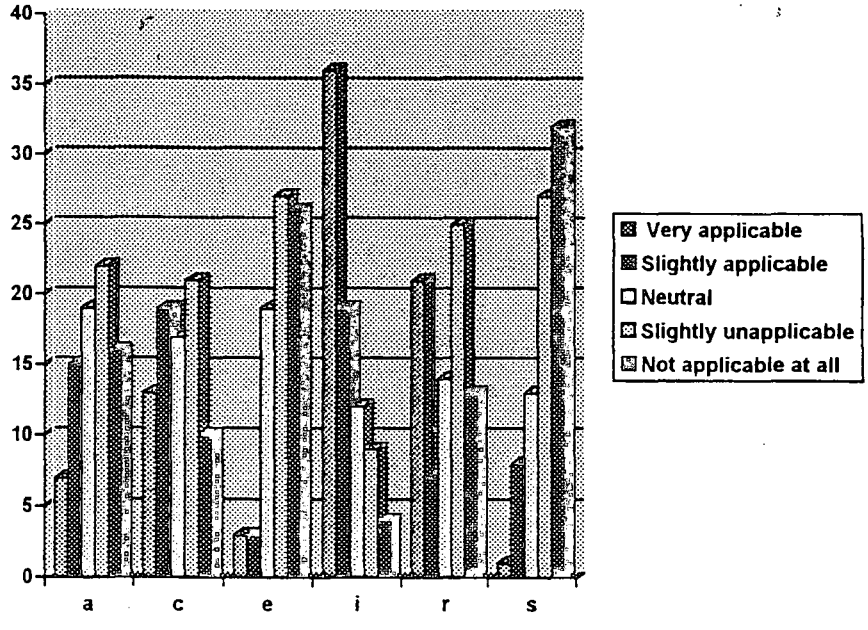
Figure 4.1 shows that all of the respondents there was a definite variance in personality predispositions perceived as characteristic of Food Service Managers. The results showed the themes in rated order:

- A - creative / artistic
- C - conscientious
- E - energetic
- I - independent / introspective
- R - stable / reliable
- S - social

TABLE 4.6

RANKED MEANS OF QUALITIES MOST REQUIRED OF A FOOD SERVICE MANAGER AS IDENTIFIED BY MEANS OF A QUESTIONNAIRE COMPLETED BY MANAGERS WITHIN THE INDUSTRY OF CONTRACT CATERING INDUSTRY (n = 83)

AVERAGE RANKING	VOCATIONAL QUALITIES OF A FOOD SERVICE MANAGER
4.81	PUNCTUALITY / TIME MANAGEMENT
4.74	HYGIENE
4.73	DELEGATION
4.71	HUMAN RELATIONS
4.71	COMMUNICATION (SUPERIORS)
4.69	WORKING TO DEADLINES
4.68	SELF CONFIDENCE
4.64	CO-ORDINATE STAFF
4.64	COMMUNICATION (SUBORDINATES)
4.63	SELF MOTIVATION
4.63	PERSONAL PRESENTATION - IMAGE/APPEARANCE
4.62	PERSONAL INTEGRITY
4.62	COMMUNICATION (PEERS)
4.57	WORK STUDY / EQUIPMENT USAGE
4.51	IMPLEMENT PLANS
4.51	MATURITY
4.50	ABILITY TO WORK UNDER PRESSURE
4.49	HEALTH
4.48	WORK WITH AND THROUGH PEOPLE
4.47	DEVELOP PLANS
4.46	STAFF MOTIVATION
4.43	TRAINING OF SUB-ORDINATES
4.43	ADAPTABILITY AND VERSATILITY
4.39	WORK WITHIN A SYSTEM
4.39	ACCOUNTING SKILLS
4.38	CREATIVITY
4.37	ASSERTIVENESS
4.36	FINANCIAL MANAGEMENT
4.36	IMPLEMENTATION OF SOLUTIONS
4.35	INNOVATIVENESS
4.35	DECISION TAKING WITHIN DEADLINES
4.35	STAFF SUPERVISION
4.35	CROSS CULTURAL KNOWLEDGE
4.33	CROSS CULTURAL LIAISON
4.30	CO-ORDINATION OF RESOURCES
4.29	CO-ORDINATION OF ACTIVITIES
4.27	NEGOTIATION SKILLS
4.23	NUTRITIONAL KNOWLEDGE
4.20	DEMONSTRATION/EXPLANATION OF USE OF EQUIPMENT
4.18	INTERPERSONAL EMPATHY
4.18	PRACTICAL ABILITY TO WORK WITH HANDS
4.07	PERSONAL STRENGTH
3.99	PROBLEM IDENTIFICATION
3.99	CONFRONTATION OF UNCERTAINTY
3.74	ABILITY TO STAND ALONE
3.65	EXTROVERT PERSONALITY
3.46	ABILITY TO TAKE CALCULATED RISKS
3.33	KNOWLEDGE OF KITCHEN DESIGN AND LAYOUT
3.33	NEED TO RELOCATE WITH JOB
3.33	CONFLICT MANAGEMENT
3.33	COMPUTER LITERACY



KEY: PERSONALITY TRAITS

A	Creative/artistic
C	Conscientious
E	Energetic
I	Independent/introspective
R	Stable/reliable
S	Social

FIGURE 4.1: PERSONALITY TRAITS OF CATERING AND REGIONAL MANAGEMENT STAFF WITHIN THE CONTRACT CATERING INDUSTRY

Table 4.7 represents the ranked average of the perceptions of Catering Managers to various behavioural traits. To read the Table, it is necessary to note that the rating is from one to five, therefore the averages of 2.5 and above represent a favourable predisposition for the listed behavioural trait. Averages of 2.49 and below represent dissatisfaction with the listed behavioural trait and therefore favour is found with the opposite of that behavioural trait.

TABLE 4.7

RANKED MEANS OF PERSONALITY TRAITS MOST REQUIRED BY A FOOD SERVICE MANAGER
(n = 83)

AVERAGE RANKING	SCALE OPTION
4.38	BASE DECISIONS ON PERSONAL VALUES
4.09	AWARE OF OTHER PEOPLES' FEELINGS
3.89	ENJOY NEW PROBLEM SOLVING SITUATIONS
3.88	WORK METHODICALLY
3.56	ENJOY LEARNING NEW SKILLS
3.17	LOOK FOR NEW POSSIBILITIES RATHER THAN KNOWN FACTS
3.05	LIKE PLEASING PEOPLE
3.04	PREFER FLEXIBILITY AND SPONTANEOUS WAYS
2.97	WORK IN BURSTS OF ENERGY WITH ENTHUSIASM
2.77	CAN LEAVE THINGS OPEN FOR ALTERATION
2.75	WORK WITHOUT MUCH ANALYSIS OR ORDER
2.63	RELATE TO PEOPLE AND INNER IDEAS
2.27	LIKE QUIET / DISLIKE INTERRUPTIONS
2.23	HAVE TROUBLE MAKING DECISIONS
2.22	ADAPT TO CHANGING SITUATIONS
2.10	ENJOY WORKING ALONE
1.78	BATTLE TO DISCIPLINE PEOPLE IN THE WORKPLACE
1.51	HAVE TROUBLE COMMUNICATING
0	

Q13 and 14

The results presented In Table 4.8 show that the importance of the various languages spoken in Natal varies in the workplace. English is the language used most frequently, Zulu is the second most frequently used language in the workplace. As seen in Table 4.8, Afrikaans shows a marked insignificance in usage when compared to the high modes and averages depicted for both English and Zulu.

Table 4.9 indicates the forms of communication as they would be used with various levels of personnel from the perspective of a Food Service Manager.

TABLE 4.8

RATED VALUE OF AFRIKAANS, ENGLISH AND ZULU
AS THEY APPLY TO THE ROLE OF A CATERING MANAGER (n = 83)

VARIABLE	ENGLISH	AFRIKAANS	ZULU
* MODE	5	1	4
MEDIAN	5	2	4

* MODE - 5 = USED FREQUENTLY
4 = USED FAIRLY OFTEN
3 = USED OCCASIONALLY
2 = SELDOMLY USED
1 = NOT USED AT ALL

TABLE 4.9

RATED FORMS OF COMMUNICATION AS USED WITH VARIOUS LEVELS OF
PERSONNEL WITHIN THE FOOD SERVICE INDUSTRY (n = 83)
(The same modes as in Table 4.8 apply)

	SUPERIOR	PEER	SUBORDINATE
VERBAL	4	4	4
WRITTEN	3	2	3
DEMONSTRATION	3	3	4

Q15 Of the sample (n = 83) which completed the questionnaire, only thirteen respondents indicated their involvement in the selection and recruitment of staff.

Q16 The responses to question sixteen (Table 4.10) indicate the rated effectiveness of certain selection methods as seen by those personnel in the contract catering industry who are involved with the selection and recruitment of staff.

As far as selection of candidates is concerned, all the respondents in industry placed a high value on the submission of a formal qualification indicator, with the least effective selection method indicated being the informal interview.

