

Graduate Competency Acquisition:
A Study of a Durban based Multinational

by

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In memory of my father, John Murphy

Abstract

The popularity and application of competencies to human resource processes has grown over the last 20 years since Richard Boyatzis first described a competency in his book 'The Competent Manager' in 1982. With this dissertation a study of the origins of the competency movement, its various applications and in particular, its application to human resource processes in the area of graduate recruitment, selection and development, is undertaken.

A study of the application of an existing competency framework to the graduate recruitment process in a local subsidiary of a Durban-based multi-national was undertaken. The objective of the study was to investigate whether specific competency clusters, as defined in the competency framework, were better at predicting early career success than were others. The study used the cumulative appraisal increases of fifty-four graduate recruits over a twenty-one month period, together with the competency scores that were awarded the graduate during their actual recruitment and selection for employment. Using a backward elimination multiple regression technique the merit ratings were included with scores for each of the four competency clusters in the equation.

Results suggest that higher scores on two of the four competency clusters 'Determines Direction' (DD) and 'Delivers through People' (P) are better predictors of early career success. It was concluded that while certain competency clusters seem better indicators of early career success than others, factors such as interviewer skill in identifying competency evidence, interviewer bias and appropriateness of

competencies to graduate recruitment, may account for the weak relationship between the indicator variables in the study.

Preface

This dissertation presents the work performed by the author in the Graduate School of Business, University of Natal, King George V Avenue, Durban, 4001, from November 2001 to March 2002 under the supervision of Professor D.A.L. Coldwell.

This dissertation is the original work of the author and has not been submitted in part, or in whole, to any other university. Where use has been made of the work of others, it has been duly acknowledged in the text.

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Key to Abbreviations

Abbreviation	Term
Competencies	
DD	Determines Direction
D or Dr	Drive
P	Delivers through People
V	Values
Work-Stream Functions	
M	Marketing
Fin	Finance
SC	Supply Chain
CM	Customer Management
HR	Human Resources
IT	Information Technology

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Chapter 1

Introduction

1.1 COMPETENCY BASED HUMAN RESOURCES MANAGEMENT

Competency based human resource management is an approach that reduces complexity and increases overall organisational capacity. Competency models underpin this process and are models built on the application of knowledge, intellect, skills, abilities and attitudes of successful and effective people. (Kochanski, 1997)

Competency models are designed in order to improve the overall effectiveness of a company's management. This is achieved by learning and understanding which skills, qualities and motives drive successful managers or employees to deliver effective organisational performance. The principal then followed is that through development, training and selection, overall management effectiveness is driven through the organisation. (Boak, 1991)

Kemp (as cited in Boak, 1991) defined a competency as 'an underlying characteristic of a person which results in effective and/or superior performance in a job'. The process therefore, for defining a competency model, relied on some form of measurement of superior performance, as well as a procedure for identifying or assessing the characteristics or behaviours of individuals whose actions lead to the superior performance. Once these characteristics or behaviours were listed, they are clustered or grouped together to form the foundation of a competency model, of either

a specific job or a to form a more generic competency model applicable to several possible categories of job.

The idea of testing for competence rather than intelligence was first proposed in the early 1970's by David Mc Clelland, a former Harvard psychologist. He was asked to find new research methods that could predict human performance and reduce the bias of traditional intelligence and aptitude tests. (Mirabile, 1997) The first examples of attempting to create competency models are to be found in the pioneering work of Richard Boyatzis who undertook to identify and document behaviours of successful managers in American organisations, so generating a generic competency model made up of specific behaviours. From these beginnings began the modern competence movement. Competency based human resource management has consequently attracted much attention and has grown to the point where competencies are being tied into the strategic planning processes of organisations.

1.2 COMPETENCY BASED HUMAN RESOURCES PROCESSES

In many organisations human resource processes now follow competency-based strategies in the areas of career and succession planning, recruitment and selection, management development, performance management, competency based pay and management style. (Matthewman, 1994) An example of the use of competency models in human resource practices is in their application to recruitment and selection processes and more specifically, assessment centres. Assessment centre methodology, of which competency models are the foundation, is generally considered to be the

most powerful and valid recruitment and selection process currently in use.

Increasingly organisations have also begun to extend the usage of their competency models into the domain of graduate recruitment and development.

1.3 THE USE OF COMPETENCIES IN GRADUATE RECRUITMENT

Behavioural competencies are now well established in the graduate recruitment and selection practices of companies and for many have become the foundation stone of these selection processes. A typical interviewing approach used in assessment centres, the behavioural event interview is also gaining popularity for graduate recruiters. The interview approach requires that the interviewer probe the experiences of individuals to try and identify behaviours that have been defined in the competency models. A distinctive feature of this approach is to avoid the use of hypothetical questions, but to focus on events that have happened in the past. (Boak, 1991) This technique allows a trained interviewer to identify the degree to which a graduate follows such behaviour style in their examples.

The use of competencies, especially generic behavioural competencies in graduate recruitment and development has received some recently. It is not surprising therefore, that more and more graduate recruiters are turning to the assessment centre methodology to improve their chances of success in this area. (Wood, Boyle and Fullerton, 1994)

1.4 COMPETENCIES AND GRADUATE RECRUITMENT PROCESSES

Competency based selection processes such as assessment centres, have improved the chances of recruiter success when recruiting individuals with work experience.

Despite this however, a better understanding of the application of competency based recruitment to graduates recruiting is required. The researcher sought answers to the following questions, so far lacking in empirical research undertaken thus far:

- ⇒ If recruiting graduates is based on the identification of future potential, can competency based recruitment processes provide companies with a guide to a recruit's potential for success in the company?
- ⇒ Are competency models too far removed from student life? Can a competency model, as a sophisticated model of corporate behaviour, ever be relevant in a graduate recruitment context?
- ⇒ If such a competency model is applied, can specific competencies act as better predictors of early career success than others?

1.5 APPROACH TO THE STUDY

To investigate these questions, the researcher has chosen to study a company already utilising a competency-based framework for its graduate recruitment processes. In order to establish if there is a link between early career success and specific

competencies identified by this company during the recruitment process, this dissertation will present the findings of a study of the results of this process representing a two-year period.

1.6 BACKGROUND TO THE ORGANISATION'S COMPETENCY FRAMEWORK

In 1994 the organisation introduced the competency framework at its overseas headquarters as a tool to identify high potential. Thereafter the framework's application spread to use in recruitment and in 1998 as an integral part of the organisations Performance Development Planning (PDP) process at all its operating companies worldwide. Eleven competencies (grouped into five clusters) were developed through a rigorous process involving their managers world-wide, such that there is a correlation between high performance and high competency rating. (Peelan, 1998:1) The competency framework was developed internationally for use in the organisation's entire operating company and subsidiary network around the world.

The role of graduate recruitment in the organisation is to provide the organisation with new talent who will form the future senior management of the business. The approach of the organisation is to base its recruitment processes on uncovering evidence of its management competencies. All functions of the business partake in the graduate recruitment process, sharing the responsibility with a centralised graduate recruitment and development function for recruiting new graduates into their

functional areas. This would involve their participation even as early as campus selection events.

Believing that it is personal behaviour that drives performance and competencies that drive behaviour, the competencies are logically be divided under five clusters for ease of comprehension and usefulness.

- ⇒ Intellectual power to determine direction
- ⇒ Ensures that direction is market driven
- ⇒ Acts decisively to improve performance
- ⇒ Delivers through people
- ⇒ Achieves through integrity, teamwork and learning

(Organisation internal publication, 1998: 3)

1.7 A DESCRIPTION OF THE RECRUITMENT AND SELECTION PROCESS

The competency framework and its behavioural indicators are used extensively by the organisation in its recruitment processes at any level of recruitment. Recruiting graduates is no exception and the reference to competency behaviours begins as early as the advertising and promotional phase of the recruitment process. Here competency framework descriptors are adopted as phraseology in posters and magazine advertisements. The competency language usage has the dual effects of providing a

clue to the culture of the organisation and of assisting the graduate to identify with the organisations performance requirements.

For a 'soon to qualify' graduate, the application process begins with the completion of an application form in which competency based questions invite applicants to cite examples of times when they have demonstrated particular behaviours. Screeners look for evidence of the required behaviours in the application form and an invitation to a campus interview depends on the quality and level of this evidence.

At the campus interview process, a competency based interview style is used. This entails interviewers posing behavioural-event questions designed to probe for evidence of the organisations competencies. Should interviewers utilising a scoring system uncover enough evidence of these behaviours, they are invited to attend a final interview process, which is run along assessment centre lines.

At this final selection stage selectors from the organisation's senior management rank participate. The organisation's competency framework again provides the structure for the selection process, which incorporates behavioural-based interview questions as well as a battery of potential assessment tests. Applicants who pass this phase are invited to join the organisation as management trainees.

1.8 A GRADUATES EARLY CAREER

These organisational competencies with labels that tend to reflect the specific preoccupations and culture of the organisation concerned are also carried forward into the organisations formal appraisal programme. A graduate's early career is benchmarked against the acquisition and application of these organisational competencies and is likely to play a significant role in their ultimate success in the organisation.

The first year of a graduates career can significantly determine how successful or not the next phase of his or her career will be. The road to management can become less certain if the initial period in a new company is regarded as unsuccessful. As graduate recruitment is regarded as a long-term investment, the company's perception of a graduate as an unsuccessful hire can significantly affect his or her chances of success.

1.9 RATIONALE AND OBJECTIVE OF THE STUDY

The rationale for the study is based on developing a better understanding of the link between the management trainee's competency profile identified during the recruitment and selection process and his or her early career success in the business. The objective of the study will be to provide information as to which competencies, or combination of competencies, are better predictors of graduate success during the graduate's initial training period with the organisation.

This dissertation will examine aspects of the early career success of graduates in a Durban-based multinational organisation. In particular it will focus on the first twenty-one months after commencing employment in the company and utilise the graduate's first three merit appraisal ratings as a measure of their success. As graduates entering the employment of this organisation are placed in real roles, performance assessments are directly linked to the achievement of work objectives and personal developmental goals.

This dissertation aims to explore factors centering on competency frameworks and their holistic application to human resource processes. Specifically, the study will also examine the application of competency frameworks to the processes of graduate recruitment and development. An empirical study of the application of competency based graduate recruitment processes will be undertaken to determine whether early career success can be better predicted if certain organisational competencies are present at recruitment.

As no recent research has been uncovered on performance and the use of competencies to predict future performance in a graduate recruitment context, the study will aim to provide a new and fresh insight of this area.

Chapter 2

Literature Review

2.1 TOWARDS DEFINING COMPETENCY

To begin this study I will begin with a review of the multi-faceted nature of competence or competency. In doing so however, a challenge lies in the fact that competence is essentially an abstract concept. It can be defined and measured only through behaviour or performance (Meyer, 1996). The popularity of the concept of the competency is usually attributed to Richard Boyatzis' book "The Competent Manager" published in 1982. It seemed to offer a fresh start by getting away from the muddle of traits and motives. It also seemed to offer a neutral term that looked at work related performance. (Furnham, 1994: 27)

Richard Boyatzis, a McBer and Company consultant, said that a competency was "an underlying characteristic of an individual which is causally related to effective or superior performance in a job." (Adams, 1996: 45) Berman (1997) presents a definition of managerial competency; one that is similar to the one first expressed by Boyatzis in his 1982 book. He defined competency as any personal trait, characteristic or skill that can be shown to be directly linked to effective or outstanding job performance. (Berman, 1997) Williams sees competency as two main conceptualisations. On the one-hand behaviours and on the other, subscribing to the earlier definition by Boyatzis, namely as an underlying characteristic of a person. In

other words they also describe what people are (in causing superior performance) and not simply what they do. (Williams, 1998).

