IDENTIFYING THE GENERIC COMPETENCIES OF RUGBY UNION REFEREES

By

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SUMMARY

IDENTIFYING THE GENERIC COMPETENCIES OF RUGBY UNION REFEREES

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The Blue Bulls Rugby Referees' Society has experienced difficulty identifying the competencies required for individuals to become successful referees at national and international levels. The purpose of this study, therefore, is to identify the generic competencies required by a referee to become successful at the highest level. Competencies therefore, according to this study, are a prerequisite for successful rugby union refereeing.

The two main research strategies used are the quantitative and qualitative research methods. In this study quantitative research is predominant, but qualitative research was also used to identify the competencies employed in the questionnaires.

Interviews were conducted with the management of the Blue Bulls Rugby Referees' Society, and with the players to gather input based upon their knowledge. Interviews with approximately ten senior coaches were also conducted to obtain their views. The information gathered from these interviews, together with personal experience and inputs from De Beer (2003: unpublished interview) were utilised to draw up a list of competencies.

In this study survey research was used, using the Delphi technique to determine what the Blue Bulls referees' opinions are about the required competencies of a successful referee, and to ensure that important competencies were not excluded. The Blue Bulls referees' inputs were incorporated and a final questionnaire

compiled. This questionnaire consisted of 36 competencies, which could be rated on a 5 point Likert scale.

The total population for the study was 223, with 181 referees and 42 Currie Cup players. A weighted competency index was determined from these responses and the ten most important generic competencies, required to be a successful referee, from these responses are:

- **Objectivity / Impartiality** *(being able to treat both sides the same)*
- **Consistency** *(consistency in the way rules are applied during a match)*
- **Concentration / Focus** *(ability to stay focused during a match and not allow the mind to fluctuate)*
- **Honesty / Integrity** *(the ability to be honest with players, on and off the field)*
- **Commitment** *(dedication to do the best when preparing for games, know the rules, and always giving the best when refereeing a match)*
- **Judgement** *(ability to evaluate and judge situations during a match correctly)*
- **Fitness** *(fitness in terms of physical ability to keep up with play during a match)*
- **Trustworthiness** *(ability to make the players trust you and know that you will apply the laws consistently and fairly)*
- **Decisiveness** *(ability to reach quick and firm decisions)*
- **Composure** *(to be calm during difficult situations)*

CHAPTER 1

GENERAL INTRODUCTION

1.1 BACKGROUND OF STUDY

Rugby is managed professionally as a business organisation and, therefore, the competencies of referees and the identification of high potential referees are important (Horn 2003: unpublished interview).

The game of rugby has a tremendous influence on the social and economic life of a large part of South African rugby supporters and players. Approximately 450 rugby matches are played during a typical week of the rugby season, in the Blue Bulls rugby region (Rhoodt 2003: unpublished interview). There are 50 schools involved in and around Pretoria, with matches taking place at 25 schools every week. There are 0/14, 0/15, 0/16, and open team matches. In the case of the bigger schools, there are up to three teams per age group and even more teams in the open league. There are a minimum of 40 club matches during such a week, plus at least 15 University and Technikon hostel matches (Rhoodt 2003: unpublished interview).

Referees handle all these matches and, therefore, they contribute greatly to the enjoyment and satisfaction of the players and supporters. Thousands of supporters attend these leagues and the bigger school and provincial matches are the subject of everyday conversations. The issue most likely to be discussed is the way the referees officiated the matches.

During a week in the Blue Bulls region, with the many matches that take place, it is mostly qualified referees who participate in the games, and in most cases, one referee will handle more than one match per week. In some matches qualified touch judges are also involved (Rhoodt 2003: unpublished interview).

The competencies of rugby referees are important because they impact matches in the following ways:

- They provide the framework within which the game can “flow”.
- They present the opportunity for the players to display their individual skills and for teams to execute their game plans and strategies.
- They determine a climate of fair or unfair refereeing.

Participation in the game of rugby is growing rapidly, and so much is at stake that the competencies of referees need to be improved all the time.

Interest in rugby generally starts at a young age and therefore school level rugby is already very competitive. The Craven Week is a national rugby week for both primary and high schools where teams from around the country battle it out to see which province will be “crowned” as champions. There are also some traditional rivalries between schools that attract a lot of attention, such as the rivalry that exists between the Afrikaans Hoër Seunskool (AFFIES), from Pretoria, and Grey College, from Bloemfontein. This particular rivalry started in 1953. Another old rivalry of this Pretoria high school is the annual game against their neighbours, Pretoria Boy’s High School. These two sides started their battle in 1923 and to date 96 games have been played (Snyman 2002: 8).

After school, there are various age groups in which provincial colours can be obtained. There are 0/20 and 0/23 levels before players move on towards senior rugby. Women’s rugby is also growing in popularity and an interprovincial competition for women rugby players is already in place.