TABLE 4.10

RATED EFFECTIVENESS OF VARIOUS SELECTION METHODS AS IDENTIFIED BY PERSONNEL WITHIN THE CONTRACT CATERING INDUSTRY WHO ARE INVOLVED WITH THE SELECTION AND RECRUITMENT OF CATERING MANAGERS (n = 13)

CRITERIA FOR SELECTION	MODE	NUMBER OF RESPONSES	RANK
1. SUBMISSION OF FORMAL QUALIFICATION/EDUCATIONAL CREDENTIALS	5	7	1
2. PANEL INTERVIEW	3	6	6
3. STRUCTURED INTERVIEW	4	7	2
4. INFORMAL INTERVIEW	2	5	8
5. DEMONSTRATION OF A PRACTICAL SKILL	4	6	3
6. COMPLETING A COGNITIVE TEST	3	8	5
7. COMPLETING AN ABILITIES TEST	3	5	7
8. PERSONALITY TEST	4	5	4

NOTE: THIS KEY GIVES A DESCRIPTION FOR EACH MODE
MODE - 1 = NO EFFECT
2 = MINIMAL EFFECT
3 = AVERAGE
4 = EFFECTIVE
5 = VERY EFFECTIVE

4.4 PERSONALITY TEST

4.4.1 Introduction

Personality tests were conducted on the student sample group in order to establish the extent of the correlation between the desired traits as expounded by industry and those of the selected students.

4.4.1.1 *Jung Personality Test*

As discussed in section 2.7.6, the Jung Personality Test proposes that each individual has a personality based on four basic preference extremes. These are:

- (I) introversion - (E) extroversion
- (S) sensing - (N) intuition/knowing
- (T) thinking - (F) feeling
- (J) judgement - (P) perception.

From each pair of extremes listed, an individual will show a tendency to associate to one of the two extremes in each of the four categories. These eight 'extremes' are represented as 'TYPES' for the purpose of Tables 4.11 to 4.14.

The Jung Personality test was selected as the method of determining the personality types indicative of each of the student sample groups (first, second and third year). The results for each of the three sample groups can be seen in Tables 4.11, 4.12 and 4.13 respectively.

TABLE 4.11

PERSONALITY TRAITS RECORDED FROM 1ST YEAR FOOD SERVICE MANAGEMENT STUDENTS DURING THE YEAR 1990 BY MEANS OF THE JUNG PERSONALITY QUESTIONNAIRE (n = 26)

FIRST YEAR

	FREQUENCY	PERCENTAGE %	CUMULATIVE FREQUENCY	CUMULATIVE PERCENTAGE %
TYPE E	22	84.6	22	84.6
TYPE I	4	15.4	4	15.4
TYPE F	19	73.1	19	73.1
TYPE T	7	26.0	7	26.9
TYPE N	17	65.4	17	65.4
TYPE S	9	34.6	9	34.6
TYPE J	19	73.1	19	73.1
TYPE P	7	26.9	7	26.9

TABLE 4.12

PERSONALITY TRAITS RECORDED FROM 2ND YEAR FOOD SERVICE MANAGEMENT STUDENTS DURING THE YEAR 1990 BY MEANS OF THE JUNG PERSONALITY QUESTIONNAIRE (n = 23)

SECOND YEARS

	FREQUENCY	PERCENTAGE %	CUMULATIVE FREQUENCY	CUMULATIVE PERCENTAGE %
TYPE E	21	91.3	21	91.3
TYPE I	2	8.3	2	8.7
TYPE F	16	69.6	16	69.6
TYPE T	7	30.4	7	30.4
TYPE N	13	56.5	13	56.5
TYPE S	10	43.5	10	43.5
TYPE J	8	34.8	8	34.8
TYPE P	15	65.2	15	65.2

TABLE 4.13

PERSONALITY TRAITS RECORDED FROM 3RD YEAR FOOD SERVICE MANAGEMENT STUDENTS DURING THE YEAR 1990 BY MEANS OF THE JUNG PERSONALITY QUESTIONNAIRE (n = 11)

THIRD YEARS

	FREQUENCY	PERCENTAGE %	CUMULATIVE FREQUENCY	CUMULATIVE PERCENTAGE %
TYPE E	9	81.8	9	81.8
TYPE I	2	18.2	2	18.2
TYPE F	4	36.4	4	36.4
TYPE T	7	63.6	7	63.6
TYPE N	7	63.6	7	63.6
TYPE S	4	36.4	4	36.4
TYPE J	5	45.5	5	45.5
TYPE P	6	54.5	4	54.5

TABLE 4.14

PERSONALITY TRAITS RECORDED FROM 1ST, 2ND AND 3RD YEAR FOOD SERVICE MANAGEMENT STUDENTS DURING THE YEAR 1990 BY MEANS OF THE JUNG PERSONALITY QUESTIONNAIRE (n = 60)

CUMULATIVE RESULT (FIRST, SECOND AND THIRD YEAR)

	FREQUENCY	PERCENTAGE %	CUMULATIVE FREQUENCY	CUMULATIVE PERCENTAGE %
TYPE E	52	86.7	52	86.7
TYPE I	8	13.3	8	13.3
TYPE F	39	65	39	65
TYPE T	21	35	21	35
TYPE N	37	61.7	37	61.7
TYPE S	23	38.7	23	38.7
TYPE J	32	53.3	32	53.3
TYPE P	28	46.7	28	46.7

4.4.2 Analysis of the Data

The data presented in Tables 4.11, 4.12 and 4.13 indicate the following personality results:

°	the first years =	E (extroversion)
	(n = 26)	F (feeling)
		N (intuition)
		J (judgement)
°	the second years =	E (extroversion)
	(n = 23)	F (feeling)
		N (intuition)
		P (perception)
°	the third years =	E (extroversion)
	(n = 11)	T (thinking)
		N (intuition)
		P (perception)

As a combined group of first, second and third year students(Table 4.14), the cumulative result of EFNJ is the same as indicated in the first year. It should be noted that the sample size in the first year is the largest group, which would have a favourable effect on the final cumulative result with regard to this sample.

EFNJ are people who are (First Year):

> *Responsible and responsive. Generally feel real concern for what others think or want and try to handle things with due regard for the other person's feelings. Can present a proposal or lead a group discussion with ease and tact. Sociable, popular, sympathetic. Responsive to praise and criticism.*

(Consulting Psychologist Press, 1988)

EFNP are people who are (Second Year):

> *Warmly enthusiastic, high spirited, ingenious, imaginative. Able to do almost anything that interests them. Quick with a solution for any difficulty and ready to help anyone with a problem. Often rely on their ability to improvise instead of preparing in advance. Can usually find compelling reasons for what they want.*

(Consulting Psychologist Press, 1988)

ETNP are people who are (Third Year):

> *Quick, ingenious, good at many things. Stimulating company, alert and outspoken. May argue for fun on either side of a question. Resourceful in solving new and challenging problems, but may neglect routine assignments. Apt to turn to one interest after another. Skilful in finding logical reasons for what they want.*

(Consulting Psychologist Press, 1988)

In a study done in the United States of America, computer scoring between the years 1971 and 1984 with a sample size of 1082 in terms of Food Service Workers indicated that the highest scoring personality type was ENFP (Macdaid *et al*). This therefore compares to the personality type found in the second year batch of students while, overall, the personality type ENFJ predominates

It is therefore concluded that the results of all three years compared to the investigation carried out in the similar industry in the United States of America show very little difference.

The two personality traits differing in the other years, namely first and second, are P or Perceptive and J or Judging. Perceptive people tend to be flexible and spontaneous in their approach to life and prefer to keep their options open. Judging people prefer a planned and organised approach to life and prefer to have things settled.

CHAPTER FIVE

GENERAL DISCUSSION AND RECOMMENDATIONS

5.1 OVERVIEW

In Chapter one it was stated that this study was undertaken to establish an effective selection programme for the identification of those students who would meet the academic and vocational requirements of the educational programme towards the Diploma in Food Service Management. From the information collated for this purpose, the reasons for the partial success in achieving this goal are offered. At the same time, the reasons for failure to accept some of the findings are discussed.

5.2 EVALUATION OF THE RESULTS

To reach the goal of identifying the elements needed for an effective student selection process, this study investigated/identified the following:

- how the academic performance of tertiary students compared to their scholastic performance;
- the most important vocational skills pertaining to the function of a Food Service Manager as identified by the representative industries;

- what personality traits were common to both prospective Food Service Management students and persons employed in the related industry.

These respective goals were achieved. To produce the elements required for a differential selection programme, it was necessary to integrate the results. Analyses of all the results revealed three main foci for the development of the selection process. These were:

- Student Selection - ;
- Vocational Selection Criteria;
- Personality traits of Food Management Service students and industrial requirements.

5.2.1 Student Selection - Predictability and Sustainability

A selection programme must be designed to identify and select those persons best suited to sustain an academic programme and then succeed in the identified career or job position. This entails matching an individual to their school performance, tertiary success and ultimately to job compatibility.

As technikon education has a distinct technical slant and is ultimately job-specific in terms of educational programmes, it became evident through the findings that a selection programme had to predict success beyond first year to ultimately ensure job competence (SAPSE 118, 1987:22)

The educational system in most South African schools considers "intelligence" as a single general capacity which should enable an individual to be clever in all situations (Gardner in Pienaar, 1996). Since each individual is unique, a single

general ability is not demonstrated at school, and it is therefore impossible to use academic school achievement as the sole predictor for future learning success and ultimate success in life.

This study found that the success displayed from the first year of tertiary study and onwards increased with the years of study and could be used as a means of predicting sustainability in terms of the relevant programme.