Certain writers make the point that competencies as capabilities, attitudes or skills are transferable between roles or jobs. A persons competencies allow him or her to perform actions that achieve certain results or outcomes. They are abilities and describe what a person can do; not necessarily what they do all the time, regardless of the situation or setting. Competence is a wide concept, which embodies the ability to transfer skills and knowledge to new situations within the occupational area. (Critten, 1994: 35)

Whilst competencies can be used to describe behaviours linked to particular jobs, some writers go on to describe how a distinguishing facet of competencies is that frameworks can be designed to define behaviour at different levels. The link with competencies and performance or success in performing a role or job is based on the process underlying the development of those competencies in the first place.

Competencies should be differentiating, and are criterion referenced to behaviour, which in the past has produced superior results. It is this behaviour, lying behind the superior level of performance or outputs that companies with a competency based human development system are interested in.

As the usefulness of competencies became better understood, so too did the range of application of competencies. For example so-called core competencies came to be linked directly to corporate values. These values should therefore apply to all employees irrespective of role, grade or other form of seniority. Role specific competencies on the other hand apply to certain groups of employees. Therefore, at

one extreme they can involve a detailed listing of activities, tasks, and job-related knowledge for most jobs and on the other, they can comprise a terse set underlying behaviours that cut across job boundaries. (Matthewman, 1997:5)

The use of competencies and competency modeling has become second nature in modern human resource processes. The role of competencies has been applied to all areas of human resource management from selection systems to promotion and development systems. To understand how the application of competencies grew, it is appropriate to study the origins of competency development.

2.2 THE ORIGINS OF COMPETENCY DEVELOPMENT

The competency-based movement has been in existence for some time. It is generally agreed that competence-based education has its roots in teacher education and training as a way to improve teacher provision, through modularisation of instruction, evaluation and feedback and emphasis on field experience. (Fletcher, 1992).

From the 1960's onwards, however there was an increasing demand in the business world, for greater accountability and more effective means of measuring and managing performance. (Fletcher, 1992: 14) In the 1970's in particular Boyatzis became intrigued with how managers either help or hinder the people working for them. (Delahoussaye, 1999). This led to research into what makes people effective and therefore competent in the business world. The popularity of competencies however, is due largely to the pioneering work carried out by an American consultancy firm McBer and Company, formerly known as the Behavioural Science

Centre founded by David McClelland, a Harvard psychology professor.

(Delahoussaye, 1999) David McClelland argued that traditional academic exams did not predict job performance or success in life, and were also biased against minorities, women and others. He maintained that researchers should be looking at ways to identify other variables – ‘competencies’ – that could predict success and which were unbiased, or at least less biased. (Adams, 1996)

In the early 1970’s, consultants at McBer began to try out ways to identify competencies that could predict success and which were unbiased. One of the pioneering studies carried out by McBer was a study done for the US Navy studying supervisory chaplains. Richard Boyatzis calls this study the first comprehensive competency study that was done at McBer. In this study they administered a whole battery of tests to try and differentiate one group of navy chaplains from another. The aim of the study was to answer the question, ‘why were some Navy supervisory chaplains more effective than others?’ (Delahoussaye, 1999)

Later in the 1970’s the McBer consultancy turned their interest to the world of business and also to developing the behavioural event interview (BEI) which was an adaptation of the critical incident interview. Consultants at McBer, in particular Richard Boyatzis, became interested in trying to understand how people change so that people could adapt and learn how to become effective performers. Performers of occupational roles in the business world became the principal focus of their studies as the business world began to see the value that lay in understanding this principal.

McBer and Company paid particular attention to the process of being able to measure the characteristics of effective managers via a combination of a unique coding system

developed by themselves, the Behavioural Event Interview as well as the use of video taping sessions. (Delahoussaye, 1999). McBer defined competence in terms of these characteristics of individuals which were validated by referencing from highly successful or excellent performers in various roles (Fletcher, 1992).

2.3 GENERIC COMPETENCY MODELS

The competence movement quickly went beyond the analysis and definition of competences for a particular job, to produce a number of models of manager competence that claim to be generic. These set out competences of effective managers across a range of organisations. For example, the American Management Association commissioned McBer and Company to research and define a model of generic management competencies crucial to effective performance. (Boak, 1991). The result was 65 behaviours, skills and attitudes organised into 18 groups or clusters.

2.4 VOCATIONAL COMPETENCIES

In the United Kingdom during the 1970's another model was born. The UK standards of occupational performance developed a system different in concept to the McBer system. The system focused on the development of standards that described expectations of workplace performance. (Fletcher, 1992). This led to the establishment of National Vocational Qualifications or NVQ's, and the establishment

of NVCQ (National Council for Vocational Qualifications), who would manage the development of occupational standards for all industrial sectors of the economy.

The following table reflects the fundamental differences in approach between the USA and UK competence models.

Criterion-referenced (UK)	Criterion-validated (USA)
Standards of performance (competences) developed and agreed by industry	Competency clusters developed by research using 'excellent' performers
Assessment of workplace performance	Learning and development of competence
Competence = expectations of employment	Competence = personal characteristics
Standards outcome-based (criterion referenced)	Standards output orientated (criterion validated)
Standards of occupational competence (Actual Performance at work)	Educational process (competence development)
Sectorally agreed benchmark of competent performance:	Specifications of 'superior performance' defined by educational research
Product – Hard competences	Product – soft competencies

Figure 2.1: Key differences between main types of competence-based assessment systems

(Fletcher, 1992:22)

2.5 HOW COMPETENCY MODELS AND FRAMEWORKS ARE RESEARCHED AND DEFINED

There is precise methodology behind the development of competency modeling that seeks to identify the attributes of effective managers. (Dalton, 1997) Classically organisations derive the competencies they plan to use for human resource management by identifying their best staff and then interviewing them about their work. These interviews generally use one of three well-tried methods: the critical incident technique (CIT), behavioural event interviews (BEI) or repertory grids. (Adams, 1997:36)

The key to the development of any competency model is the analysis of actual behaviour of the effective performer. The event is analysed through a Behavioural Event Interview to assess individual abilities, thoughts or feelings that the effective performer exhibited. The account of the event is then analysed to see what behaviours and competencies it contains. (Boak, 1991)

2.5.1 Usage and Application of Competency Frameworks

As interest in competencies has grown so have the contexts to which competency frameworks have been applied. The application and use of a competency framework can loosely be defined by whether it is a framework based on attributes or characteristics that are inferred from behaviour; or if its origins are performance based and defined in terms of required performances. (Meyer, 1996)

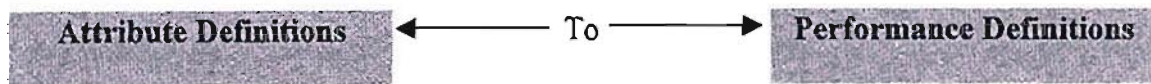


Figure 2.2: Attribute and Performance Definitions

(Meyer, 1996)

“Boyatzis’s original definition of competencies clearly embraces personal traits as well as acquired knowledge and skills, although later followers have attempted to differentiate between these.” (Roberts, 1996)

2.5.2 A Framework of Organisational Competence

Meyer (1996) refers to a framework by Cannon that addresses competencies at an organisational level.

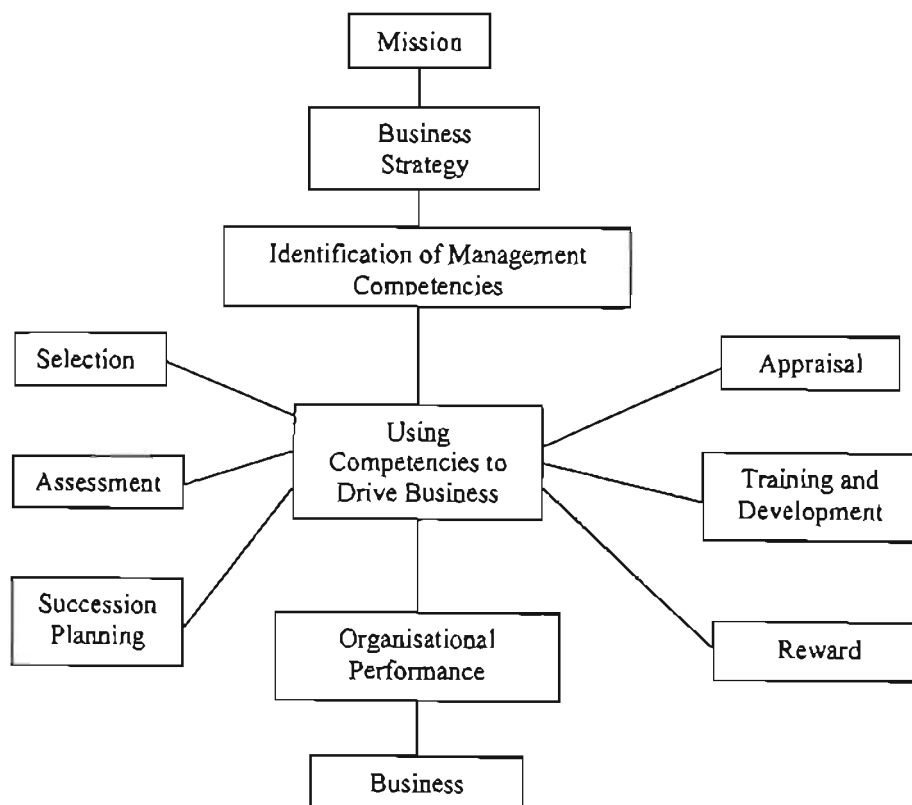


Figure 2.3: The use of competence as a strategic tool within an organisation.

(Meyer, 1996 :40)

All around the world it is becoming increasingly accepted that organisational core competencies are fundamental to competitiveness and ability to compete in new and often global markets. Here ownership of the competence is embedded in the organisation. (Meyer, 1996) Core competencies underpin the acquisition of occupational competencies and are necessary to function effectively in an organisational or societal context. Organisational core competence is evident in the organisation's technology, people and structure. The acquisition of individual occupational competencies (incorporating skill elements) and broad core-competencies (not linked to any particular occupation or profession) largely determine an individual's earnings potential and career progression.

Wallace and Crandall (1996), refer to four types of competencies at an organisational level:

Types of Competency	Descriptor
Foundation competencies	Those that prospective employee needs to supply employers at their own expense and time.
Core competencies	Those needed by the "core business processes central to the success of an organisation"
Support competencies	Those that are enablers of "core skills" but not central to the mission of the organisation.
Outsourced competencies	Those that can be done more effectively by people outside the organisation.