The most prestigious rugby competitions within South Africa are the 0/20 national championship, the President's Cup (Senior B sides of all the provinces), and the most important is the Currie Cup, the traditional championship between all the provinces (http://www.supersport.co.za).

International rugby is another aspect of the game that attracts a lot of attention. The Super 12 is a championship between four South African "regional" sides, five New Zealand sides and three Australian sides. The Tri-nations is an international competition between South Africa's Springboks, the Australian Wallabies and the New Zealand All Blacks (http://www.supersport.co.za). International tours also take place annually and every fourth year there is a World Cup, in which all the top rugby playing nations partake.

Centre stage in all these games and traditional rivalries are the referees who are responsible for officiating. At senior and international levels, the prestige linked to results is very high and, therefore, referees and their competencies are the subject of public debate and are frequently covered by the media. It is an old cliché that the losing team normally blames the refereeing.

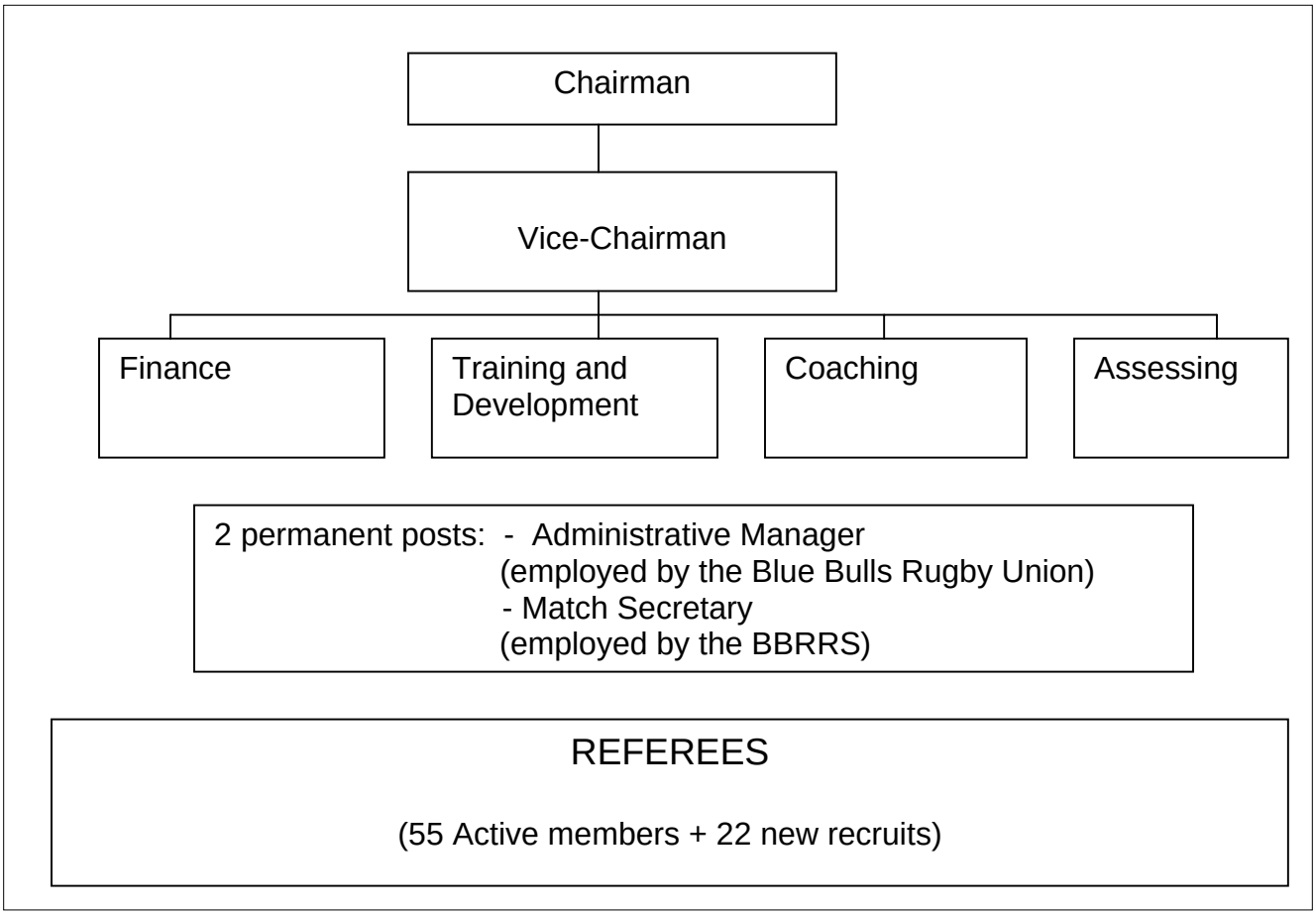
Most rugby unions within South Africa are profit oriented companies and have their own referee association or society. The South African Rugby Football Union (SARFU) has some referees on their payroll and these referees are professionals. Most referees from the different unions referee for the love of the game and make no money from their efforts. However, since the game turned professional in 1996, the demand for competent referees has increased dramatically. Since rugby unions became profit-making organisations, some rugby referees pursue rugby as a career, and the rugby referee societies have become a crucial division of the rugby organisations (unions). Once rugby unions are run as organisations they must function as such and, therefore, the optimal management of human resources is vital (Horn 2002: unpublished interview).