Most selection programmes occur by means of an elimination process whereby the person most suited for an activity or job is identified. At tertiary institutions the process has long-term implications, since the selected candidate must be able to complete the programme and then he must meet the requirements demanded by the industry for which he has been trained. Obligations to both satisfy the state subsidy's financial confinements and the Reconstruction and Development programmes educational aspirations, means that the technikon has to ensure that their selection strategies are aimed at ensuring optimal success in both areas. The tertiary institution therefore an underpinning obligation to choose those people who will satisfy all of the financial, social and academic conditions, and who will ultimately move successfully into their selected career fields.

5.2.1.1 *The Value of Senior Certificate Results as Predictor Elements*

To try to ascertain those factors to be used in predicting student success, the study started by considering the value of school performance in the form of final matriculation results. As can be seen in Chapter 4, the matriculation subjects were correlated both with other matriculation subjects and then with the subjects to be studied over the three years of the programme. The results showed very little correlation between those subjects studied at school and a student's performance

in the Food Service Management programme. Since most selection programmes used to admit prospective students into tertiary educational institutions use past school achievement as a means of predicting future success, the low correlation of past academic achievement must be considered at this point. Since the results of Senior Certificate examinations fail to predict latent potential in prospective students this opens up the possibilities of considering other means of measuring future success. While the correlation in these results was poor, the four subjects with some correlation were:

- English
- Afrikaans
- Home Economics
- Biology

The general poor correlations could be the result of three factors, namely:

- a very small sample size (n = 51);
- the subject diversity in the sample was very large (21) with only a few subjects being common (section 3.5.1.2 a);
- owing to the past National educational strategy, there could have been a variance in the standards due to the offered diversity of various education departments, i.e. Natal Education Department, KwaZulu Education Department, Department of Education and Training, House of Delegates and House of Representatives. This should improve as there is now one education department for KwaZulu-Natal which should therefore ensure greater standardisation in the future.

The subjects showing the greatest correlation with the related field of study were Home Economics and Biology. Owing to past perceptions, Home Economics was considered only suitable for study by females and this has resulted in the majority of applicants wishing to study Food Service Management being of the female gender (James, 1992). What should be noted is that this phenomenon supports the current corporate move to appoint more women in managerial positions (Anon, 1990c:10), while the signals sent by the hospitality industry (Table 4.5) which show a preference for males within this industry, are negated.

5.2.1.2 *Language*

The languages showing some correlation in this study were English and Afrikaans. It can be deduced that as these two languages were common to the entire sample (n = 53), there would automatically be a higher propensity for a correlation. Afrikaans was seen to have a greater influence than English in terms of first year success and this is hard to explain since English is used predominantly in the province of KwaZulu-Natal where this study was conducted. A possible explanation - but one which cannot be verified by any research at this stage - is that Afrikaans Second Language is offered at a more basic level than English and more so at black schools, and that candidates therefore score well in this subject.

The significance of languages in terms of predictability was reassuring, as languages featured strongly in the vocational questionnaire conducted for the purpose of this study. The industry rated English as the most used language on the job, followed by Zulu (Table 4.8), in both forms of verbal communication and

demonstration. The reported relevance of the value of Afrikaans in the selection process at Technikon Natal must be questioned, since it appears to have no application in the work environment as shown through the results of the questionnaire. While statistically Afrikaans showed some correlation to first year subjects studied, for the actual process of predicting success at Technikon Natal Afrikaans was seen to be of limited value.

With languages being a part of a person's predicted general ability, the performance in languages at school is seen to have some relationship with the person's subsequent performance at technikon level (Stoker *et al.*, 1985). Relevant language proficiency (i.e. English) provides each student studying at the technikon with a fair chance to sustain the academic programme (De Klerk, 1988:2), and for this reason it should also be considered as a necessary inclusion in a suitable selection programme. As languages are seen to be a part of those subjects that form the basis of all general abilities, the value of the g-test (section 2.7.3) could be considered.

In terms of vocational criteria, Gerstein & Reisman (1983) identified that the need to communicate through verbal and written interchange is of critical value to all managers. However no significant correlation was found between these identified school subjects (languages) and the student's academic attainment in the subject Management at tertiary level. It should be noted that particularly with the major subject Management, there was no indicative school subject to predict performance, and yet this subject showed some influence in terms of its correlation with subsequent years of study. If the training institution is to accommodate the management needs of industry, then some school predictor should be identified to be a part of the selection package.

5.2.1.3 *General*

It appears from these findings that there is very little value in terms of academic criteria that can be gleaned from a matriculation certificate for the prediction of actual success in the education programme towards the Diploma in Food Service Management. As the matriculation subjects showed a very poor correlation with the subsequent tertiary subjects, their validity as indicators in a selection process must be questioned. In the light of this, it cannot be recommended that the Senior Certificate constitutes the sole means of selecting prospective students. Gerstein and Reisman (1983) reported that academic success at secondary school level in the United Kingdom did provide some indication of educational success at tertiary level, but only for the first year. In a post-apartheid South Africa, the Reconstruction and Development Programme makes provision for a strategy on training and education and this implies that using academic criteria for selection in future should not be overlooked. For this reason identified school subjects should be used as part of the process of selecting incoming students, but it certainly does not identify sustainability after the first year of study. Since the school systems have an academic slant, all the scholars who do not demonstrate an aptitude in this regard are "lost" as their latent potential for success in any other form are overlooked. Tertiary institutions base the identification of future success on the past academic success of Senior Certificate, and a vast number of people do not succeed in this area, surely the latent potential of candidates cannot be based solely on matriculation performance.

While it appears that there is very limited connection academically between the results achieved for a Senior Certificate and the results obtained during the educational programme towards a Diploma in Food Service Management, the matric results should not be totally discredited. In the light of the high ranking of

communication skills (Table 4.6 and 4.8) for the function of a Food Service Manager, together with the indicated correlation of languages between the subjects studied in first, second and third year (Tables 4.2, 4.3 and 4.4), it is recommended that the achievement in languages at school be used as one of the means of identifying and selecting prospective students. This is currently implemented as a general policy for technikon admission in the G rules 7(1).

5.2.1.4 *Tertiary Performance - Student Sustainability*

The increase in the correlation between academic performance over the three years of study indicates that it may be possible to monitor a student's progress and predict their ability to sustain the programme based on performance the previous year.

The correlation between dependent and independent variables for first, second and third year of study (Tables 4.2, 4.3 and 4.4) showed a progressive increase in the relationship between the achievement in the subjects of one year and that of the following year. This suggests that it would be possible to analyse the results achieved in some of the subjects studied in the first year to predict the student's success rate in the second year, and consequently the same prediction can be made in the second year with regard to projected achievement in the third year. While these results cannot be used to select prospective students, they could certainly assist in identifying a student's ability to sustain academic achievement and to complete the course.

Significant subjects in the second year are Science, Management 1 and Food Theory 1 (Table 4.3), while in the third year Food Practical and Management 2 showed a high correlation with Sociology (Table 4.4). What is interesting is that the management subjects are one of the major features of the course relating to the ultimate job specification. The management subjects prove to be a reliable measure of sustainability, yet there are no indicators at school level that could be used to predict if a prospective student possesses managerial qualities or has the latent potential to be developed into a good manager. Since this study revealed that managerial skills are multi-disciplinary, it has become possible to question the multiple intelligence approach to teaching at primary and secondary school level as proposed by Gardner in Pienaar (1996). This is an area to be considered for further study.

5.2.2 Vocational Selection Criteria

The study indicated that the vocational skills and attributes of a Food Service Manager are extensive and multi-faceted. As all individuals are unique and as it is impossible for all prospective students to possess all of the desired qualities in equal proportions, a differential selection process should be designed to select those students who demonstrate the possession of the best possible combinations of the skills required.

5.2.2.1 *Gender*

The results imply the need to recruit more male students as this appears to be the requirement of the industry. The information in Table 4.5 supports this, as it appears that the careers of males progress at a more rapid rate than these of females within the industry. When considering "position"(Table 4.5, column 4)

within the industry, it is segregated into Regional Management and Catering Managers. A Regional Manager is a position of Area Manager and above, a position which is more senior to that of Catering Manager. A Catering Manager looks to improve his/her career prospects by being promoted to a Regional Management position. The findings revealed that the majority of senior management positions, i.e. Regional Management, was filled by males (84%) compared to (16%) females. These findings imply:

- that the technikons are not supplying the correct gender mix as required by industry;
- that industry has a gender bias.

This phenomenon tends to oppose the general trend in industry. Mr Manning, a Management Consultant, indicated that the number of women in the South African workforce had doubled since the end of World War 2, and said that if the drastic shortage of managers was to be met, the present inequalities experienced by women in the workplace would have to be addressed (Anon, 1990c:10). Technikon Natal currently recruits more female than male students to study Food Service Management, as more female students apply for this course (Appendix H). The reason for this disparity is that, traditionally only women were seen to have an interest in food and related subjects. This preconception is apparently still prevalent among the South African youth, particularly as Home Economics at secondary school level is almost exclusively chosen by girls.

In the light of Mr Manning's projections (Anon, 1990c), the current gender ratio in the Department of Food and Nutrition at Technikon Natal (i.e. the majority of students being female) appears to meet general industrial needs. However, from the findings in this research this gender ratio is not meeting the needs of the food

service industry. Appendix H, for the year 1992, indicates that 23 male students (11.6%) were enrolled for the Food Service Management programme as opposed to 176 female students (88.4%). When this is compared to the findings presented in Table 4.5, the industry shows a ratio of employed males:females as 47%:53%. In line with this, males tend to get promoted faster, which also indicates the industry's preference for males managers. If the regional management positions are considered, males hold 84% of the positions and females only 16%. With these considerations in mind, the technikon should look towards an equalising of the current gender disparity, rather than a complete reversal of the ratios.