Figure 2.4: Competency Types

Wallace and Crandall (1996)

2.6 CROSS CULTURAL APPLICATION OF ORGANISATIONAL COMPETENCIES

Instances of competencies being studied and applied across a range of cultures are few. Sparrow and Bognano's study (as cited in the Journal of Performance through People: 1994) of BP's strategy to deliver its organisational competencies cross culturally provides an interesting case study. BP applied a competency-based approach to delivering its corporate strategy across international boundaries. To ensure that their newly designed organisational competency framework suited the range of national cultures in which the company was based, BP tested the applicability of competencies to different cultures. The competencies, which represented BP's new organisational culture, were written with reduced behavioural detail, allowing each company in which BP operated to customise the behaviours to suit the culture. This process had to avoid any fundamental change to the meaning. An extensive training programme supported the approach.

2.7 A FRAMEWORK OF GENERIC MANAGEMENT COMPETENCIES

The definition of job specific competency led to research aimed at defining generic competencies that were common across a range of management roles. In the late 1970's The American Management Association commissioned McBer and Company, to research and define a model of generic management competencies. After extensive research, encompassing microscopic examination of jobs, motivation, performance and statistical analysis, they devised a set of threshold competencies and differentiating competencies that were possessed more often by superior managers.

(Boak, 1991) The competencies in the model were also clustered at the skills level to produce groups of similar competencies. (Adams, 1996)

2.7.1 Problems with Generic Management Competencies

Critics of generic frameworks such as the one developed by Boyatzis, cite difficulty with the validity of the research underlying the generation of such frameworks. The question asked is whether the research methods used to identify the individual characteristics were feasible within normal research constraints. Typically where the study of psychological characteristics are concerned, the research is a complex and lengthy process, fraught with major operational difficulties and calling for advanced statistical techniques. (Collins, 1989:23)

2.8 COMPETENCE OR PERFORMANCE BASED COMPETENCY FRAMEWORKS

The application of this type of competency has been found in most competency based qualifications systems. This approach to competency frameworks is a feature of frameworks such as the South African National Qualifications Framework and the English and Scottish National Council for Vocational Qualifications. The defining feature is that competencies are a demonstration of required behaviour

2.9 COMPETENCY AND BUSINESS STRATEGY

2.9.1 Organisational Competencies Values and Culture

The articulation of an organisational management competency framework adds to the picture of what a specific organisational culture may look and feel like. For prospective employees of an organisation, an insight of the company's management competency framework will give a very good idea of the organisational values, business strategy and performance expectations. Values can be regarded as a property of the organisation to which employees are expected to prescribe. (Williams, 1998)

2.9.2 Competency Based Human Resources

Organisational core competence is an attempt to provide an articulation of the essential competencies of an organisation to set it apart from its competitors. At its most sophisticated, the language of competencies articulates the ultimate goals and values of the organisation for its future success. (Mathewman, 1997: 2) It is a company's individual knowledge and production skills (Meyer citing Pahalad and Hamel) that in combination are developed over time and which must adapt to market needs.

The direction and development of these competencies is a strategic decision. As organisations seek to position themselves in competitive business environments, so must they develop or acquire individuals with the right skills. So too must this be the case at an individual level, where individuals must plan and manage their own development. The processes supporting the development of individual capabilities of

the individuals in the organisation is called Human Resource Development (HRD). A framework linking these processes that support the development of individual vocational and management competencies is critical. A competency framework defines these capabilities needed to drive the business strategy and develop core organisational competencies. Essentially a validated framework can truly be strategic and an operational tool.

2.9.3 Implementing a Competency-Based Human Resources Strategy

The benefits of a competency based Human Resources strategy are that a defined competency framework can be used to bring human resource processes together as a cohesive whole. Disparate processes – such as recruitment, training, performance management and career development can be brought together under one umbrella, so improving the performance of the individual and of the business. Competencies also provide organisational flexibility through improved management capability by allowing managers to plan and manage their own development.

Organisations generally group their competencies into clusters with the selection of the competency headings themselves generally showing a growing concern with business priorities. (Mathewman, 1997:3) Unisys developed a HR strategy in 1990 based on competencies, that was integrated with the business strategy. They called their strategy, “profiting through people”. This would provide the business with focused development and so enhance the capability of the organisation. This allows the organisation to apply the competencies development across the performance management process.

The Lloyds Bank and the TSB Group merged in 1995 and they looked to develop a framework that was business-centered and which would be of real help to organisational development and also to support the new way of working in the new merged entity. (Hudson, 1998)

2.9.4 Performance Evaluation

There are different views of performance, ranging from results and outputs to behaviours. Typically however, behaviour is regarded as one of the causes of output, with output being one of the means by which the effectiveness of performance (that is behaviour) may be judged. (Williams, 1998:94)

Although competence is demonstrated by performance, competence does not generally result in superior performance. It can be said that competence is a necessary, but not sufficient condition for performance. (Meyer, 1996: 37)

Campbell's view of effective performance (as cited in Williams, 1998), is only those actions or behaviours that are relevant to the organisations goals and that can be scaled (measured) in terms of each individuals proficiency. It is fair to say however that the term performance tends to be used in a loose way to embrace both outputs and behaviour.

By utilising competencies to underpin an organisation's Human Resources Development processes, a conscious effort is being made to move the organisation to superior levels of performance. Organisations must take specific care when developing a competency framework, that links between behaviours and specific

performance outcomes have been found and that in promoting these behaviours, the ultimate objective is improved business performance and impact on the bottom line.

Boyatzis (as cited in Hooper, 1997) identified the link between individual competencies, the demands of the job and the organisational environment. Thus individuals opportunities to perform may be restricted by jobs that do not permit the use of their capabilities. (Hooper, 1997:33)



Figure 2.5: Determinants of Performance

(Wolmarans, 2001)

The application of competencies in the workplace will be affected by considerations, which include; the scope of the job, the organisation culture; and the manager's attitude and motivation towards the organisation. The fact that people have the ability to perform does not necessarily mean that they will therefore apply that competence in the workplace. Other factors may also inhibit the application of competence in the workplace. (Hooper, 1997:29)

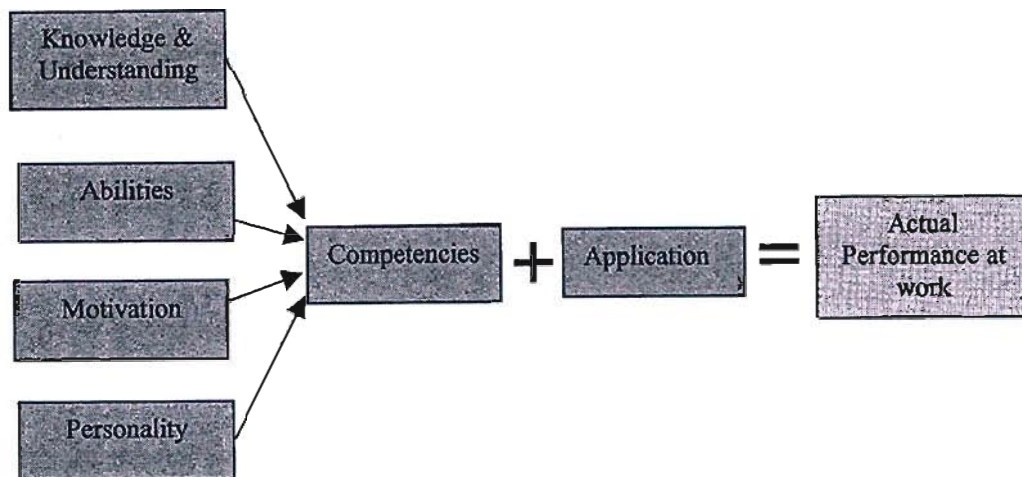


Figure 2.6: Summary of Factors Leading to Effective Performance at Work

(Hooper, 1997)

2.9.5 The Performance Appraisal Process

Many organisations operating competency based human resources systems, run performance appraisal or measurement systems with competencies as the yardstick to measure performance output and to track and provides a framework for personal development. The inherent benefit of competencies is that they provide a tool to guide specific performance related behaviour. These behaviours are regarded as causes of output. (Williams, 1998) Individual contribution or output linked to top-down goal setting processes, against a backdrop of competency behaviours, provide a powerful means by which the organisation can achieve its goals and also meet the developmental needs of its management.

The use of validated behaviour obtained via behavioural interviews (BEI's) and the critical incident technique (CIT) to draft typical competency descriptions, implies that competencies are ideal to evaluate successful or effective individual performance.

Another advantage is that individuals, by having access to material defining competency behaviours, know what is expected of them. The mistake most often made when adopting a competence based performance management system is that it is rarely used more than once a year. After an initial assessment is carried out of workplace competence, a continuous process of assessment is recommended so that training and development needs continue to be identified.

Case Study 1:

Courtaulds set about rising to the challenge of meeting the increasing demands of managing the performance of their business through people development processes. They began this by developing an understanding of what good performance was. It was essential to have a coherent framework to talk about people, so that everyone could understand and make sense of it. (Atack, 1994: 20)

Courtaulds followed the Boyatzis model by concentrating on what differentiates superior from average performance. The concept of a cohesive behavioural structure was followed and was extended into the appraisal and training domains, with the appraisal process concerned with developing potential.

Atack (1994) in her study, found that the impetus that drove Courtaulds to explore the area of competency came from the need to improve communication about individual's potential. Their assessment of people's shortcomings tended to be very negative, attacking the individual as a person rather than describing

behaviours. They were subjective and judgmental assessments and were unhelpful in that they revealed very little about the individual.

2.9.6 Recruitment & Selection

2.9.6.1 Competencies in Recruitment

Achieving equity, striving for fairness and reducing the chances of a mismatch and ultimately an unsuccessful recruit are desired outcomes of any interview process. The assessment of candidates using validated competency-based techniques allows interviewers to measure true job-fit. Amongst other benefits, competency-based techniques increase the chances that a standard can be defined and applied across a pool of potential incumbents leading to desired outcomes of fairness and equity.

Competencies are now widely used in recruitment and selection. Structured interviews with interviewers seeking examples of how the candidate addressed a specific situation and/or resolved a problem. (Roberts, 1996) Organisations are in addition incorporating competencies into their advertising and their applications forms. (Mathewman, 1997:7) This use of competencies in application forms also assists individuals in being self selective in pursuing their initial interest in a company, if they feel that an organisation fits an individual style-approach or need.

Presenting the findings of the fifth annual HR-BC/IRS (*The Journal of Performance Management through People*, 1998), survey Mathewman (1998) reveals that 87% of companies have introduced behavioural or competency based interviews. They have done so on the basis that past performance is the best indicator of future performance.

Behavioural event interviewing is used as a means of collecting and evaluating information about job applicants. This technique seeks to ask applicants to describe how they dealt with situations or issues in the past.

2.9.6.2 Competencies in Graduate Recruitment

The 1994 graduate recruitment survey conducted in the United Kingdom, shows that competencies are now well established in the recruitment and selection practices of graduate recruiters. The survey finds that nearly a third of graduate recruiters use competencies. Whilst a graduate's qualifications are important, employers are moving steadily towards competency based recruitment processes that allow students to demonstrate how their experiences suit them to filling the position within the organisation. (Purcell and Hogarth, 1999)

Strebler and Pike (as cited in the *Journal of Performance through People*: 1994) found that graduate recruitment and selection is increasingly being influenced by competencies. The rigour with which they were applied however varied, with some companies using simple headings whilst others had gone so far as to define associated behaviours.