1.2 OBJECTIVES AND STRUCTURE OF THE ORGANISATION

The Blue Bulls Rugby Referees' Society (BBRRS) has been one of the more successful referee unions in South Africa over the past few years. The society started the season in 2002 with a strong contingent of members in all refereeing categories. Although there were a number of transfers to other societies and some resignations, the Blue Bulls Society ended the year with a healthy increase in membership (Blue Bulls Rugby Referees' Society Annual Report 2002: 3).

The Blue Bulls Rugby Referees' Society is a division within the bigger set-up of the Blue Bulls Rugby Union. The Blue Bulls Rugby Union is a shareholder of the Blue Bulls Company, which in turn is a profit seeking organisation. The various divisions within the union must therefore perform their functions separately, but it is also important that all the divisions relate to each other to make the "organisation" operate effectively. Within each of these divisions people are at work and must be managed accordingly, and therefore human resources remain essential in the performance of Blue Bulls rugby. Some of the other divisions within the union are a public and media relations office, event organisers, a marketing and sponsorship office, stadium manager, etc, and the Blue Bulls Rugby Referees' Society also has various portfolios in its hierarchy that must be managed, as can be seen in the following figure:

Figure1.1: Organisational structure of the BBRRS.



Horn (2003: unpublished interview)

The referees fall under the jurisdiction of the BBRRS and, in a sense, are employees of the BBRRS even though they operate mainly on a voluntary basis. It is, because of the voluntary nature of their service, even more important to manage these referees effectively in order to retain their services. To create employee satisfaction and to strive in making employees more competent falls under the human resource function.

The vision of the BBRRS is: “A Rugby Referees’ Society with world class referees” (http://www.bullrefs.co.za).

The mission of the Blue Bulls Rugby Referees’ Society is to provide world class referees by:

- Effective and competent management of the society
- Creating and maintaining a culture of enthusiasm, caring and devotion
- Maintaining open communication within and outside the society
- Providing excellent training, coaching and support to all members
- Providing excellent service to the BBRU and SARFU

(http://www.bullrefs.co.za).

The Blue Bulls Rugby Referees’ Society also has seven important values namely:

i. Transparency – management, committees and members conduct business in such a way that all are aware and understand what is happening within the society.
ii. Loyalty – all members are loyal and committed to the society.
iii. Integrity – an attitude of sincerity within which all endeavour to be honest in word and deed.
iv. Professionalism – commitment and dignity, both on and off the field.
v. Cooperation – willingness to cooperate and to sacrifice while striving to secure the objectives of the society.
vi. Accessible – management, committees and members are approachable.
vii. Dignity – to act in such a way that both individuals and the society are respected.

(http://www.bullrefs.co.za).

The referee numbers of the Blue Bulls Rugby Referees' Society were as follows at the end of 2002:

Table 1.1: Compilation of the Blue Bulls Rugby Referees' Society – 2002.

	Pretoria			Limpopo Region			
MEMBERS	**WHITE**	**BLACK**	**LADIES**	**WHITE**	**BLACK**	**LADIES**	**TOTAL**
START (2002)	111	11	3	17	2	0	144
NEW RECRUITS	12	4	2	14	4	0	36
TRANSFERS	3	0	0	1	0	0	4
RESIG-NATIONS	11	2	0	8	0	0	20
TOTAL	115	14	5	24	6	0	164

Blue Bulls Rugby Referees' Society Annual Report (2002: 4)

With the Blue Bulls Rugby Union being one of the so-called "bigger" unions in South Africa there is a lot of pressure on them to perform, not only their various rugby teams on the field, but also their referees. Effective recruitment and selection of referees is therefore very important.

1.3 RECRUITMENT AND TRAINING OF REFEREES

The Blue Bulls Rugby Referees' Society takes in new referees during January of every year. There is no set number of intakes and anybody is allowed to apply. Applications close on the 31st of January and any late applications have to wait until the next year. During 2002 there were 24 new recruits.

Once an application has been successful the aspirant referee must undergo training to qualify as a Blue Bull referee. All this training is carried out free of charge.

Table 1.2: Table of the various leagues (levels) used by the Blue Bulls Rugby Referees' Society.

Highest Level	Carlton league and higher (Club 1st teams)
Middle Levels	Senior Reserve League (Club 2nd teams)
	Reserve league
	League 2A
	League 2B
	League 3A
	League 3B
Entry Level	4th League

Blue Bulls Rugby Referees' Society Annual Report (2002: 11-17)

The Blue Bulls Rugby Union uses a different structure to separate the various leagues and levels of play to that used by the Blue Bulls Rugby Referees' Society. They use a two league system with the third level being school rugby.