These findings provide the scope for further study into the gender bias within the related industry.

5.2.2.2 *Racial*

While the findings indicated that the majority of respondents were White (Table 4.5, column 2) followed by Blacks, with Indians and Coloureds holding fewer positions, the percentage breakdown indicated that the admission to Technikon Natal in 1988, 1989 and 1990 favoured white applicants and did not take cognisance of the industrial need for greater attention to be given to the other racial groups.

At the time when these data were collected, the changes in post-1994 South Africa were not apparent, and educational institutions were still largely segregated, preventing Technikon Natal from accepting or 'poaching' non-white students from other tertiary institutions. This also controlled the natural effect or influence of rival institutions, as described by Porter in his theory about competitive advantage (Porter, 1985).

In the light of the time constraints, this study did not include any discussions on or investigation into the effects of 'affirmative action'.

5.2.2.3 *Recommendations for Vocational Selection*

Management

Figure 2.2 and Table 4.6 illustrates industry's identified need for a variety of vocational skills necessary to perform the function of a Food Service Manager. What is apparent is that managerial functions constitute the largest part of the job of a Food Service Manager. Management therefore forms a large part of the Food Service Management course and is studied over three years. However, as has been discussed earlier, this study could not identify any specific school subject that would serve as a predictor for successful management skills. Four subjects that showed some correlation with success only in the first year of tertiary study were identified. It is therefore suggested that predictive elements other than those four subjects also be identified at secondary school level in order to predict whether a prospective student would be successful in a managerial position.

Communication Skills

Communication skills play a role in all levels of the hierarchical structure in the industry and a variety of forms must be used, primarily verbal, written and demonstrative. While language is used as a selection criterion throughout the technikon, the programme in Food Service Management should consider language usage not just for general proficiency, but certainly as a prerequisite for career success. In the light of this more research should be done in this field.

Computer Literacy

Table 4.6 indicates that managers perceive that computer knowledge has little value as a management tool in the food service industry. In the time period since these questionnaires were completed, the industry has advanced in the acquisition and utilisation of computer technology. It is therefore assumed that, should these questionnaires be used for data collection after 1994, the ranking of computer knowledge would reflect a higher value.

With the advent of Internet, computer knowledge and its application to the Food Service Industry will require further study.

5.2.3 Personality Traits

With the results of the correlation between school subjects and performance at tertiary institutions showing a very low correlation, it becomes necessary to consider alternative methods for predicting a persons future success. In the light of this, a method of identifying personality traits that can be matched to success in tertiary programmes, and long term to career success, could be a most valuable selection tool.

The findings indicated that it is possible to identify appropriate personality traits through the application of the Jung Personality Questionnaire. These results were in line with those of an industrial study conducted in America among food service workers (Macdaid *et al.* 1986). As it has been argued that basing selection criteria on personality traits is "unfair" (Powell, 1973:17), this means of selecting candidates should be used only as a part of a comprehensive selection procedure.

By adopting such a selection procedure, the organisation takes on additional responsibility and financial commitment because a qualified psychologist must oversee the tests. This is necessary to ensure credibility and thus gain acceptance for such proceedings and ensure that the eventual results are regarded as valid. However if these tests assist in selecting the most appropriate students and ultimately employees for the industry, then the cost spread over the years of successful study and employment becomes negligible.

As recently as March 1996 it appeared that Technikon Natal had licensed a computer assisted personality trait test, known as Discus. This was licensed to the Human Resource Department and although not being used specifically for student selection procedures, further study into this area could suggest possibilities for this application (Roodt, 1996, personal communication).

As there are a number of personality tests available, it would be necessary to do further study to ascertain which personality test would be best in the selection programme.

5.2.4 Selection Methods

Of the 83 people in industry who completed the questionnaire, 13 respondents were involved in selecting and recruiting staff. The selection methods that they indicated as being successful are:

- academic qualifications
- structured interview
- practical demonstration
- personality test

Academic Qualification

Industry places a top priority on academic qualifications when new Food Service Managers are recruited. The fact that most students who complete the course find employment in the related industry, therefore implies that the academic and training standards set by Technikons Natal are acknowledged and accepted. The recognition received in this regard places a tremendous responsibility on this Institution to keep the course content relevant and to maintain standards. If the academic qualification as a criterion for success in the workplace were to be disregarded by industry, it would indicate to the training institution that:

- it is not meeting the needs of industry. Alternative training avenues must then be identified;
- the potential for rival alternative training will be further developed. Examples of such rivals (Porter, 1985) exist and can be seem in Figure 2.1.

A decrease in the need for technikon diplomates would result in fewer students, less financing, and in severe circumstances, total abolition of the relevant programme(s).

Structured Interview

As indicated by industry, a structured interview was the second most utilised means of selecting suitable personnel. Since verbal communication is considered to be an important skill required of a Food Service Manager, this method will allow the interviewer to assess the candidate's communication skills.

The Department of Food Service Management conducts interviews as a part of the student selection process. These interviews are unstructured and act as an information dissemination process rather than ascertaining the skills of the candidate. Further investigation is required into the structuring of the interview procedure and training in the process of interviewing for the staff of the Department of Food and Nutrition.

Practical Demonstration

The practical demonstration method featured as the third most applicable means of selecting food service staff by the recruitment staff in industry. With the related practical component of the job of a Food Service Manager, it is suggested that this could be included as a selection strategy for Food Service Management students. If Technikon Natal institutes this as part of the selection process for incoming students then more research is required to identify the nature of the demonstration(s).

Personality Test

Personality tests are used within industry to match the personality type of applicants to the culture and ethos of the industry. The findings illustrated industry's support for this method as part of a selection strategy. This, coupled with the favourable findings of the personality tests conducted on the student sample, suggests that it would be possible and desirable for Technikon Natal to implement personality tests as a part of their selection process.

As indicated in section 5.2.3 the new computerised personality trait package "Discus", which has been licensed to the Human Resource department at Technikon Natal also has potential to be included as part of a selection programme, but further study is required into this.

General

If the technikon and the related industry are selecting the same person to fulfil the ultimate career requirements, then the selection techniques should be compatible. The findings of this study indicated that (Table 4.10) academic qualifications may be used as indicators of competency, and for this reason it is suggested that the matriculation results still be utilised in the selection process. A structured interview is the next most utilised method, followed by a demonstrated practical skill and then a personality test.

In order to meet the need to ascertain whether prospective students possess the diversity of skills required to study for and fulfil the role of a Food Service Manager (Appendix B), appears that a variety of selection methods will have to be introduced.

5.3 THE RESEARCH PROCESS

5.3.1 Methodology

The methods used for obtaining the data were the Multiple Regression Correlation, the Analytical Method by means of a the students academic results, a questionnaire and the Jung Personality Questionnaire completed under the

guidance of a registered psychologist. The SAS (statistical analysis systems, Institute INC) computer software programme was used to capture and process the raw scores of the first, second and third year students' matriculation results and those of their final year-end results for each of the three years of study.

The size of the student sample used over the duration of a three year academic programme (1988, 1989 and 1990) was rather small (n = 51). This small sample size as well as the diversity of school subjects studied limited the results that could be obtained from the multiple regression process.

5.3.2 The Multiple Regression Correlation

The multiple regression correlation was calculated for the senior certificate results and the final year end results for each of the first (1990), second (1989,1990) and third (1988, 1989, 1990) year group of students. This method was selected to test and partially accept the first hypothesis (section 1.4.1). Owing to the small sample size (n = 51) and a great variation in matriculation subjects, only the subjects English, Afrikaans, Biology and Home Economics showed some relationship or significance, and these were relatively poor. One reason for the limited common subjects is the gender breakdown, as very few males choose the subject Home Economics at secondary school level owing to prejudices in subject selection.

It would be recommended that this method be continued on an annual basis to increase the sample size and thereby produce a more significant sample size which would establish trends and produce more reliable indicators of success.

5.3.3 The Questionnaire

The questionnaire was devised and administered to test and accept the second hypothesis (section 1.4.2).

The onus for the distribution of the questionnaire was in the hands of the personnel department of each of the three contract catering companies involved in this study. This resulted in a sample that had a greater representation of regional management staff than of Catering Managers.

The industry as a whole was extremely supportive of the work done in this regard and assisted in the data collection. If a follow-up study of this nature was to be undertaken, it could only be completed based on the assumption that industry would once again provide their support and assistance to gather subsequent data.

The results of the questionnaire supported the third assumption (section 1.7.3) namely that the three catering companies involved in the survey, while competing fiercely in the market place, would be able to provide common information for the purpose of this study and in the interest of the industry as a whole.

The information based on the responses to the questionnaire facilitated the identification of the vocational skills required of a Food Service Manager. Another means by which industry informs institutions for the skills that they require in potential employees is by means of advertising for the recruitment of personnel (Figure 2.2) This means of informing of employment needs by listing the required vocational skills, should not be overlooked by institutions that provide the manpower for those advertised positions. While the questionnaire was successful in rating the required employment skills needed by a Food Service

Manager, what did not become apparent through the results of the questionnaire was how to evaluate these potential skills or how to identify students who possess such skills. This could serve as an area for further study.