Six to seven competencies appeared to be the average number of competencies used. Wood, Boyle and Fullerton's (1994) findings in their study of assessment centres used for graduate recruitment, found that more competencies were cited under people skills than any other heading. This could be further categorised under the heading interpersonal skills.

In graduate recruitment, use is made of the behavioural event interview based on seeking information from the candidate that will provide behavioural evidence of the competency. The theory is that an individual who has demonstrated a competency in the past has the capacity to demonstrate it again in the future (i.e. potential behaviours). The method does not necessarily probe motivation (will the individual want to use such competencies in the future). (Boak, 1991)

2.9.6.3 Challenging the Relevance of Competencies to Graduate Recruitment

Companies that have moved to competency based interviews, seek increased reliability for their recruitment decisions. A competency framework provides a clear guideline to recruiters and potential hires as to the competencies valued in the organisation.

Typical managerial competency and behaviour frameworks provide descriptors for interviewers to utilise when probing for evidence in the interview situation. In this way interviewers can identify behaviours that will be appropriate to the organisations needs. As the use of managerial competencies in graduate recruitment increases, its appropriateness for the task has been questioned. Clearly the objective of graduate recruitment is to select those graduates with the highest probability of succeeding. The question however is whether competencies provide the appropriate framework against which to assess a graduate's potential and suitability.

Competency frameworks are generally borne out of validating successful managerial behaviours in an organisation. This is especially so for frameworks borne out of the

McBer approach that emphasises validated excellence. The implication is that any organisational competency framework possesses within it an inherent work context that is unique to the organisation. This framework represents successful organisational behaviour in which values, attitudes and motives are embodied. As few graduates have work experience the validity of competency frameworks in identifying a graduate's chances of future success and suitability is debatable.

This argument is further expanded when considering the use of a behavioural event interviewing style for graduate recruitment, which is the preferred interview approach for competency-based selection processes. For an experienced candidate with a working background drawing on work experiences to demonstrate examples of their competence in a certain area, is a simple matter. However, for a graduate, the situation is more complex. The limited range of business-based or commercial experience that a graduate possesses makes a business grounded set of generic management competencies be somewhat removed from a selection experience. It must be remembered that any behaviour is a consequence of what you are asked to do and the context in which you carry out the task. It is clear therefore that the context of the selection process is and will be different from that of the job. (Whiddett, Kandola and Keenen, 2000)

An approach that has been suggested is the systematic study of jobs for which graduates are being recruited, either immediately or after training has taken place. This would entail the identification of the behaviour, capacities and inclinations required to do the job. (Gill and Banks, 1980) This however may not always be possible or desired as a great deal of effort goes into the development of management competency frameworks that are meant to streamline and standardise processes.

Another approach is to use the existing management competencies, but to narrow down the competencies used in the selection process to those that the graduate must have before they join the organisation. This will enable them to integrate better into the company and their new roles. (Whiddett, Kandola and Keenen, 2000)

Case Study – Courtaulds (continued)

The application at Courtaulds Textiles of their competency framework in their recruitment processes was found to be extremely valuable. This allowed them to decide on and design the relevant selection criteria which made the interview process much more effective. (Atack, 1994:24) It was soon applied to their graduate recruitment processes. A graduate profile was established from 6 core competencies (as indicated in Boyatzis' work), plus two specific ones related to working in Courtaulds Textiles. Changes were also made to the graduate application form to help build a behavioural profile, whilst the company also developed exercises to generate situations to observe the competencies. (Atack, 1994:25)

2.10 GRADUATE TRANSITION AND EARLY DEVELOPMENT

The opportunities for the acquisition of competences in higher education are few. Most students are also not aware of the significance of this and would also not be aware of the need to develop these competences. Competences like effective listening and managing time for example, are a major part of a student's experience, and may

well play a role in their future careers as successful behaviours that they have mastered. (Hettich, 2000)

The turn around time from successful student to successful employee is shortening as terms such as commonly used terms such 'fast-track' and 'high-flyer' indicates.

However, there are many reports that graduates lack the required personal and interpersonal skills that businesses now demand which in turn affects this development process. Invariably employers must strike a balance between development and support and the need for performance and results. (Roberts, 2001)

Typically the graduates development is traced through a company-wide performance appraisal system designed to measure and assess the acquisition and development of organisation and job specific competencies. Whilst competencies can be developed, companies recruiting graduates today seem to prefer to hire graduates who already possesses some of the core competencies and motives which suit the organisation and are preferring to spend more attention on specific skills acquisition. Graduates are recruited for their potential as future leaders, but also due to their flexibility and openness to learning the required job specific skills quickly.

Hettich (2000) suggests that the answer to questions regarding a graduate recruits transition from University to career, lies in understanding that the process of succeeding at University is very different to the processes of succeeding at work. Coupled to this is the difference in the learning process at university, which is very different to the world of work where learning is no longer compartmentalised and easily absorbed. (Roberts, 2001)

For a graduate recruit to make good early development progress, it is essential that they begin to understand early on their individual areas of strength and weakness and be able to emotionally take charge of their development. With self-awareness will come an understanding of where they can make a contribution and from where to build on the learning acquired from these experiences. (Roberts, 2001)

2.11 THE COMPETENCIES EMPLOYERS SEEK IN GRADUATES

Research conducted by Harvey and Green into the attributes that employers want from graduates (as cited in the Journal of Competency, 1997), the following generic/skills and attitudes and personal attributes were identified as being key.

Generic or core skill and attitudes:

- ⇒ Willingness to learn
- ⇒ Teamwork
- ⇒ Oral communication skills
- ⇒ Written communication skills
- ⇒ Problem solving
- ⇒ Analytic ability
- ⇒ Logical argument
- ⇒ Ability to summarise key issues

Personal attributes:

- ⇒ Commitment
- ⇒ Reliability

- ⇒ Self-motivation
- ⇒ Cooperation
- ⇒ Self management
- ⇒ Flexibility and adaptability

2.12 COMPETENCIES – LOOKING TO THE FUTURE

There are typically three well-tried methods of generating competencies. They all rely on obtaining information about individual past behaviour that produced successful outcomes. These methods all focus on the past, which could be of questionable relevance especially if the organisation is going through change. (Adams, 1998) For competency frameworks to have any real value to the organisation, they must take into account the organisations future skill and competency requirements. Current performance must be translatable into an inferred capability by viewing competence in a wider, larger future context. (Bullied: 1994) Thus the inference is that these people will have the capability to behave in the future according to the competencies valued in the organisation at the time.

If competencies are to be effective in doing what they are designed for – recruiting the right people, encouraging appropriate behaviour, helping the organisation keep up with the competition and act strategically, they need to focus on the future rather than the past. (Adams, 1998:36)

Chapter 3

Research Design, Methodology & Data Collection

3.1 BACKGROUND TO THE RESEARCH DESIGN

The researcher had to consider the following aspects of the graduate recruitment process when designing the study.

3.1.1 Assessing Graduate Potential - An integrated competency-based recruitment and selection process

3.1.1.1 Organisational Competencies

The competency framework and its behavioural indicators are used extensively by the organisation in its recruitment processes at any level of recruitment including graduate recruitment. The Company competency framework comprises five competency clusters, however only four are used for the assessment of graduates.

The four clusters used are as follows:

⇒ Determines Direction (DD)

⇒ People Skills (P)

⇒ Values (V)

⇒ Drive (D)

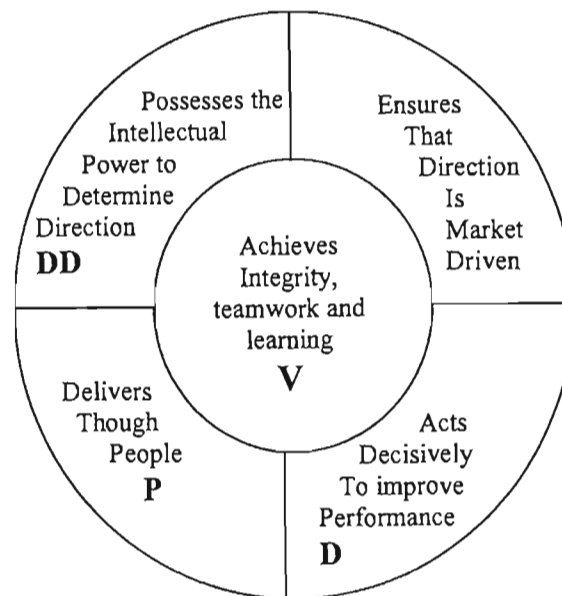


Figure 3.1 Competencies of the Effective Manager

(Company Publication, 1998)

3.1.1.2 The Appraisal Process

Potential identified at recruitment is tested early by the organisation's appraisal process. The performance management process gauges a trainee's progress in acquiring competencies, which are set against a backdrop of specific operational target achievement designed to build skills. A trainee's manager sets performance and

competency acquisition goals in conjunction with the trainee at the beginning of a review period. At the end of the review period, the manager provides direct feedback on his or her performance, whilst the trainee, who is actively encouraged to seek feedback in a 360 degree document from colleagues, team-members and other managers, provides this feedback into the review discussion. The trainee's manager agrees a rating with the trainee and resets performance goals for the new period.

3.1.2 Graduate Selection – The culmination of a process

For this particular organisation a successful graduate recruitment process is the culmination of rounds of successive selection phases. The phases are as follows:

3.1.2.1 Phase One

This begins with a candidate being able to identify with the company's on-campus publicity. Competency messages, presented as expectations of future performance, are interpreted by the student as positive or negative information and therefore act as a screening tool for the company.

3.1.2.2 Phase Two

The next phase is where the student who is attracted to the message, is invited to complete an application form. Here, further competency messages are communicated to the student. The student is required to answer several questions giving examples of behaviours exhibited in the past in certain situations. Application form content is

screened against the competency clusters using a five-point rating scale, where 'five' indicates the most congruence with desired competency behaviour and 'one' indicating the least. Applicants with the highest combined score from the four competency clusters are passed through to the campus interview phase.

3.1.2.3 Phase Three

At the campus interview, candidates are required to answer specific questions drawn from a standard interview protocol for each of the four competency clusters. Answers are again scored on the five-point scale and candidates scoring the highest are invited to a selection panel.

3.1.2.4 Phase Four

The culmination of the selection process is a selection panel of a day and half duration. During this process, candidates complete a potential assessment test, answer behavioural-event type questions directed at them by two panels of two interviewers each and take part in a series of group discussions. Interviewers score each candidate on the five-point scale. Scores are collated across the interview panels and candidates achieving a required minimum standard are offered management trainee posts in the organisation. Scores are likely to be in the three to five point range, with any score below three likely to have disqualified the candidate.

3.1.3 Unique Aspects of the Graduate Advancement Process Influencing the Research Design

The researcher had to consider the following aspects of the graduate advancement process when designing the study.