Table 1.3: Table of the various leagues (levels) used by the Blue Bulls Rugby Union.

SENIOR	RESERVE	SCHOOLS
Carlton	1st league	Big schools
Senior Reserve (2nd teams)	2nd league	Medium schools
U/21A league	3rd league	Small schools
U/20 league		
Senior reserve 2nd league (3rd teams)		
Senior reserve 3rd league (4th teams)	Women's league	

Blue Bulls Rugby Referees' Society Annual Report (2002: 11-17)

At the moment, most referees receive only a honorarium, and there are no big financial incentives except for the yearly amount paid for travelling costs. The referees receive honorariums twice a year in June and October, and the amount is dependent upon the amount of money available within the Union. Referees are also paid according to the league they operate in (Table 1.2 indicates the layout of the various leagues used by the BBRRS).

During 2002 the honorariums for the different leagues were as follows:

- Carlton - R90 per game
- Senior Reserve - R70 per game
- League 2A - R55 per game
- League 2B - R40 per game
- League 3A - R25 per game
- League 3B - R15 per game
- 4th League - R15 per game

The first step in the training of an aspirant referee is a theoretical examination on the rules of the game. Again it is important to note that all the training is free of charge. If the theoretical exam is passed successfully, three courses have to be attended and passed (Horn 2002: unpublished interview). They are:

i. A touch judge course
ii. Level 0 course (a referee introduction)
iii. Level 1 course (referee course)

All three of these courses are SARFU accredited.

If the courses are completed successfully the candidate must undergo a fitness test before management decide if the candidate will be accepted as a referee. Once accepted, the new referee will only act as a touch judge for two months before starting to officiate in the less important 4th league games.

Another aspect of refereeing is that standards are continuously monitored and referees are promoted and demoted accordingly between the categories mentioned earlier (Table 1.2). Grading of referees happens twice a year, during June and October.

There are five dimensions considered for the promotion and demotion of referees (Horn 2002: unpublished interview), namely:

I. Three exams per year of which the referee must pass two. The minimum percentages for the tests are as follows:

a. Carlton league - 75%
b. Senior Reserve league - 70%
c. Reserve league - 70%
d. League 2A - 65%

e. League 2B - 65%
f. League 3A - 60%
g. League 3B - 60%
h. 4th League - 55%

II. Three compulsory fitness tests, which involve a 2,4 km time trial run, called the Cooper run. The different times for each level of referee are as follows:

a. Carlton league - 11 min
b. Senior Reserve league - 11,30 min
c. Reserve league - 11,39 min
d. League 2A - 12 min
e. League 2B - 12 min
f. League 3A - 12,30 min
g. League 3B - 12,30 min
h. 4th League - 13 min

III. Referees must pass at least level 1 and 2 refereeing courses.
IV. There are assessors and coaches appointed to evaluate referees while they officiate – these assessors and coaches get paid a small amount for their services. The coaches are more involved with the junior referees (lower league classes), whilst the assessors work more closely with the senior referees.
V. Taking part in the activities of the society such as rule discussions, meetings, etc., also plays a part in the "grading" process of the referees.

In all of the above processes there are no cost for the aspirant referee, until that person becomes a Blue Bulls referee. All the training costs are therefore the burden of the Referee's Society. Once the aspirant referee becomes a qualified referee all the other costs are for their own account, like the compulsory kit they must wear during games, their traveling costs etc., and, as mentioned earlier they

do get paid a small amount twice a year mainly to cover their traveling costs (Horn 2002: unpublished interview).

During the training of such aspirant referees, together with the grading (that is, the promotion and demotion process), there is a substantial expenditure involved per candidate for the Blue Bulls Rugby Referees' Society. Below is an example of some of the real expenses for the 2002 season per person:

- A rule book - R40
- Touch judge course - R50
- Level 0 course - R50
- Level 1 course - R100
- Fitness test - R60

Together with these "real" costs there are hidden costs, such as the people involved in the training who must be paid for their services. The coaches and assessors must also receive their awards. It would therefore be fair to estimate that it costs R400-R500 to train each referee and to maintain current standard of the referees within the Blue Bulls Rugby Referees' Society (Horn 2002: unpublished interview).

1.4 PROBLEM STATEMENT

The Blue Bulls Rugby Referees' Society experience difficulty in identifying the competencies required for individuals to become successful referees at National and International levels.

In addition they also experience a high drop-out rate among applicants accepted as Blue Bulls referees. These referees complete the induction process only to realise, after a couple of games, that they do not like being a referee. The Society cannot prevent them from resigning because refereeing is voluntary, and the

referees must be replaced. The total identification process must be repeated at additional expense. Not only does this cause the Society significant financial loss, but time and resources are also stretched to the limit.

Furthermore, some of the referees lack the required competencies and this impacts negatively on the worth of the game for spectators and players. The players and spectators perceive these referees as biased and/or incompetent.