As part of the questionnaire, the respondents were asked to evaluate certain behavioural or personality traits with reference to a Food Service Manager. As these questions were not based on the exact data of the Jung Personality Questionnaire, the information collected was not comparable to the results collected from the student sample.

The value of the responses to the question on selection procedures is questionable since very few respondents were involved in the selection and recruitment of staff. This responsibility mainly lies with the regional Personnel Manager and thus Catering Managers were not in a position to respond appropriately. As the Technikon and industry should be selecting the same person, a recommendation would be that the recruitment personnel from industry get involved in the selection of first year students. The technikon would benefit from the experience and training of Human Resource personnel for the process of recruitment and selection, and the industry would benefit as they would have jump start on selecting the "right" person who will eventually join the industry.

5.3.4 The Jung Personality Questionnaire

This test was readily available and easy to administer with the assistance of a registered psychologist. The results correlated favourably with the data available from studies conducted in this field in the United States of America. The success

of this questionnaire and its application assisted in accepting the second assumption (section 1.7.2). As the findings revealed strong positive comparative results, it is recommended that this test be included as part of a selection package.

5.3.5 The Hypotheses

First Hypothesis

In section 1.4.1 it was postulated that the academic performance of students studying towards the Diploma in Food Service Management could be studied to provide academic predictor elements. This hypothesis was only partially accepted, because, while the results of academic performance at secondary school level could be correlated with academic performance at first year level, the correlation was poor even for those subjects indicated in Table 4.1. In comparison, a positive relationship was shown between the academic results over the three years of study, indicating the possibility of monitoring a student's ability to sustain the programme once he/she has been enrolled in the course.

Second Hypothesis

The second hypothesis was accepted (section 1.4.2), as the results of the questionnaire (Table 4.6) showed that it was possible to identify job-related skills needed to be a Food Service Manager. It is suggested that the means of measuring or identifying these skills in a prospective Food Service Manager be investigate in order to suggest effective strategies for selection purposes.

Third Hypothesis

The third hypothesis was that it was possible to integrate the findings of both academic predictor elements and vocational criteria to formulate a selection programme for the Diploma of Food Service management. This was only partially accepted. The findings in this study indicate the need to include:

- academic criteria (Tables 4.1, 4.2, 4.3, 4.4)
- vocational criteria (Tables 4.5, 4.6, 4.7, 4.8, 4.9)
- personality tests (Table 4.14)

It is therefore apparent that selection based solely on a prospective student's past secondary school performance i.e. academic, is inadequate for selection into the Diploma of Food Service Management and eventual job-placement within the industry. However before the third hypothesis can be fully accepted further study is required to identify the means by which these elements can be measured successfully before being formulated into a selection programme.

5.3.6 Restrictions on the Research Process

One major restriction proved to be a lack of time in which to complete the research programme. Since the study was carried out part-time over a period of five years, the inherent value of the findings changed, as the policies, political climate and general selection procedures at Technikon Natal have altered. However certain aspects such as the need for tertiary institutions and the industry to select the same persons, and the fact that the Food Service Management programme is multi-disciplinary, thereby requiring a suitably diversified selection

package, has remained unchanged by time and political policies. This therefore supports the need for a study of this nature.

5.4 RECOMMENDATIONS

The compilation and introduction of a student selection programme for the identification of students most suited to the Food Service Management educational programme could make a great contribution to the success rate of diplomates while also matching the prospective employee with the needs of the related industry.

The selection process should:

- involve three selection methods, namely the senior certificate results, a structured interview and a personality test;
- include a simple co-ordination test which could be administered during the structured interview;
- take cognizance of the school performance in the subjects English, Home Economics and Biology and possibly Afrikaans;
- include the expertise of the recruitment personnel from the related industry.

The implications of the findings of this study are limited owing to the time span over which it was conducted. Since the inception of this study the political changes in post 1994 South Africa have opened up the selection procedure on a racial basis at Technikon Natal. Technological developments in the related industry have resulted in an increase in the use of computers by Food Service

Managers, and there has been a marked increase in the need for improved communication skills with the increase in union action and the subsequent need for effective industrial relations.

It is recommended that further study be conducted into the relationship of academic predictors as a means of selecting successful technikon students. This should involve strategies for looking at the students' mean scores for all subjects, as well as taking a larger sample to compare subject performance in all subjects.

It is recommended that an investigation be launched in order to identify predictor elements at secondary school level that would facilitate the identification of prospective students who would be successful in management programmes. Even the basis of education at secondary school could be investigated to incorporate theories such as that of multi-intelligence (Gardner in Pienaar, 1996), thereby accommodating pupils' individual abilities and ultimately promoting success after school.

While the study has identified the vocational skills most needed by a Food Service Manager, further research is required to establish the most suitable methods for measuring performance with regard to these identified vocational skills.

Should the questionnaire used in this study be considered for future use, questions 11 and 12 on the personality traits must be revised if the results are to have any bearing on the correlation with student performance and the American findings as shown in Macdaid, McCaulley and Kainz, 1986. The Jung Personality Questionnaire showed very positives results for the purpose of this study.

However there is a variety of personality tests available, it is recommended that further studies be done to ascertain which personality test is most suitable. This test should be included as part of a comprehensive selection programme and not in isolation.

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APPENDIX A

MISSION STATEMENT OF TECHNIKON NATAL

In response to the needs of its community and country
Technikon Natal
as a unique and dynamic institution,
shall

educate and train
in the true spirit of tertiary education
high-level career manpower
for leadership roles in the South African society,

advance technology through research and development

and offer its specialised knowledge, skills and resources
to commerce, industry and the people
of the community it serves.

(Du Preez, 1989:9)

APPENDIX B:

CATERING MANAGER - JOB DESCRIPTION

(Peters; Viljoen, 1990)

Scope and General Purpose
To manage the catering services of an organisation/company to their requirements and satisfaction, within the agreed budgetary limits.

Responsible To
A district or area manager
A senior manager - personnel

Responsible For
subordinate catering staff

Liaises With
Customers
Maintenance Department
Suppliers
Other catering managers

Main Duties
- To ensure the provision of quality food and service, to the requirements and satisfaction of the company.
- To plan and cost menus, making sure that budgetary limits and prescribed menus are adhered to.
- To ensure correct and timeous completion of all administrative work.
- To ensure that cash-up procedures are adhered to.
- To ensure that all monies are banked in accordance with laid down procedures.
- To ensure that staff records are kept up to date.
- To ensure that hygiene standards comply with company and statutory requirements.
- To ensure effective security in all areas under your control.
- To be aware of and respond to the needs of your staff, including induction, monitoring performance and coaching, and ensuring appropriate training is effected.
- To carry out on-job-training as requested by the company.
- To ensure that regular fire drills are held, evacuation procedures understood and effected.
- To ensure that MOSA and NOSA regulations are adhered to.
- To complete and submit all necessary, relevant documentation in the event of fire, burglary or accident.
- To ensure that staff are correctly dressed at all times.
- To recruit, interview and manage subordinates complying with the company's statutory procedures.
- To practise and to be seen practising good industrial relations.
- To constantly be aware of the needs of the customer, and to strive continuously to create the right working environment.

APPENDIX C:

LETTER FROM INDUSTRY

SUPERVISION
FOOD
SERVICES

TO WHOM IT MAY CONCERN

CONFIRMATION OF CO-OPERATION WITH RESEARCH PROJECT:
MISS P MEYER

In the spirit of close liaison with Technikon Natal, we endorse the endeavours of Miss Pauline Meyer, lecturer with the Department of Food and Nutrition, to further her qualifications. Such efforts will improve standards generally and shall lead to an increase in professional excellence in the interests of the hospitality industry.

In the light of the above we will gladly assist by availing our Food Services Manager to complete a questionnaire on the skills necessary for the development of an effective student selection programme.

With the escalating expansion of the hospitality industry coupled with a great demand for suitably qualified personnel, we welcome research of this nature in the hope that it will provide some of the solutions.

Yours faithfully
SUPERVISION FOOD SERVICES

M D DAVIES
REGIONAL DIRECTOR

APPENDIX D

QUESTIONNAIRE

TECHNIKON NATAL

DEPARTMENT OF FOOD AND NUTRITION

QUESTIONNAIRE
VOCATIONAL SKILLS : SURVEY 1990

INSTRUCTIONS

A Please read every question carefully before answering it.

B Circle the appropriate response number, unless other instructions are given.

C Please answer all of the relevant questions.

			FOR OFFICE USE ONLY
Q1. Sex	Male	1	
	Female	2	
Q2. Race Group	White	1	
	Black	2	
	Asian	3	
	Coloured	4	
	Other	5	
Q3. What is your home language?			
	English	1	
	Afrikaans	2	
	Zulu	3	
	Other /specify	4	
Q4. What position do you hold within the company?			
	Regional Management	1	
	Catering Manager (F.S.M.)	2	
Q5. If your answer to question 3 is REGIONAL MANAGEMENT, state your current position within the company for example, Area Manager, Personnel Manager, Operations Manager.			

Q6. If your answer to question 3 is CATERING MANAGER then identify the type of operation that you are involved in:

. Industrial - large (supply > 1000 meals/day)	1
. Industrial - small (supply < 1000 meals/day)	2
. Institutional (school/ hospital etc.)	3
. Commercial / Retail	4
. Other/ specify _____	5

Q7. Number of years experience in the catering or food related industry.
= _____

Q8. What position did you hold prior to your current post?
= _____

Q9. Indicate your highest qualification .