3.1.3.1 Measures of Success

Merit Increases:

Graduates entering the organisation are placed in real operational roles. In these roles, delivery and development are allocated equal weighting in assessing the progress of the new trainee. The organisation Performance Development Process (PDP) (Company publication – 2001), measures a trainee's performance and their abilities in acquiring and mastering the organisation competencies. Six monthly appraisals are used to provide the graduate with feedback in their early careers, and merit increases, recognising the steep learning curve, accompany these appraisals.

A philosophy of the organisation is to award 'high' performers at a premium level relative to the 'good' performer. This is done to encourage a level of delivery above the average and a consequent step change improvement in competency development of the trainee. This enables the organisation to be able to fast track a trainee along a career path. The developmental progress and levels of delivery shown by the graduate affect the scale of these merit increases. The researcher has

therefore elected to use a cumulative merit increase percentage score (appraisal increases 1 to 3) as a measure of early career success.

Rate of Promotion:

Another indicator of success used was that of rate of promotion. In the first twenty-one months a management trainee will be assessed three times and may also be promoted during this period in recognition of their performance.

3.2 NATURE AND PURPOSE OF THE STUDY

Historical data was collected once, although the study data covers a twenty-one month period, making the study longitudinal in nature. The study is a quantitative study involving historical data collected from recruitment and appraisal records of new graduate trainees employed in the organisation for a period of not less than twenty-one months. The study will investigate whether specific competencies are better predictors of early career success and higher levels of performance in the first twenty-one months than are others.

3.2.1 Data Collection

The study did not require the design and use of any data collection instrument. The study utilises historical data from company records, namely data collected from the Recruitment Department for the 1999 and 2000 graduate intakes, as well as merit

increase percentages obtained from human resources records of the graduates first twenty one months in the business. The data format is numeric in both instances; namely the competency score on a five-point scale and the merit increase percentage. This numeric data is interval in nature.

3.3 SAMPLE DESIGN

3.3.1 The Population

The population consisted of management trainees, from each of the six operational work-streams or functions, who had been recruited into the organisation during the years of 1999 and 2000 and who were still employed in the organisation at the time of data-collection. During these two years, the recruitment process that produced the competency data used in this study was identical in design. The sampling process design attempted to ensure that objects from each of the six work-stream functions were included in the sample. Objects in the population were therefore grouped into the business function or work-stream to which they belonged, to form a stratified sampling frame.

3.3.2 The Sampling Technique

Objects in each of these functions were ordered according to company number and thereafter allocated a sequential number. A simple random method of sampling was chosen and was designed to produce a sample of approximately fifty-four objects for

the study, with approximately seven to nine sampling units per function. A table of random numbers was used to generate the sample from each of the strata. (Cooper and Schindler, 1998)

3.3.3 Sample Size

The sampling procedure produced a sample of fifty-four objects from a sampling frame of one hundred and thirteen objects. The sample was stratified by function and produced a sample of objects from each function as follows:

- ⇒ Customer Management (CM) (n=8)
- ⇒ Finance (Fin) (n=7)
- ⇒ Human Resources (HR) (n=3)
- ⇒ Information Technology (IT) (n= 3)
- ⇒ Marketing (M) (n=18)
- ⇒ Supply Chain (SC) (n=15)

Total Sample: (n=54)

3.4 DATA ANALYSIS METHOD

3.4.1 Statistical Techniques

The study incorporates correlation and multiple regression analyses.

3.4.1.1 Correlation analysis

This would be carried out first to determine if there was any clear relationship that could be observed at the 5% significance level between competency scores and early career success as measured by individual cumulative merit increase percentages.

3.4.1.2 Multiple Regression analysis

The model consisted of a dependent variable: Management Trainee Success. Success is measured by the combined performance appraisal scores of the stratified simple random sample of management trainees. (n=54)

The model's independent variables are represented by the competency scores obtained by each candidate on the competency clusters Determines Direction (DD), Delivers through People (P), Integrity & Teamwork (V) & Drive (D), as measured during the recruitment process.

The model aims to examine the nature of the relationship between the dependent variable performance success and the independent variable/s represented by the

competency scores of DD, P, V & D. Principally the study sets out to determine which competency cluster and its associated behaviours have the most influence on early career success for young graduates during their first twenty-one months in the organisation.

The data mentioned above could be measured on an interval scale and can be classified as metric. A multivariate analysis technique, multiple regression was used. This is a dependency technique where criterion or dependent variables and predictor or independent variables exist in the equation of the research model. (Cooper R & Schindler, P. – 1998) Multiple regression analysis was used to build a model to predict the outcome for success achieved (Sum %) by a management trainee given that certain competency scores were scored at recruitment and selection.

The model can be represented by the following regression equation:

$$Y = a + b_1 (x_1) + b_2 (x_2) + b_3 (x_3) + b_4 (x_4)$$

Substituting the variables from the study:

$$\text{Success (Sum\%)} = \text{constant} + b_1 \text{DD} + b_2 \text{D} + b_3 \text{P} + b_4 \text{V}$$

- Success (sum%) = the dependent variable
- DD; D; P & V = independent variables

All the indicator variables were allocated to the full model. The final model would be determined by using a backward elimination multiple regression computation. The model that would be chosen would explain which variables are the best predictors of early career success.

Chapter 4

Results and Discussion

The following represent the findings of the study The following abbreviations are used in this chapter.

Competencies

DD	Determines Direction
P	Delivers Through People
V	Values
D	Drive

Functions

CM	Customer Management
Fin	Finance
HR	Human Resources
IT	Information Technology
SC	Supply Chain
Market	Marketing

4.1 STATISTICAL TECHNIQUES

The study incorporates analyses of mean frequency distributions and associated graphs, intercorrelations and multiple-regressions.

4.2 CORRELATION ANALYSIS

Intercorrelations for competency scores by function and cumulative merit increase percentages are given in the following table.

Apil-B	1					
DD	0.047	1				
D	-0.046	0.307	1			
P	0.071	0.144	0.25	1		
V	-0.139	0.245	0.151	0.301	1	
Cum. Increase	0.383	0.26	0.139	0.162	0.068	1
	Apil-B	DD	D	P	V	Cum. Increase

Table 4.1: Correlation Matrix – Cumulative Increase (Success)

The correlation matrix scores show that there were no significant relationships at the 5% level.

4.3 ANALYSIS OF RATE OF PROMOTION AND MEAN COMPETENCY SCORE BY COMPETENCY CLUSTER AND PERIOD OF PROMOTION, I.E. PERIOD '2', PERIOD '3' OR PERIOD '0' INDICATING THAT NO PROMOTION WAS RECEIVED

As part of the exploratory data analysis a graphical analysis was conducted of the mean competency scores by competency cluster and period of promotion, i.e. period '2', period '3' or period '0' indicating that no promotion was received.

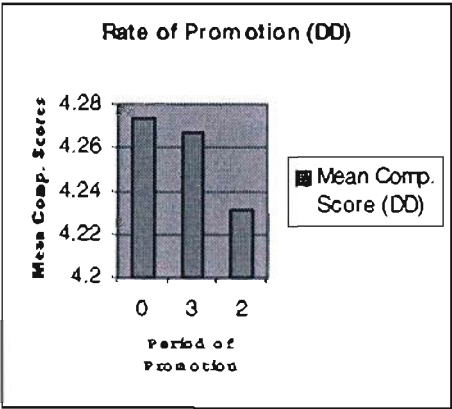


Figure 4.1: Rate of promotion (DD)

Promotion Period	Count	Mean Comp. Score (DD)
0	11	4.273
3	30	4.267
2	13	4.231

Table 4.2: Rate of promotion (DD)

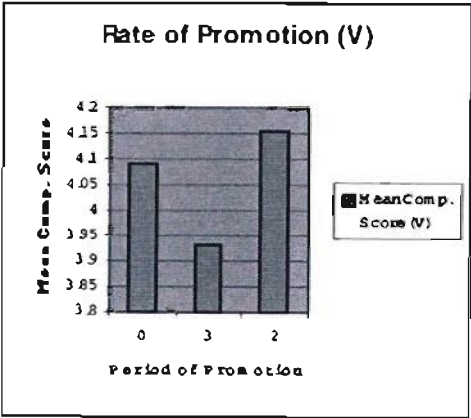


Figure 4.2: Rate of promotion (V)

Promotion Period	Count	Mean Comp. Score (V)
0	11	4.091
3	30	3.933
2	13	4.154

Table 4.3: Rate of promotion (V)

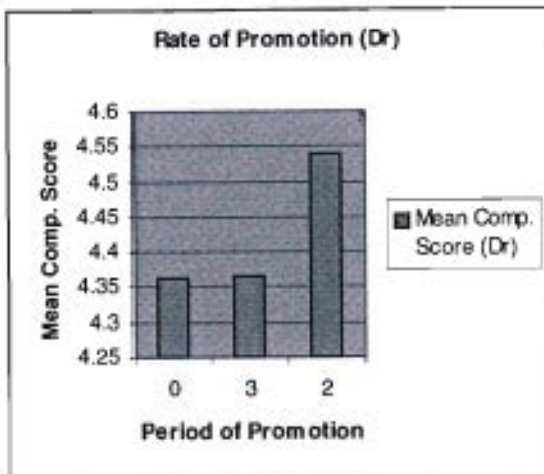


Figure 4.3: Rate of promotion (D)

Promotion Period	Count	Mean Comp. Score (Dr)
0	11	4.364
3	30	4.367
2	13	4.538

Table 4.4: Rate of promotion (D)

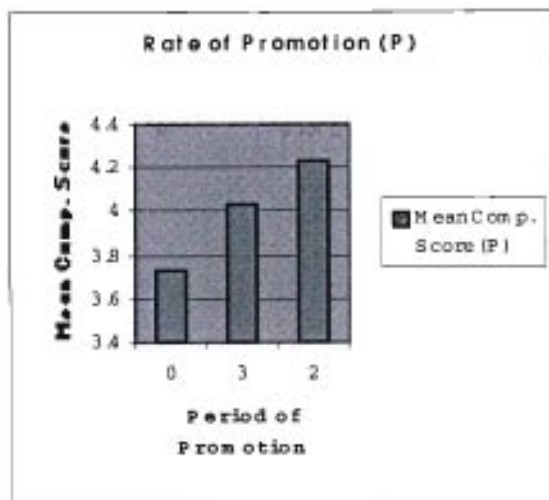


Figure 4.4: Rate of promotion (P)

Promotion Period	Count	Mean Comp. Score (P)
0	11	3.727
3	30	4.033
2	13	4.231

Table 4.5: Rate of promotion (P)

This analysis shows that in three (D, V & P) of the four competency clusters there is a positive relationship between rate of promotions and mean competency score for the competency. This indicates that the mean score for period (2) promotions is higher than the mean score for period (3) promotions and also higher than the mean scores of individuals who did not receive promotion in this initial period (0).

4.4 ANALYSIS OF MEAN MERIT INCREASE PERCENTAGES AND COMPETENCY SCORE

Further exploratory data and graphical analysis was conducted of the mean cumulative merit increase percentages and the different competency scores.

This analysis showed that relationships could be observed between these indicator variables. The following tables and associated graphs illustrate the relationships.