1.5 PURPOSE OF THE STUDY

The aim of this study is therefore to identify the competencies required by a referee to become successful at the highest level. Once the competencies are known, it will be easier during the screening and selection process of referees for the Blue Bulls Rugby Referees' Society to make the correct selection, and prevent newly trained referees from quitting or leaving the union.

Other purposes of the study include:

- The study should show the differences, if any, between the perceptions of the various referee groups and player groups within South Africa.
- The results of the study should assist the Blue Bulls Rugby Referees' Society to select their referees more effectively in future.

In order to fulfill the aim of the study, the survey method will be used to gather data. The Delphi technique will be used to gather data from the active Blue Bulls referees and to help identify the final competencies to be included for rating by other referees and players.

1.6 STRUCTURE OF THE STUDY

This study will be discussed in terms of the following:

- Chapter 2 and 3 will contain the literature study.
  - Chapter 2: The literature on competencies and competencies of rugby union referees.
  - Chapter 3: Refereeing, in the broad sense, will be discussed. This chapter will include literature on refereeing in any sport and not necessarily rugby alone.
- Chapter 4 covers the research methodology used during the study. The chapter describes the research process, methods of research, and the measurement techniques employed.
- In Chapter 5 the results of the study will be presented and discussed.
- Chapter 6 contains the identified competencies, and how the Blue Bulls Rugby Referees' Society can use these competencies to select new referee recruits that will be successful at the highest level.

CHAPTER 2

COMPETENCIES

2.1 INTRODUCTION

The goal of rugby union referees is to continuously strive for greater success, for a more professional approach and to hold the respect of players, coaches and supporters. The most effective way to achieve this goal is to identify the competencies that make a rugby referee successful at the highest level. Before such competencies can be identified, the term “competency” should be clearly defined, and the difference, if any, between “competency” and “competence” must be clarified.

In this chapter an operational definition of the term “competency” will be presented, even though the term has not yet been clearly defined in the literature. Various approaches to the term will also be discussed.

Other topics addressed in this chapter are Dickson’s (2000: personal e-mail) related research on the competencies of rugby referees in Australia, and lessons for this research will be drawn from Dickson’s study.

Referees are an integral part of the human resources of their sport organisations, e.g. unions, and consequently their competencies also need to be discussed. This chapter will endeavour to identify clearly the competencies of rugby referees.

2.2 DEFINITIONS OF THE TERM "COMPETENCY"

There are various definitions of competencies. Berge, de Verneil, Berge, Davids & Smith (2002: 43-61) wrote the following about the different definitions of competency: "Providing for a competent workforce has led to the general inquiry about competencies as a basis for a common language. This goes beyond the changing roles and titles found across organisations. There are many different definitions of competency – with definitions dependent on how the concept is used. Early on in the defining of competency, it was believed that clearly defined competencies would systematically ensure job performance. Many different definitions have been proposed resulting in a wide range of frameworks and definitions in the literature of various fields. Not all these definitions are compatible and consequently the debate continues."

Human resource practitioners often consider that competencies describe the characteristics of a person, as stated by Green (1999: 5). He provided a definition of this use of the term: "An individual competency is a written description of measurable work habits and personal skills used to achieve a work objective".

Green (1999: 5) further indicated several implications of the above definition:

- An individual competency is different from organisational competencies, capabilities, values and priorities.
- A written description of at least twenty words communicates exactly what is meant by the competency.
- Measurable work habits and personal skills mean that the competency can be used to measure reliability and accurately predict a person's actions.
- Individual competencies contribute to achieving a work objective, but they are often part of a work system that may be the primary cause of the results gained.

After he had reviewed the literature Hoffmann (1999: 275-286) concluded that three main positions were taken towards a definition of the term “competency”. Competencies were defined as either:

I. observable performance (Boam and Sparrow, 1992; Bowden and Masters, 1993 in Hoffmann, 1999: 275-286)
II. the standard or quality of the outcome or the person’s performance (Rutherford, 1995; Hagar et al, 1994 in Hoffmann, 1999: 275-286)
III. the underlying attributes of a person (Boyatzis, 1982; Sternberg and Kolligian, 1990 in Hoffmann, 1999: 275-286)

Some of these authors used more than one of these positions to describe the concept (Hoffmann 1999: 275-286).

The first definition viewed competency in terms of observable performance or the outputs of the learning process. This definition was concerned with whether the person was competent in accordance with the written standards. The focus, therefore, is on the output, or tasks, to be completed.

The second definition viewed competency as a standard, or quality, of outcome. According to Hoffmann (1999: 275-286), there are several ways in which standards for quality of performance may be applied in the workplace. In the case of this study, the standard for referees on the field might be interpreted as follows:

- A standard could refer to a minimum acceptable level of performance, for example, a referee must pass all criteria set by his union/society to qualify as a referee, although these criteria do not necessarily make the person a good referee.
- A standard could refer to higher levels of acceptable performance than had previously existed, for example, a referee’s society/union may rate referees

not only according to minimum standards, but also according to performance on the field.