. Less than Standard Ten.	1
. Senior Certificate.	2
. Technical Certificate/Diploma	3
. Technikon Diploma	4
. Post-Technikon Diploma	5
. University Degree	6
. Post Graduate Qualification	7
. Other (specify) _____	8

IN ANSWERING THE NEXT FEW QUESTIONS PLACE AN '' X '' ANYWHERE ON THE LINES BETWEEN THE TWO EXTREMES:

EXAMPLE: 1. COMMUNICATION SKILLS

Used frequently __ X __ __ __ Used seldom
Very important of no importance

BY PLACING THE " X " ON THE LEFT HAND SIDE, YOU HAVE INDICATED THAT COMMUNICATION SKILLS WERE USED QUITE A LOT AND HOLD A RELATIVELY HIGH IMPORTANCE TO THE ISSUE BEING ADDRESSED.

EXAMPLE: 2. COMMUNICATION SKILLS

Used frequently __ __ __ __ X Used seldom
Very important Of no importance at all

BY PLACING THE " X " TO THE RIGHT HAND SIDE, YOU HAVE INDICATED THAT COMMUNICATION SKILLS ARE OF NO IMPORTANCE OR USED VERY SELDOM IN THE ISSUE BEING ADDRESSED.

Q10. On a five point scale rate the USE or IMPORTANCE of the following SKILLS/ ATTRIBUTES as they relate to the job of a Food Service Manager.

ark with an " X " on the line.

1. CONFLICT MANAGEMENT

Used Frequently __ __ __ __ __ Not used at all

2. THE ABILITY TO DEVELOP PLANS

Very important __ __ __ __ __ Not important at all

3. THE ABILITY TO IMPLEMENT PLANS

Very important __ __ __ __ __ Not important at all

4. SELF MOTIVATION

Very important __ __ __ __ __ Not important at all

5. ABILITY TO CONFRONT UNCERTAINTY

Not important at all __ __ __ __ __ Very important

6. THE ABILITY TO TAKE EFFECTIVE DECISIONS WITHIN A LIMITED TIME PERIOD

Not important at all __ __ __ __ __ Very important

7. THE ABILITY TO CO-ORDINATE ACTIVITIES

Very important __ __ __ __ __ Not important at all

8. THE ABILITY TO CO-ORDINATE STAFF

Very important __ __ __ __ __ Not important at all

9. STAFF MOTIVATION

Used frequently __ __ __ __ __ Not used at all

10. ABILITY TO TRAIN SUB-ORDINATES / STAFF

Very important __ __ __ __ __ Not important at all

11. STAFF SUPERVISION

Used frequently __ __ __ __ __ Not used at all

12. THE ABILITY TO CO-ORDINATE RESOURCES

Very important __ __ __ __ __ Not important at all

13. PROBLEM IDENTIFICATION

Used frequently __ __ __ __ __ Not used at all

14. SOLUTION IMPLEMENTATION

Very important __ __ __ __ __ Not important at all

15. TAKING CALCULATED RISKS

Not important at all __ __ __ __ __ Very important

16. ASSERTIVENESS IN A LEADERSHIP POSITION

Very important __ __ __ __ __ Not important at all

17. CREATIVITY

Very important __ __ __ __ __ Not important at all

18. INNOVATIVENESS AS A MANAGER

Used frequently __ __ __ __ __ Not used at all

19. PUNCTUALITY

Very important __ __ __ __ __ Not important at all

20. WORKING TO FIXED DEADLINES

Very important __ __ __ __ __ Not important at all

21. ABILITY TO WORK UNDER PRESSURE

Very important __ __ __ __ __ Not important at all

22. THE ABILITY TO STAND ALONE

Not important at all __ __ __ __ __ Very important

23. WORKS WITH AND THROUGH OTHER PEOPLE

Very important __ __ __ __ __ Not important at all

24. THE ABILITY TO WORK WITH AND WITHIN A SYSTEM

Used frequently __ __ __ __ __ Not used at all

25. FINANCIAL MANAGEMENT

Used frequently __ __ __ __ __ Not used at all

26. ADAPTABILITY AND VERSATILITY

Very important __ __ __ __ __ Not important at all

27. ABILITY TO WORK WITH YOUR HANDS/MOTOR COORDINATION

Very important __ __ __ __ __ Not important at all

28. ACCOUNTING SKILLS - NUMERACY

Very important __ __ __ __ __ Not important at all

29. HYGIENE

Not important at all __ __ __ __ __ Very important

30. HEALTH

Not important at all __ __ __ __ __ Very important

31. PERSONAL STRENGTH

Very important __ __ __ __ __ Not important at all

32. NUTRITIONAL KNOWLEDGE

Used frequently __ __ __ __ __ Not used at all

33. INVOLVEMENT IN BUILDING / KITCHEN / UNIT DESIGN AND LAYOUT

Very important __ __ __ __ __ Not important at all

34. COMPUTER LITERACY

Used frequently __ __ __ __ __ Not used at all

35. PRESENTABILITY IN TERMS OF APPEARANCE

Not important at all __ __ __ __ __ Very important

36. MATURITY OF CHARACTER

Very important __ __ __ __ __ Not important at all

37. SELF-CONFIDENCE

Very important __ __ __ __ __ Not important at all

38. AN EXTROVERT PERSONALITY

Very important __ __ __ __ __ Not important at all

39. ABILITY TO UNDERSTAND EQUIPMENT USAGE

Very important __ __ __ __ __ Not important at all

40. ABILITY TO EXPLAIN AND DEMONSTRATE EQUIPMENT USAGE

Used frequently __ __ __ __ __ Not used at all

41. ABILITY TO TRAVEL AND RELOCATE AS THE JOB DICTATES

Not important at all __ __ __ __ __ Very important

42. GOOD HUMAN RELATIONS - THE ABILITY TO WORK WITH A VARIETY OF PEOPLE

Very important __ __ __ __ __ Not important at all

43. CROSS-CULTURAL LIAISON

Not important at all __ __ __ __ __ Very important

44. KNOWLEDGE OF CULTURAL EATING HABITS

Used frequently __ __ __ __ __ Not used at all

45. PERSONAL INTEGRITY - THE ABILITY TO EVOKE TRUST IN OTHERS

Very important __ __ __ __ __ Not important at all

46. THE ABILITY TO DELEGATE TASKS

Very important __ __ __ __ __ Not important at all

47. INTERPERSONAL EMPATHY

Very important __ __ __ __ __ Not important at all

48. USE OF NEGOTIATION SKILLS

Used frequently __ __ __ __ __ Not used at all

49. THE ABILITY TO COMMUNICATE EFFECTIVELY WITH SUPERIORS

Very important __ __ __ __ __ Not important at all

50. THE ABILITY TO COMMUNICATE EFFECTIVELY WITH PEERS

Very important __ __ __ __ __ Not important at all

51. THE ABILITY TO COMMUNICATE EFFECTIVELY WITH SUB-ORDINATES

Not important at all __ __ __ __ __ Very important

Q11. Below is a number of personality descriptions that categorizes a TYPE of person according to their BEHAVIOUR within a particular ENVIRONMENT

Read through the behavioural descriptions and the personal characteristics and rate each THEME according to its applicability for the CATERING MANAGER (F.S.M.)

EXAMPLE:

THEME A Very applicable X __ __ __ __ not applicable at all

BY PLACING THE " X " ON THE LEFT HAND SIDE, YOU HAVE INDICATED THAT THEME A RATES HIGHLY IN ITS APPLICABILITY TO THE POSITION OF A FOOD SERVICE MANAGER.

THEME E Very applicable __ __ __ X __ not applicable at all

BY PLACING THE " X " ON THE RIGHT HAND SIDE, YOU HAVE INDICATED THAT THEME E RATES VERY POORLY IN ITS APPLICABILITY TO THE POSITION OF A FOOD SERVICE MANAGER.

THEME C

Conscientious, stable, steady and thorough. Excellent at maintenance or follow-through tasks. They trust the "tried and true" ways that experience has shown to be successful. They like tangible, logical, practical environments governed by definite rules and procedures. They prefer working in office settings with definite hours, good training and secure benefits. They prefer following rules with little change or disruption. They work well under close supervision. They enjoy using numerical skills or efficiency to bring order, predictability and stability to their work environment. They place a low value on power, making changes or taking risks.

1. THEME C : Very applicable __ __ __ __ __ not applicable at all

THEME S

Social people are kind, generous, idealistic and cooperative.They are concerned with their own feelings and those of others. They seek to help people and work at solving individual problems. They dislike competition and want people to enjoy what they are doing and cooperate with team effort. They listen well and are willing to give time to others to help in resolving conflict. Social people seek to use interpersonal skills to get everyone to work together. Success is defined in terms of moral and humanistic values.

2. THEME S : Very applicable __ __ __ __ __ not applicable at all

THEME I

These people are curious, reserved, independent and introspective. They enjoy problem-solving tasks where they can work alone.They do not enjoy giving or receiving directions. They enjoy working with people who have similar levels of expertise. They dislike a structured enviroment with many rules but prefer to set their own pace without deadlines. They seek creative solutions to problems but do not always implement them. They utilize analytical and theoretical skills. Power leadership and conformity have a low value to these type of people.

3. THEME I : Very applicable __ __ __ __ __ not applicable at all

THEME E

They are energetic, ambitious and fast-paced.people who enjoy power, status and wealth. They can be persuasive and assertive and are able to make and implement decisions.They enjoy a challenge, risk and competition. They do not like precise, detail-orientated work and spend little time researching a problem. They seek opportunities to take chargeof those areas they feel need to be changed. They contribute drive, leadership, optimism, direction and control.