4.4.1 Competency Score - Determines Direction (DD)

Competency Score DD	Count	Mean Increase
3.000	5	0.2618
4.000	30	0.3159
5.000	19	0.3431

Table 4.6: Competency Score (DD) & Mean Increase

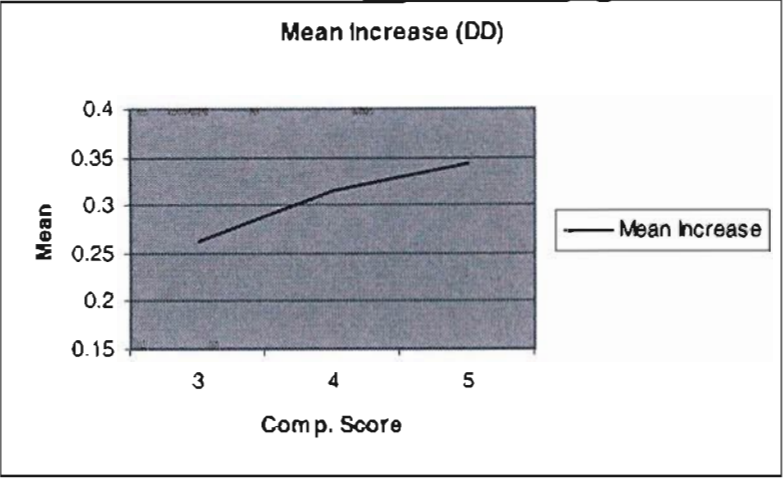


Figure 4.5: Competency Score (DD) & Mean Increase

4.4.2 Competency Score – Drive (D)

Competency Score D	Count	Mean Increase
3.000	4	0.2700
4.000	24	0.3201
5.000	26	0.3285

Table 4.7: Competency Score (D) & Mean Increase

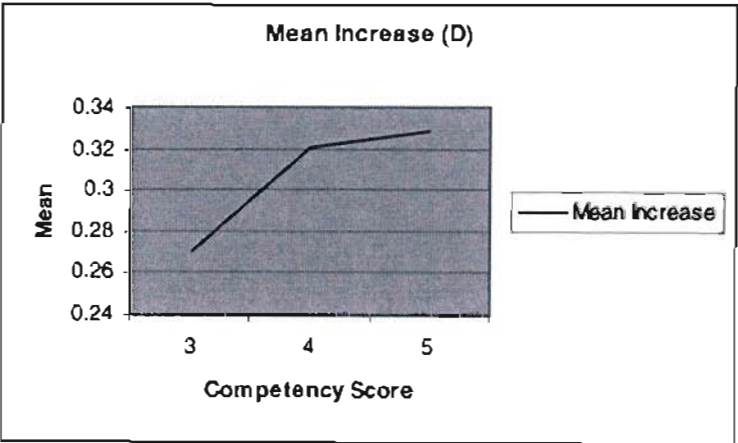


Figure 4.6: Competency Score (D) & Mean Increase

4.4.3 Competency Score – Delivers through People (P)

Competency Score P	Count	Mean Increase
3.000	16	0.2986
4.000	21	0.3271
5.000	17	0.3328

Table 4.8: Competency Score (P) & Mean Increase

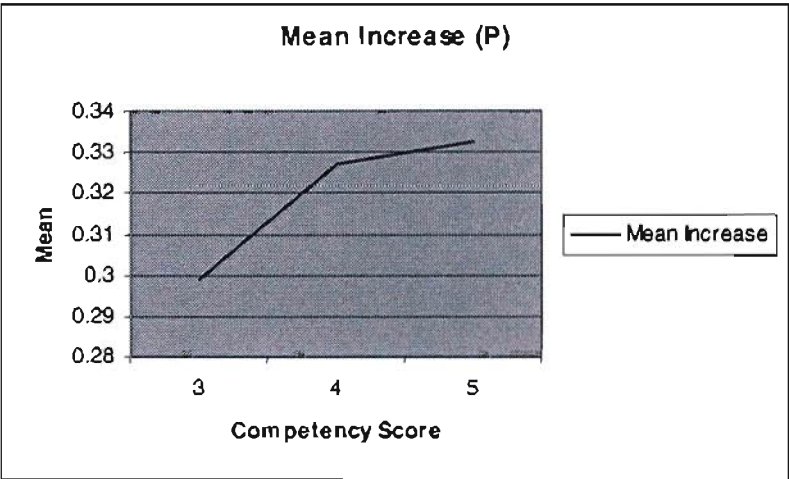


Figure 4.7: Competency Score (P) & Mean Increase

4.4.4 Competency Score – Values (V)

Competency Score V	Count	Mean Increase
3.000	10	0.3192
4.000	30	0.3238
5.000	13	0.3211

Table 4.9: Competency Score (V) & Mean Increase

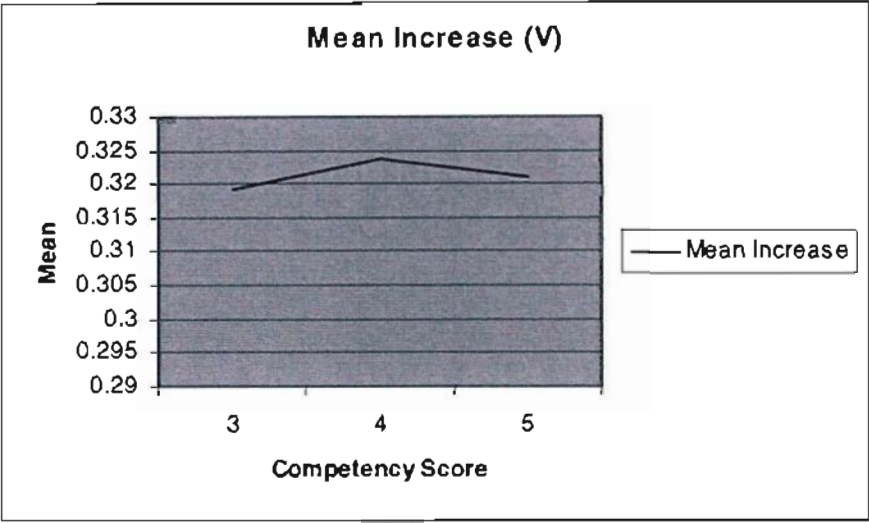


Figure 4.8: Competency Score (V) & Mean Increase

This analysis shows that in three (DD, D & P) of the four competency clusters a positive relationship exists between competency scores received during the recruitment process and the mean appraisal increases received over the three periods.

4.5 ANALYSIS OF MEAN MERIT INCREASE PERCENTAGES,
COMPETENCY SCORE BY FUNCTION

The following table illustrates the mean merit increases by function.

Function	Count	Mean
CM	8	0.3494
Finance	7	0.3127
HR	3	0.2190
IT	3	0.3733
Marketing	18	0.3055
SC	15	0.3363

Table 4.10: Mean Increases by Function

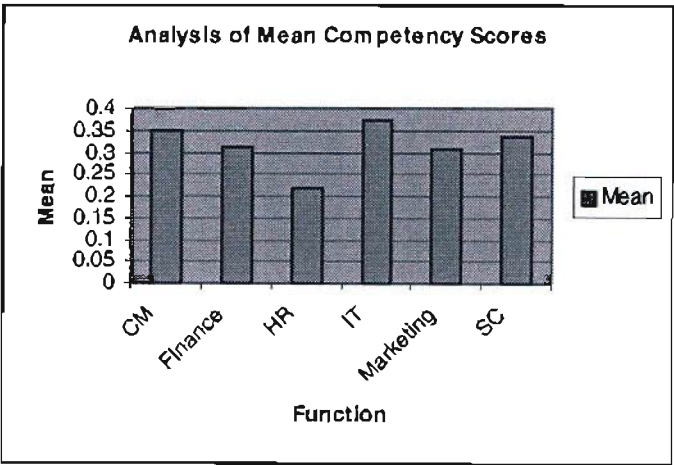


Figure 4.9: Mean Increases by Function

When stratified by function, further discrimination could be observed in relationship between competency score, mean increase percentage.

Below are some examples of evidence of these relationships.

4.5.1 Analysis of Mean Merit Increase Percentages and Competency Score

Determine Direction (DD) by Function

Function: Customer Management (CM)

Competency Score - DD	Count CM	Mean Increase - CM
3.000	1	0.2300
4.000	6	0.3542
5.000	1	0.4400

Table 4.11: Mean Increases by competency score (DD) by function CM

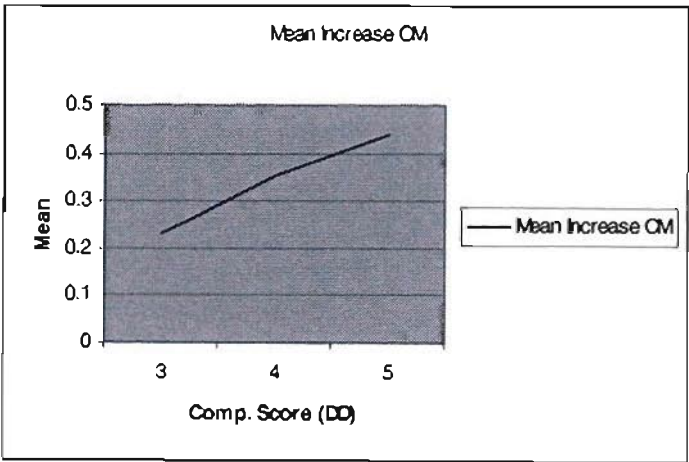


Figure 4.10: Mean Increases by competency score (DD) by function CM

Function: Finance (F)

Competency Score - DD	Count – Finance	Mean Increase - Fin
3.000	1	0.3000
4.000	2	0.3265
5.000	4	0.3090

Table 4.12: Mean Increases by competency score (DD) by function Fin.

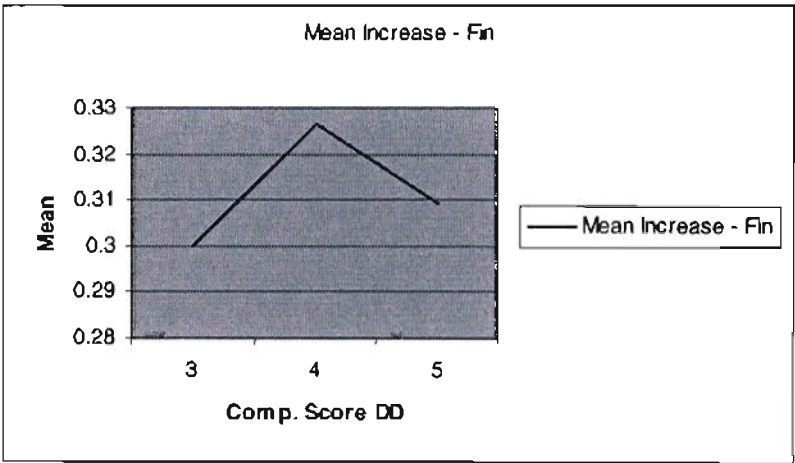


Figure 4.11: Mean Increases by competency score (DD) by function Fin.