- A standard could be used to manage change.
- A standard could refer to the need to standardise performances, for example, all referees across South Africa, and not only in one union, might be required to qualify according to the same training and evaluation criteria.

The third definition of competency refers to the underlying attributes of a person, such as their knowledge, skills or abilities. This definition creates a focus on the required inputs of individuals in order for them to produce competent performances.

In Berge *et al* (2002: 43-61) various examples of the term competency are quoted which are very similar to the conclusions of Hoffmann, in the sense that performance is emphasised.

- Mirabile (1997: 74 in Berge *et al*, 2002) defined competency as a knowledge, skill, ability, or characteristic associated with high performance on a job, such as problem solving, analytical thinking, or leadership.
- Parry (1998: 74 in Berge *et al*, 2002) expanded on this by stating that to identify certain traits and characteristics might be helpful to recruiters and interviewers, but it is not the trainer's job to assess or develop them. Additionally, Parry (1996: 49 in Berge *et al,* 2002) stated that most HR experts believe that training programmes, performance appraisals, and wage and salary administration should focus on performance, not personality.

Garcia and Associates (2002: http://www.garcianassociates.com) also describe competency in relation to the underlying attributes of a person in their definition: "Competencies are specific knowledge, skills, behaviours, attitudes and other attributes required for effective performance of particular tasks. Concepts of

competency identification and application have had significant effects on the design of performance management systems and are now becoming more widely used."

Weightman (1994: 2), in turn, defined competencies as the underlying behaviours thought necessary to achieve a desired outcome. A competency is something you can demonstrate – for example: "change gears while driving a car" – where it is clear when the behaviour is successful.

After taking all the above definitions into consideration, the following operational elements can be used to formulate a definition of the term "competency" with regards to the competencies of rugby union referees:

- Individual competency is a written description of measurable work habits and personal skill used to achieve a work objective. The competencies of successful referees need to be stated in writing so that the success or failure of a referee on the field can be measured.
- A competency is observable performance or high performance.
- A competency is something that can be demonstrated.
- A competency must indicate the standard or quality of the outcome of a referee's performance.
- Competencies are the underlying attributes of a referee, which involve the knowledge, skill, ability or characteristic associated with high performance.

2.2.1 DIFFERENCE BETWEEN THE TERMS "COMPETENCY" AND "COMPETENCE"

After defining the term competency it is important to note the difference between the terms competency and competence, and Rowe (1995: 12-17) too states that it is important to distinguish between "competence" and "competency". He observed that some dictionaries combine the terms and treat them as interchangeable, but he suggests that it is useful to let "competence" refer to skill and the standard of performance reached, and to let "competency" refer to the behaviour by which it is achieved. In other words, one describes what people can do while the other focuses on how they do it.

Figure 2.1: The interface between competence and competency.

COMPETENCE		COMPETENCY
Skilled-based	→	Behaviour-based
Standard attained		Manner of behaviour
What is measured	←	How the standard is achieved

Rowe (1995: 12-17)

According to Rowe (1995: 12-17), a better distinction between the concepts of "competence" and "competency" would permit more effective use of any models that might be employed. The main difference between competence and competency, therefore, is that competency is the behaviour necessary to reach a certain standard of performance.

2.2.2 UTILITY VALUE OF THE TERM COMPETENCY

Within the spectrum and context of the term competency, there are certain usages and stakeholders involved. There are many reasons to utilise or focus on competencies according to Weightman (1994: 1). Some of these reasons are as follows:

- There may be a top management initiative to look at core competencies as the basis for strategic planning.
- There may be a desire for strategic human resource management.
- The need to improve recruitment procedures or training.
- An initiative to try and ensure fairness and equality of employment.

It is for these reasons, among others, that Weightman (1994: 1) considers it necessary to study competencies.

Hoffmann (1999: 275-286) found that a variety of stakeholders use the term competency, each for their own agendas. These stakeholders employ the terms as follows:

- *Psychologists* are concerned with the concept as a measure of ability (Sternberg and Kolligian, 1990 in Hoffmann, 1999: 275-286) and whether the observable performance of a person represented their underlying traits or capacity.
- *Management theorists* apply a functional analysis to define how organisational goals are to be best achieved through improved individual performance (Burgoyne, 1993 in Hoffmann, 1999: 275-286).
- *Human resource managers* view the concept as a technical tool to implement strategic direction through the tactics of recruitment, placement, training, assessment, promotion, reward system and personnel planning (Burgoyne, 1993 in Hoffmann, 1999: 275-286).

- *Educationists* attempt to relate the idea of work preparation and professional recognition with that of a broad education (Bowden and Masters, 1993 in Hoffmann, 1999: 275-286).
- *Politicians,* including trade unions, particularly in the UK and Australia, have used the concept as a means to improve the efficiency of the labour market (Burgoyne, 1993 in Hoffmann, 1999: 275-286).