4. THEME E : Very applicable __ __ __ __ __ not applicable at all

THEME A

These people are creative, expressive and spontaneous. They enjoy tasks where they can use verbal and visual skills. They like to work alone but do not like to be ignored. They like freedom and spontaneity and sometimes feel stifled by structure, rules and regulations. They prefer to set their own hours and are most productive in a flexible environment. Success takes the form of individual recognition for their.creative products.

5. THEME A : Very applicable __ __ __ __ __ not applicable at all

THEME R

These people are stable, persistent and robust. They prefer practical "hands-on" environments with well defined products.They enjoy working with tools and machinery and prefer traditional ways of doing things. They prefer action rather than discussion and get impatient with people who talk rather than doing something about it. They seek to produce something useful, tangible and well constructed. Success is the ability to use their physical/motor skills to solve immediate, concrete problems. They are not very concerned with how others feel about them as long as they feel good about themselves.

6. THEME R : Very applicable __ __ __ __ __ not applicable at all

---

Q12. Below are a number of opposing behavioural traits. Read through the traits and place an"X" on the line to indicate which one of each of the opposing description would best describe a Food Service Manager.

EXAMPLE:

c. Enjoys working alone Likes having people around.

__ __ __ _X_ __

BY PLACING THE "X" ON THE RIGHT HAND SIDE OF THE LINE, IT INDICATES THAT THE FOOD SERVICE MANAGER ENJOYS WORKING WITH PEOPLE TO A GREAT EXTENT RATHER THAN WORKING ALONE.

c. Enjoys working alone — Likes having people around.

_X_ _ _ _ _

PLACING AN "X" TO THE LEFT HAND SIDE OF THE LINE, IT INDICATES THAT THE FOOD SERVICE MANAGER IS COMPLETELY SATISFIED IN A POSITION WHERE HE CAN WORK ALONE.

c. Enjoys working alone — Likes having people around.

_ _ _X_ _ _

BY PLACING AN "X" IN THE CENTRE, IT INDICATES THAT A COMBINATION OF BOTH ALTERNATIVES ARE APPLICABLE.

Relate more easily to the inner world of ideas than the outer world of people or things. — relate to the outer world of people and things rather than the inner world of ideas.

_ _ _ _ _

b. Likes quiet for concentration, dislike interruptions. — Like variety and action.

_ _ _ _ _

. Enjoys working alone — Likes having people around.

_ _ _ _ _

d. Has trouble remembering names and some problem communicating. — Communicates freely

_ _ _ _ _

. Thinks through tasks and works methodically through long jobs — Impatient with slow jobs and can act quickly without thinking.

_ _ _ _ _

f. Would rather look for new possibilities than work with known facts. — Prefer working with known facts than looking for new possibilities.

_ _ _ _ _

g. Enjoys new problem solving. ness and routine details. — Dislikes new problems unless there are standard ways to solve them.

_ _ _ _ _

h. Enjoy learning new skills more than using them.	Like established ways of doing things. Would rather use old skills than learn new ones.	_____
— — — — —		
i. Work in bursts of enegy powered by enthusiasm. Reach conclusions quickly.	Seldom make error of fact, good at precise work patient with routine detail.	_____
— — — — —		
j. Base decisions on personal values rather than on logic.	Base judgements on impersonal analysis and logic rather than on personal values.	_____
— — — — —		
k. Tend to be aware of other peoples and their feelings.	Do not readily show emotion and are uncomfortable dealing with peoples feelings.	_____
— — — — —		
l. Like pleasing people, dislike telling people unpleasant things.	Decide impersonally and often without considering other people and may hurt them without knowing it.	_____
— — — — —		
m. Tend to be sympathetic and like harmony.	Are able to reprimand people and fire when necessary.	_____
— — — — —		
n. Work without much analysis or order.	Like analysis and putting things into a logical order.	_____
— — — — —		
o. Prefer a flexible and spontaneous way of life rather than a planned one.	Enjoy a planned, orderly way of life rather than a flexible and spontaneous way.	_____
— — — — —		
p. They adapt well to changing situations.	Work best if they can plan their work and follow the plan.	_____
— — — — —		
q. Do not mind leaving things open for alteration.	Like to get things settled and finished.	_____
— — — — —		

r. May have trouble making decisions. — May make decisions too quickly.

s. May start too many projects and then have difficulty finishing them. — May interrupt the present project that they are working on for a more important one.

Q13. RATE the following languages:
ENGLISH , AFRIKAANS and AFRICAN LANGUAGE
as they apply to the job of a Catering Manager.

1. ENGLISH — Used frequently _ _ _ _ _ Not used at all

2. AFRIKAANS — Used frequently _ _ _ _ _ Not used at all

3. ZULU — Used frequently _ _ _ _ _ Not used at all

Q14. Indicate the extent to which each of the means of communication listed below are used in the job of a Catering Manager (F.S.M.)

CIRCLE THE APPROPRIATE NUMBER.

14.1 Communication with Superiors

	Great Deal	Fair Amount	Little	None at All
Verbal	4	3	2	1
Written	4	3	2	1
ody Language /Demonstration	4	3	2	1

14.2 Communication with Peers

	Great Deal	Fair Amount	Little	None at All
Verbal	4	3	2	1
Written	4	3	2	1
dy Language / Demonstration	4	3	2	1

Q14.3 Communicatiion with Sub-ordinates

	Great Deal	Fair Amount	Little	None at All	
Verbal	4	3	2	1	
Written	4	3	2	1	
Body Language / Demonstration	4	3	2	1	

THANK YOU FOR YOUR CO-OPERATION

APPENDIX E

STUDENTS ACADEMIC RESULTS - PERCENTAGE ACHIEVED PER SUBJECT: YEARS 1990 (First Year Students)

PRIOR SENIOR CERTIFICATE RESULTS INCLUDED.

STUDENT_NO	afrik_1	afrik_2	eng_1	eng_2	french	zulu	home_ec	speech	account
9018824		65	55				55		
9019286		45	55				65		
9022082		36	55						56
9022228		48	41				56		
9022244		45	65				65		
9022694		41	45				55		
9022708		36	55				55		48
9022724		45	45				65		
9040633		65		65		55	45		
9043136	55			45			75		
9043179		41	45				65		48
9043209	65			65					48
9043233		45	65				65		
9043268		45	55				65		
9043276		36	55				55		41
9043284		45	55						
9043314		45	55				65		
9043330		45	55				65		41
9043349		41	55				41		
9043357		45	55				55		
9043381		33	41				45		
9043403		45	45						33
9043462		55	55						65
9043551		55	55				55		
9043586		45	55						55
9047204		55	55				65		
9047247		41	55				65	45	
9047980		36	45				55		
9048111	33			55			45		
9048499		41	48						33
9050191		45	45				33		
NO STUDENT	6	81	77	10	3	3	63	4	22
AVERAGE	56	47	53	60	52	52	57	47	44

econom	maths	bus_eco	art	science	geog	typing	history	tech_dr	bib_stud
	41				55				
	33				45				
	41				55				
					33	27			
	48					27			
	33				55				
						48			
	41				55				
	33			45					
	48			56					
	48								
55	33			56					
	41						55		
	41						55		
	48								
			41			33	56		
					55	68			
	41								
					48		41		
	33						41		
					33	21			
	21				45				
	55				55				
	41						28		
	33				65				
		55				28			
	28								
	33				45				
						27			
					48				
							41		
4	48	2	8	12	43	29	19	2	2
49	42	60	54	49	49	40	47	52	41

metal_w	biology	africa_l	afri_A	afri_B	eng_A	eng_B	physiol	science_1	man_1
	27	57		60	66		42	57	46
	55	61		61	66		47	71	43
	45	53		57	61		55	71	45
	41	51		53	55			46	
	45	72		59	56		70	81	77
	45	61		59	58		54	70	72
	45	62		57	66		59	77	67
	55	68		58	57		70	80	85
	33	99		54	58		50	72	66
	65		61				75	70	
	41	67		53	53		50	78	64
		80		81		58	57	75	69
	45	54						68	70
	55	75		59	59		70	85	61
	45	50		57	61		50	52	64
	33	61		61	51		37	63	66
	55	80		64	65		70	78	71
	45	58		60	65		61	74	55
	56	45		56	53		36	59	
		49		58	48		41	68	40
	33	53		53	54		37	62	51
	33	61		61	51		37	63	66
	55	81		67	64		80	85	80
	33	52		58	50		34	56	33
	55	73		69	59		69	82	82
	55	54		62	56		64	76	64
	45	63		57	56		58	82	65
	68	52		56	54		46	60	50
33	33	58	74		58			64	43
	33	39		47	44				
	33	54		56	73		68	73	93
1	76	79	4	76	76	3	77	79	77
33	47	65	74	62	60	59	62	72	68

f_serve	f_prac_1	food_th1	micro	train_1	hos_stud	food_th_	food_pr	man_2	nutrition
42		54							
51	69	61							
44	73	66							
31	45								
57	72	77							
64	60	73							
54	69	69							
76	54	66							
57	52	64							
69	54	72	52	57			49	56	60
69	64	82							
62	50	60							
52	53	59							
56	72	65							
47	69	42							
50	66	55							
54	75	72							
53	69	66							
36	54	31							
48	65	49							
	45	39							
50	66	55							
68	74	81							
45	62	59							
60	72	74							
54	52	69							
57	68	72							
46	57	54							
39	40	41							
37									
80	67	74							
81	78	79	42	43	43	37	38	42	38
61	68	61	67	67	71	58	59	67	65

promo	f_serve2	psycho	socio	food_3	f_serve3	man_3
	69					
7	40	13	13	9	14	10
63	67	67	63	66	62	67