Function: Human Resources (HR)

Competency Score – DD	Count – HR	Mean Increase -HR
3.000	0	*
4.000	1	0.2120
5.000	2	0.2225

Table 4.13: Mean Increases by competency score (DD) by function HR

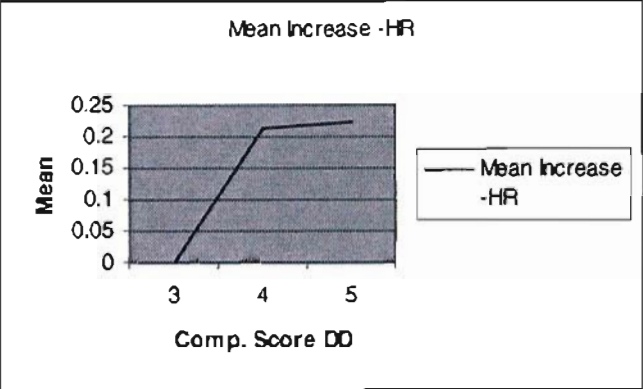


Figure 4.12: Mean Increases by competency score (DD) by function HR

Function: Information Technology (IT)

Competency Score – DD	Count - IT	Mean Increase -IT
3.000	0	*
4.000	2	0.3425
5.000	1	0.4350

Table 4.14: Mean Increases by competency score (DD) by function IT

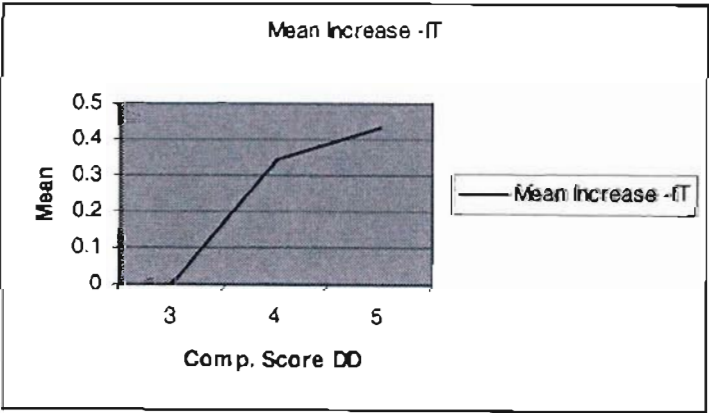


Figure 4.13: Mean Increases by competency score (DD) by function IT

Function Marketing

Competency Score – DD	Count - Marketing	Mean Increase – Marketing
3.000	2	0.2600
4.000	9	0.3040
5.000	7	0.3204

Table 4.15: Mean Increases by competency score (DD) by function Marketing

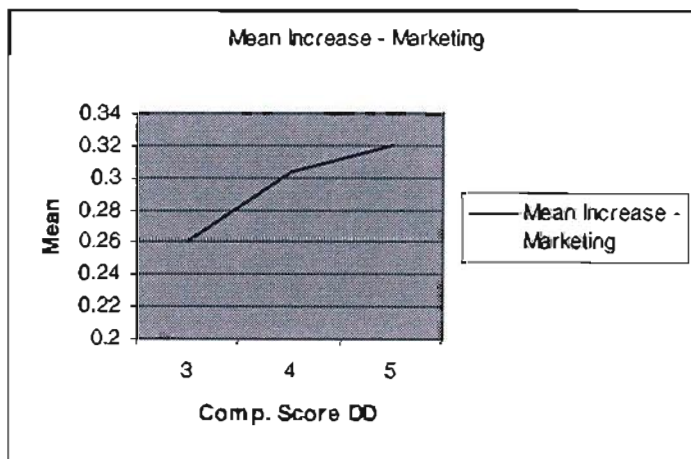


Figure 4.14: Mean Increases by competency score (DD) by function Marketing

Function: Supply Chain (SC)

Competency Score - DD	Count - SC	Mean Increase - SC
3.000	1	0.2590
4.000	10	0.3067
5.000	4	0.4298

Table 4.16: Mean Increases by competency score (DD) by function SC

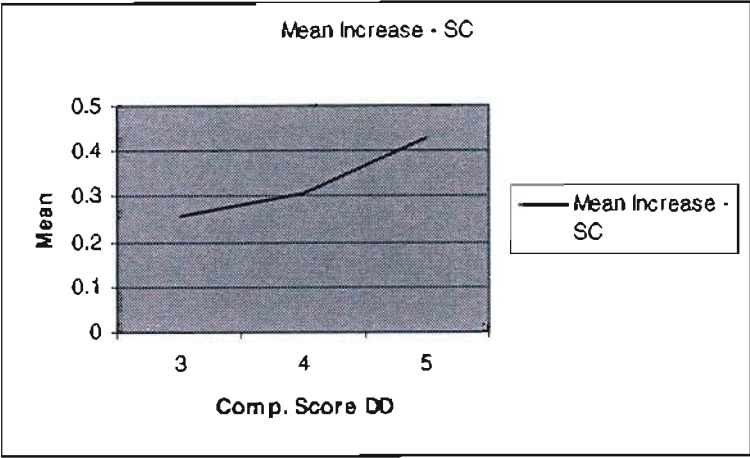


Figure 4.15: Mean Increases by competency score (DD) by function SC

This analysis shows that a further level of discrimination in the form of a positive relationship between the mean cumulative appraisal increase and competency score for the DD competency can be discerned for the functions Customer Management (CM), Human Resources (HR), Information Technology (IT), Marketing (M) & Supply Chain (SC).

Further analysis stratified by function was carried out and similar relationships were found to exist.

4.6 MULTIPLE REGRESSION MODEL

From the analysis presented above it is shown that positive linear relationships existed between the means of the cumulative merit appraisal scores and the scores from the different competency clusters. A positive relationship was also shown to exist when

the relationship between the means of the cumulative appraisal increases and the competency scores within each of the functional areas was examined.

The following scatterplots further illustrate the positive relationships.