Meyer (1996: 32) is of the opinion that the term competency is essentially an abstract concept. According to him, the problem is compounded by the variety of contexts in which the term is used, each of which suggests a different meaning or connotation. Some of the numerous usages of competency, according to Meyer, include:

- the core competence of the organisation in the context of strategy and organisational design.
- competency-based qualifications – in South Africa these would be prescribed by the South African National Qualifications Framework, of the South African Qualifications Authority.
- competencies for the assessment of potential and managerial development form the basis of assessment and learning centre technology.

Green (1999: xiv) is of the opinion that behavioural language should be used to build core competencies that describe, guide and link actions at work, when he describe:

- what was done, we are better able to measure and predict during interviews and performance management.
- what is being done, we are better able to coach and train.
- what needs to be done, we define selection standards, performance expectations, coaching goals, and instructional objectives.

Thus, behavioural language helps us to be more specific about what we intend to say and do.

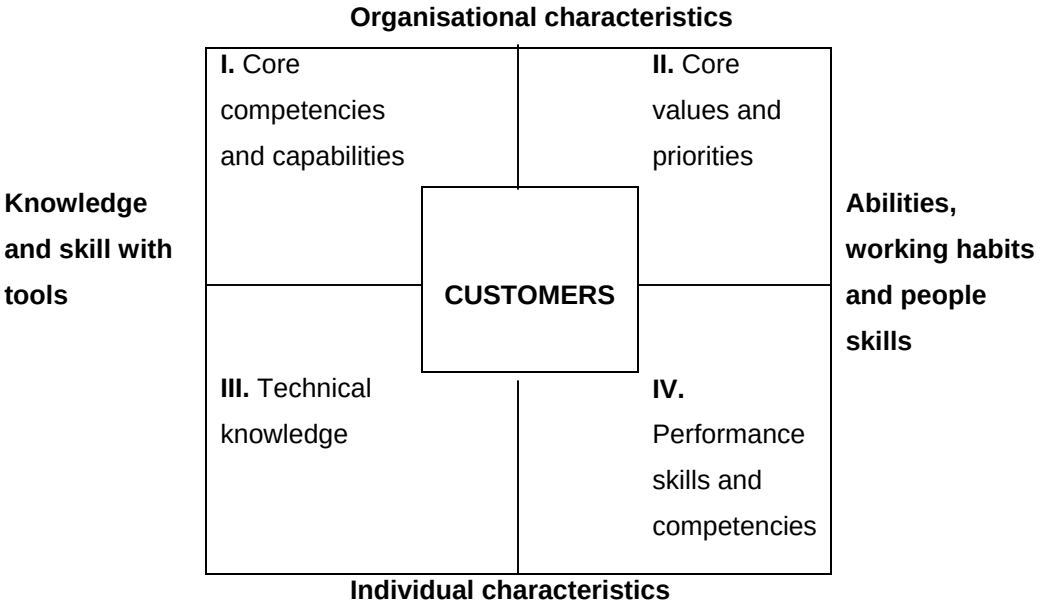
It is therefore clear that the term competency has various uses and that there is more than one stakeholder using the concept. Within the context of these uses and stakeholders it is necessary to define the scope of competency.

2.2.3 THE SCOPE OF COMPETENCY

Green (1999: 23) developed a scope for the term competency because, according to him, the ways in which the term competency is used by human resource professionals and business strategists has become confusing.

Green's scope for the term competency is a model that will help organise important meanings around the word competency.

Figure 2.2: The Scope of Competency.



Green (1999: 23)

The scope of the term competency, illustrated in Figure 2.2, can be elucidated as follows:

- Quadrant I: Core competencies and capabilities are ideally expressed in a mission statement that specifically communicates what the organisation/institution wants. The core competencies and capabilities must help to implement the purpose of the organisation/institution (Green 1999: 24).

- Quadrant II: Core values complement the technical aspects of work by explaining why the work is performed. It is experienced as the “feel” of an organisation – what it is really like to work in that organisation. Priorities reflect an organisation’s emphasis on the use of individual competencies such as working habits and people skills to make business processes and work systems more efficient or effective (Green 1999: 25-26).

- Quadrant III: Individuals use their technical knowledge to carry out their job responsibilities. These skills are typically learned in a formal learning situation and differ greatly across industries and jobs. Technical knowledge and job skill should be in support of the organisation’s core competencies and capabilities. Technical skills training provides a logical way for an organisation to maintain and extend its core competencies and capabilities (Green 1999: 27).

- Quadrant IV: Performance skills and competencies include work habits, communication styles, leadership, and teamwork. They are easily transferred across different industries and jobs, and they reflect a person’s efficiency or effectiveness in using technical knowledge and skill. A performance skill can be directly observed and described at a behavioural level (Green 1999: 28).

Together with Green's scope of competencies, Meyer (1996: 33) developed a continuum for definitions on competency. This continuum also helps to clear up confusion regarding all the various definitions.