APPENDIX F

STUDENTS ACADEMIC RESULTS - PERCENTAGE ACHIEVED PER SUBJECT: YEARS 1989/1990 (Second Year Students)

STUDENT_NO	afrik_1	afrik_2	eng_1	eng_2	french	zulu	home_ec	speech	account
8907250		65	65						
8907269		27		55		55	45		
8907331		41	48				41		
8908818		33	45				45	33	
8909245	55			75					
8909296		27	41				48		
8909393		55	55				65		
8909776		45	45						
8909903		55	65				75		
8916306		65		75	65				
8916314		55	55				45		33
8916934		55	45				65		
8916969		55	55				65		
8917361		45	55				65		33
8922276		75	55				90		75
8927170		45	65				55		55
8931674		41	56				55		
8932395		48	56						33
8932431		33	55				55		
8932433		45	45				55		
8932484		55	33				33		33
8933014		36		45		45	45		
8934363		41	33						33
8938040		55	65				56		
8941335		41	48						
9012249		36	65		45				
9012303		45	65				65	55	
9012834		45	55				65		

econom	maths	bus_eco	art	science_	geog	typing	history	tech__dr	bib_stud
			55		65	41			
							33		
					33	33			
	41								
65	55	65				27			
					33	41			
	33			48			55		
	33				45		33		
	33						90		
	65			65	65				
						41			
					41	33			
					55	33			
27									
	90			56					
	41								
					45	45			
					27	33			
	48			48					
					27				
						27			
	33			41	45				
						48	55		
	27		55		48				
	33				55				
	41								
					55	48			

metal_w	biology	africa_l	afri_A	afri_B	eng_A	eng_B	physiol	science_2	man_1
	65	73		71	65		79	87	73
	45	96		47	52		46	58	56
	27								
	48	77		53	52		67	73	90
		75		76	54		58	86	78
	41								
		78		50	68		61	92	89
	45	57		59	57		61	66	72
	56	85		61		63	75	89	92
		85		74	75		80	97	86
	41	74		68	63		64	73	70
	33	73		70	69		74	86	89
	55	73		62	67		79	89	68
	45	59		61	64		68	81	77
		80		78	67		79	92	87
	45	60		58	71		66	77	66
	55	52		62	59		52	63	50
	33								
	45	50		50	53		67	80	50
	41	52		56	52		51	66	63
		55		63	50		32	56	58
	45	99		52			50		
				56	54		55	81	71
	55								
	55	63		56	72		74	81	45
	55	40		53	53		50	58	58
	45	62		61	60		53	84	70
	48	71		60	67		55	81	71

f_serve_1	f_prac_1	food_th1	micro	train_1	hos_stud	food_th_	food_pr	man_2	nutrition
72	78	64	77	74	70	56	56	58	68
52	59	56		50	53			44	
78	76	60	66	65	68	48	58	62	58
65	79	59	69	80	71	49	60	68	67
75	66	66	87	66	76	65	45	81	72
57	71	55	69	59	68				
81	67	70	79	77	77	70	44	78	76
81	79	70	80	81	82	70	67	74	78
55	64	55	60	65	70	41	61	61	59
71	82	67	74	68	80	72	65	67	77
70	80	65	66	74	70	67	65		73
74	74	60	72	72	71	58	53	62	61
77	79	65	86	93	81	79	57	84	77
68	78	57	64	57	73	42	54	59	67
63	71	57	48	50	74			45	
52	79	52							
61	68	60	64	62	65			68	
40	51	42							
52	66	48						41	
59	63	55	73	64	75		50	50	64
48	67	64							
45		27							
52	74	68							
62	67	72							

promo	f_serve2	psycho	socio	food_3	f_serve3	man_3
	67					
	70					
	59					
	74					
	64					
	83					
	72					
	60					
	74					
	70					
	62					
	77					
	62					
	53					
	61					

APPENDIX G

STUDENTS ACADEMIC RESULTS - PERCENTAGE ACHIEVED PER SUBJECT: YEARS 1988/89/90 (Third Year Students)

STUDENT_NO	afrik_1	afrik_2	eng_1	eng_2	french	zulu	home_ec	speech	account
8800367		45	65				90		65
8804508		36	55				65		
8807337		45	55						
8807388		55	55				55		
8807558	75			75					
8807728		55	55				75		45
8809815		41	48				55		
8813264		55	55						55
8818002		68	48				55		33
8818525		55	55				33		
8820066		45	65						
8822174		75	55		45		55		
8828474		36	45						
8829071		65	45				55		
8832374	55			45			55		
8832633		55	55				65		
8837600		36	65				27		
8843066		48	55				55		
8906173		65	45				65		
8906807		55	56				55		
8906998		33	33						
8907005		55	55						
8907021		55	65				75		
8907099		45	55					55	
8907110		45	55				55		
8907188		45	45						
8907218		55	55				65		27
8907234		36	55				55		

econom	maths	bus_eco	art	science	geog	typing	history	tech_dr	bib_stud
	48								
	41						55		
	41		65				55		
						41	33		
					65	56			55
	48								
	45			48					
	41				65				
						33			
					55	48			
			75		45				
	41								
	33				45			48	
48			65						
						33			27
	68			45	55				
					41		36		
						56	48		
					45	48			
			27		48	33			
	41			48	45			55	
	48			33	65				
					55				
			45				45		
					45	68			
	33				45		33		
	33								
	48				55				

metal_w	biology	africa_1	afri_A	afri_B	eng_A	eng_B	physiol	science_1	man_1
	65	72		66	64		81	66	80
	48	65		65	69		64	51	72
	55	65		70	71		37	64	75
	48	64		67	55		82	61	78
	48	74	90		63		80	57	51
	65	66		70	65		86	73	87
	45	51		55	55		61	80	84
	55	63		71	67		84	64	82
	56	67		68	59		71	67	54
	45	70			60		50	50	85
	65	68		57	53		71	60	73
	55	64		61	60		68	57	71
	41	63		63	52		50		56
	48			67	62		66	82	53
	45	64	72			57	61	50	62
		73		69	63		72	76	82
	27	55		69	60		57	52	54
	68	64		67	55		82	61	78
	45	75		74	66		70	90	82
		82		87	82			73	56
	55	56		70	56		73	79	62
	55	34		65	75		85	94	91
	33	70		62	58		60	77	89
	55	64		61	62		71	78	71
	41	55		63	56		59	81	68
	45	63		66	66		51	77	69
	45	53		58	65		66	85	77

f_serve_1	f_prac_1	food_th1	micro	train_1	hos_stud	food_th	food_pr	man_2	nutrition
78	78	75	79	87	84	68	91	92	70
66	59	58	70	69	70	76	62	92	65
73	72	67	65	70	66	52	78	76	62
71	74	68	66	72	83	40	61	80	60
73	77	61	51	62	61	47	68	66	60
82	81	69	86	81	78	76	62	99	79
68	64								
74	67	66	62	68	74	57	54	76	64
52	72	61	53	50	56	41	52	70	53
47		64	55	69	51	60	45	44	51
54	66	52	65	61	56	56	50	76	70
70	79	68	62	75	76	71	60	89	65
52	61	42			61				
51	62	61	54	62	71	63	50	62	63
65	80	59	50	51	66	40	64	54	
78	75	69	69	71	89	66	58	82	62
54	55	55	55	58	54	59		68	56
71	74	68	66	72	83	54	59	80	60
74	78	60	70	67	82	68	61	72	71
62	64	53	54	53	65	50	58	46	44
67	71	47	75	70	71	51	53	67	64
84	82	74	77	70	77	69	61	75	78
85	80	62	67	83	76	71	72	82	76
65	77	62	65	56	68	59	71	58	62
58	74	51	66	56	65	52	44	53	67
65	78	55	61	58	72	50	64	54	54
60	75	57	68	68	68	47	53	63	65

promo	f_serve2	psycho	socio	food_3	f_serve3	man_3
78	82	75	76		73	84
	74	62	69		71	
	71	70	60		62	68
	73	67	61	74	53	67
51	62	63	55	67	56	56
77	88	80	73		74	87
	77	72	62	64	62	53
52	64			72	62	
		63	59			
	70				58	64
55	80	65	64	61	62	58
62						
	53					
	64	63	56	64	64	
67	75	68	65	80	64	78
	59	70	57	53	50	
	73	50	57	62	60	50
	70					
	46					
	58					
	68					
	80					
	67					
	55					
	56					
	56					

APPENDIX H

TECHNIKON NATAL: GENDER ENROLMENT STATISTICS FOR FOOD SERVICE MANAGEMENT

(Statistics from years 1987 to 1992)

		1987	1988	1989	1990	1991	1992	1987	1988	1989	1990	1991	1992	1987	1988	1989	1990	1991	1992
SN	1st Sem.	-	1	-	-	-	-	5	2	-	-	-	-	-	-	-	-	-	-
Food &	2nd Sem.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nutrition	Annual	6	8	11	14	19	23	67	102	145	168	177	176	-	-	-	-	-	-