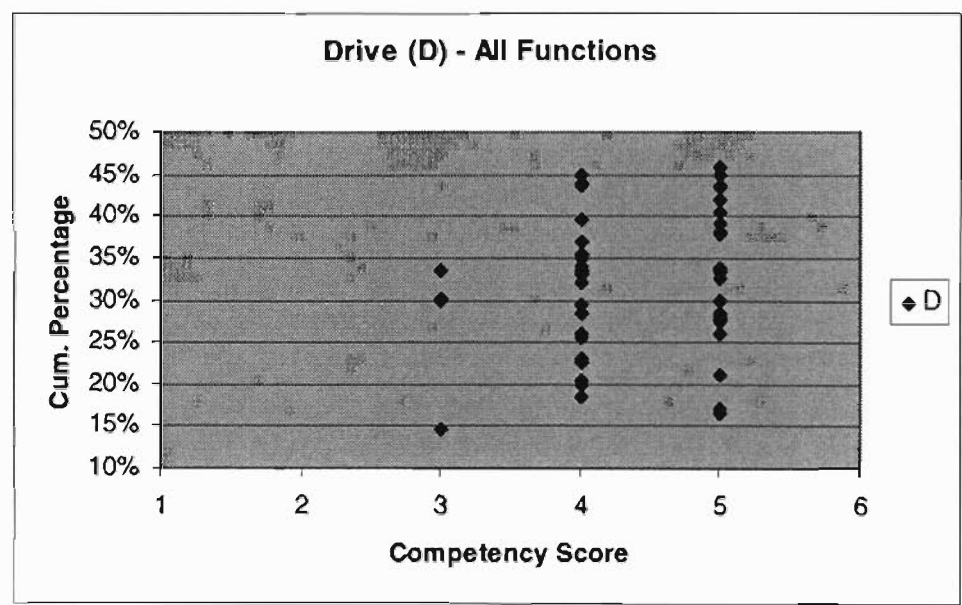


Figure 4.16: Scatterplot of Competency Score (D) and Cumulative Increase

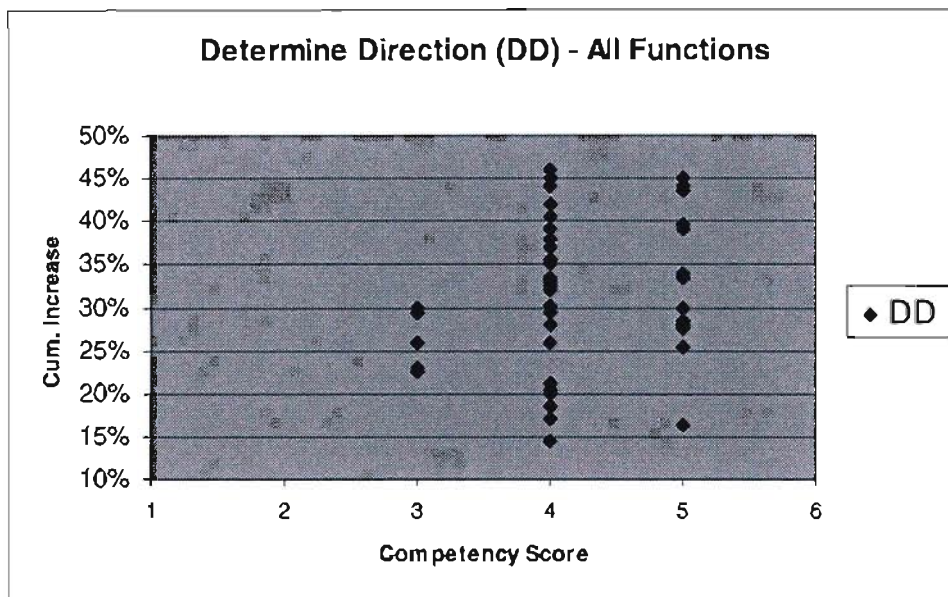


Figure 4.17: Scatterplot of Competency Score (DD) and Cumulative Increase

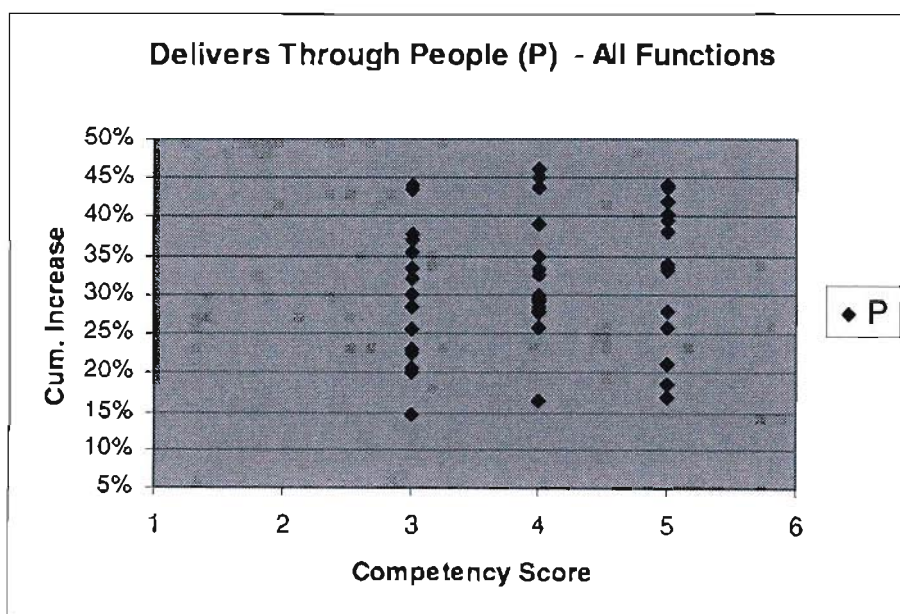


Figure 4.18: Scatterplot of Competency Score (P) and Cumulative Increase

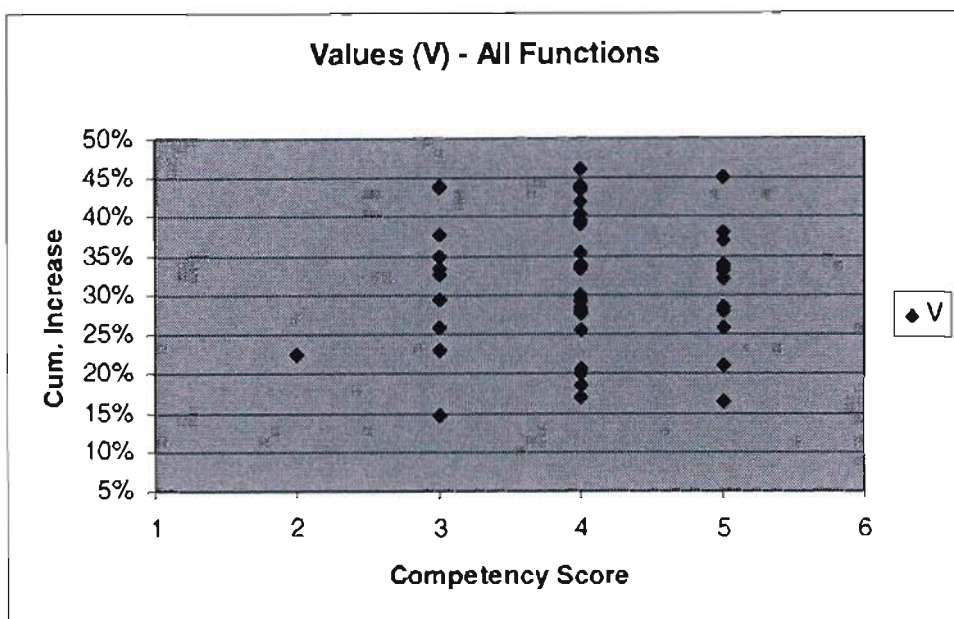


Figure 4.19: Scatterplot of Competency Score (V) and Cumulative Increase

Before undertaking the multiple-regression analysis the following main conditions were reviewed; namely that there was no evidence of multicollinearity; that there was heterogeneity of variances; that residual errors were uncorrelated and that anything unexplained is noise; and that variables were normally distributed.

To examine the effect of the independent competency variables on the chances of early career success of management trainees, multiple linear regression was used using the Genstat v. 4.2.2 software.

4.6.1 The full model equation

$$\text{Success (Sum \%)} = \text{constant} + b_1 \text{ DD} + b_2 \text{ D} + b_3 \text{ P} + b_4 \text{ V}$$

Starting with the full model, **all the variables** were used in a backward elimination multiple linear regression computation in order to ascertain which variables were the best predictors of early career success. Variables with the highest p-value were eliminated as these show the least significant difference from zero.

The most satisfactory regression function was as follows:

$$\text{SUCCESS} = \text{constant} + b_1(\text{DD}) + b_3(\text{P})$$

Dependent Variable = **SUCCESS**

Independent Variables

1. DD

2. P

Regression Equation:

$$\text{SUCCESS} = 0.1267 + 0.033(\text{DD}) + 0.0132(\text{P})$$

R-sq: 5.2%

Standard error of observations is estimated to be: 0.0796

Analysis of Variance:

	d.f.	s.s.	m.s.	v.r.	F pr.
Regression	2	0.0312	0.015621	2.47	0.095
Residual	51	0.3230	0.006334		
Total	53	0.3543	0.006684		

Variables in the equation

Predictor	Coefficient	s.e.	t(51)	t pr.
Constant	0.1267	0.0884	1.43	0.158
DD	0.0330	0.0178	1.85	0.069
P	0.0132	0.0140	0.94	0.351

Table 4.17: Multiple Regression Analysis (DD & P)

The equation however produced a p-value was greater than our chosen level of significance

$$\alpha = 0.05$$

4.6.2 Multiple Linear Regression by Groups

Further analysis was undertaken in order to find the most satisfactory regression equation. This time analysis using multiple linear regression with groups was performed. To the equation, the variable 'function' was added. Once again, using a stepwise backward elimination multiple regression technique, the following intermediate solution was obtained.

The following intermediate regression function was obtained:

$$\text{SUCCESS} = \text{constant} + b_1(\text{DD}) + b_3(\text{P}) + \text{function}$$

Dependent Variable = **SUCCESS**

Independent Variables

1. DD

2. P

3. Finance

4. HR

5. IT

6. Marketing

7. SC

Regression Equation

$$\text{SUCCESS} = 0.1127 + 0.0458 (\text{DD}) + 0.0138 (\text{P}) - 0.0540 (\text{Fin}) - 0.1672 (\text{HR}) + \\ 0.0070 (\text{IT}) - 0.0575 (\text{Mkt}) - 0.0276 (\text{SC})$$

R-sq. = 18.8%

s.e. = 0.0737

Analysis of Variance

	d.f.	s.s.	m.s.	v.r.	F pr.
Regression	7	0.1047	0.014952	2.76	0.018
Residual	46	0.2496	0.005426		
Total	53	0.3543	0.006684		

Variables in the Equation

Predictor	Coefficient	s.e.	t(46)	t pr.
Constant	0.1127	0.0835	1.35	0.184
DD	0.0458	0.0171	2.68	0.010
P	0.0138	0.0134	1.03	0.308
Func Finance	-0.0540	0.0389	-1.39	0.172
Func HR	-0.1672	0.0513	-3.26	0.002
Func IT	0.0070	0.0502	0.14	0.890
Func Marketing	-0.0575	0.0317	-1.82	0.076
Func SC	-0.0276	0.0328	-0.84	0.404

Table 4.17: Multiple Regression Analysis (With Groups)

Function CM used a reference

This regression equation returned a statistically valid model with a P-value $0.018 < \alpha = 0.05$

4.6.3 Multiple Linear Regression with Groups (Interaction Function and Competency)

A final model was determined by a further backward linear regression analysis with groups. An analysis of the interaction between the variables was undertaken to determine if interaction produced a more satisfactory solution.

The regression equation was follows:

$$\text{Success} = \text{Constant} + \text{DD} + \text{P} + \text{Func} + \text{DD.Func} + \text{P.Func}$$

R-sq. = 21.2%

s.e. = 0.0726

Analysis of Variables

	d.f.	s.s.	m.s.	v.r.	F pr.
Regression	16	0.1594	0.009962	1.89	0.055
Residual	37	0.1949	0.005267		
Total	53	0.3543	0.006684		

Variables in the Equation

	Coefficient	s.e.	t(37)	t pr.
Constant	-0.063	0.207	-0.30	0.762
DD	0.0443	0.0668	0.66	0.511
P	0.0607	0.0428	1.42	0.165
Func Finance	0.212	0.308	0.69	0.494
Func HR	-0.313	0.608	-0.51	0.610
Func IT	-1.28	1.16	-1.10	0.280
Func Marketing	0.277	0.241	1.15	0.258
Func SC	-0.068	0.272	-0.25	0.804
DD.Func Finance	-0.0433	0.0767	-0.56	0.576
DD.Func HR	0.027	0.134	0.20	0.842
DD.Func IT	0.236	0.190	1.24	0.222
DD.Func Marketing	-0.0148	0.0725	-0.20	0.839
DD.Func SC	0.0577	0.0753	0.77	0.448
P.Func Finance	-0.0179	0.0581	-0.31	0.760
P.Func HR	0	*	*	*
P.Func IT	0.064	0.111	0.58	0.566
P.Func Marketing	-0.0695	0.0488	-1.42	0.163
P.Func SC	-0.0516	0.0492	-1.05	0.302

Table 4.19: Multiple Regression Analysis (With Groups) Interaction Model

This model produced a slightly improved result; namely that 21.2% of the variance in the model can be explained by the equation. It also fell only slightly outside of our required significance level of $\alpha < 0.05$.

This regression analysis suggests that the variable 'function' in interaction with the independent 'competency' variables DD & P improves the model in helping determine early career success amongst graduates.

Chapter 5

Conclusion and Recommendations

5.1 RESULTS

This study set out to identify if specific competencies that formed part of an organisation competency framework were more significant predictors of early career success amongst graduate trainees than were others. The method chosen linked competency scores to merit appraisal increases awarded the trainees during their early careers in the organisation in a multiple regression computation, using a backward elimination technique.

The results of this exercise seemed to indicate that two competency clusters seemed to play a bigger part in determining early career success than the other two competency clusters. The two competencies, Determines Direction (DD) and Delivers through People (P) are the clusters that measure practical, creative and intellectual behaviour, as well as the ability of an individual to achieve results through other people.

The final model of the regression analysis that delivered the most statistically relevant results, took into account the interaction between the function or work-stream in which the graduate trainee works, as well as the competencies that an earlier regression computation showed to determine success. From these results it seems to

suggest that these competencies apply across all of the independent work-stream or functions in determining early career success.

5.2 RECOMMENDATIONS

The results of this study suggest that certain competencies are more valued by the organisation early on in a graduate trainees career than others. A trainee's transition into corporate life depends upon many factors, not least of all the signals received by the trainee during performance and merit appraisals. For graduates who appear to have more capability in these two competency areas, it suggests that their transition into corporate life will be easier. The organisation should therefore be looking to increase focus on developing these competencies in those individuals who seemed to be lacking these competencies at recruitment. It may also suggest that perhaps these competencies are easier to assess during the recruitment and even the early development phase of a graduate's career.

5.3 WEAKNESSES OF THE STUDY

⇒ The sample size for this study did not allow for validation of the final model.

Hence the model cannot be classed as robust.

⇒ No interview process is entirely without subjectivity. For an interview process to be fair, it must seek to reduce the effects of subjective variables as much as

possible. The effects of individual interviewer bias and styles across the different functions have not been factored into the model. Competency scores allocated to one competency for example cannot therefore be entirely consistent with others in terms of measure.

- ⇒ Although standard questions are used across the selection panel process for all functions, different interviewers are used for each functional interview panel. Interviewers are however trained in the use of the competencies for selection purposes, nevertheless, due to individual biases, approaches and interpretations, scores from panel to panel and from function to function may not represent a consistent standard.
- ⇒ Only competencies assessed during the recruitment process were used to in the model. The model does not take into account the effects of the trainees learning undergone in the development of the competencies over the twenty-one month period. This would be reflected in the appraisal scores.
- ⇒ The range of scores allocated to successful hires during the recruitment and selection process was in a very narrow range. Most candidates scored in the range 3 to 5 on a 5-point scale. This is logical, as you would expect the scores to be at the top of the scale and in fact it was a general requirement of the selection process that candidates score at least 3 on the scale to 'pass'. This made for little discrimination in scores from one candidate to another and also left the model unable to cope with scores where candidates did score less than 3.

In summary and from the evidence provided, the study showed that further exploration of the competencies and their role in the graduate recruitment and early development processes for new management trainees may be further warranted. This could further enhance or deepen the understanding of issues related to early career transition, retention and ultimately their chances of success.

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