2.2.4 CONTINUUM FOR DEFINITIONS ON COMPETENCY

Definitions of competencies can be categorised along a continuum. At one end of the continuum, one finds attribute definitions, while at the other end performance definitions are the order of the day. Meyer (1996: 33) developed a continuum that can be used to locate definitions.

Figure 2.3: Continuum for definitions

Meyer (1996: 33)

Attribute definitions infer underlying competencies or characteristics from behaviour. Typical attribute definitions include:

- A job competency is an underlying characteristic of a person which results in effective and or superior performance in a job (Spangenberg, 1990 in Meyer, 1996: 33).
- A job competency is an underlying characteristic of a person in that it may be a motive, trait, skill, aspect of one's self-image or social role, or a body of knowledge which he or she uses. The existence and possession of these characteristics may or may not be known to the person. In this sense, the characteristics may be unconscious aspects of the person (Boyatzis 1982 in Meyer, 1996: 33).

Performance definitions are defined in terms of the required performances. Therefore, the need to define, understand and measure underlying constructs becomes unnecessary. Some definitions, which use a performance-based approach, include:

- the ability to perform the activities within an occupation or function to the standard expected in employment (Australian National Training Board, in Meyer, 1999: 34).
- job competence is the employee's capacity to meet or exceed a job's requirements by producing the job outputs at an expected level of quality within the constraints of the organisation's internal and external environment (Dubois, 1993 in Meyer,1996: 34).

Meyer (1996: 34) concludes that the attribute approach to competencies focuses largely on the individual as a person with all the difficulties associated with that, whereas the performance-based approach focuses on the demonstration of required behaviour, largely in the work context, which in turn imposes certain limitations on its usefulness.

After taking the above definitions and theories into account, Meyer (1996: 34) developed a working definition of competency, which can apply to a variety of contexts or situations:

"Competency is the integration of knowledge, skill and value orientation, demonstrated to a defined standard in a specific context."

Once the scope and definition of the term competency is clear, certain models on how to identify and list competencies can be developed. Some of these models are generic and can be used across a broad spectrum.

2.3 COMPETENCY MODELS

Groups of individual competencies are organised into competency models. Some competency models are generic lists of individual characteristics that can be used in human resource systems. Other competency models are specifically designed for a particular organisation, or have a strong research basis that goes beyond any one organisation (Green 1999: 8).

According to Green (1999: 8), a competency model can be mostly verbal, mostly graphic, or a mixture of the two. An example of a competency model is included in Table 2.1.

Table 2.1. An example of a competency Model

PERFORMANCE SKILLS
ADAPTABILITY
***Shows resilience**:* Rebounds from conflict and difficult situations; treats a negative experience as a learning opportunity; responds to time pressures and interpersonal conflicts with problem-solving actions; withholds negative comments and emotional outbursts; is respectful of others, even under pressure.
***Accommodates change**:* Responds open-mindedly to change initiatives; looking for ways to help the organisation; offers opinions about changes in a supportive manner; follows team agreement on changes in ways that help their effectiveness; resists changes that may be unsafe or illegal.
INTERPERSONAL
***Participates in teamwork**:* Works cooperatively with others and contributes to the group with ideas, suggestions, and effort; communicates acceptance or rejection of team commitments; does not talk about team members in a negative manner in their absence; is willing to confront performance problems of the team.
***Displays leadership**:* Communicates thoughts, feelings, and ideas to justify a position; encourages, persuades, or otherwise motivates individuals or groups; challenges existing procedures, policies, or authority responsibly.

***Manages conflict**:* Expresses opinions directly and clearly without abuse or manipulation; listens to the opinions and feelings of others and demonstrates understanding by restating them; communicates disagreement to persons in authority as necessary; accepts negative feedback as a way to learn; negotiates agreements to resolve differences.

***Accepts differences**:* Works effectively with individuals from diverse backgrounds, behaves professionally and supportively when working with men and women from a variety of ethnic, social, and educational backgrounds, avoids using stereotypes when dealing with others; may correct others on the use of slurs and negative comments about other groups.

***Provides service**:* Works and communicates with clients and customers to satisfy their expectations; adapts own needs and objectives to help others reach their objectives; presents difficult information in an attention-getting and persuasive manner.

WORK HABITS

***Exhibits integrity**:* Gathers and uses information in ways that respect confidentiality, business ethics, and organisational secrets; makes truthful comments based on verifiable information; avoids using rumour, gossip, and subjective opinions in decision-making; is sensitive to perceived integrity issues; produces complete and accurate written documents.

***Manages self**:* Uses standard operating procedures and work instructions to guide own actions without supervision; selects relevant, goal-related activities and ranks them in order of importance; allocates time to activities, and understands, prepares, and follows schedules; periodically makes decisions that are consistent with the job mission but not guided by policy and procedures.

***Motivates self and others**:* Starts own work and get others to start working; commits to a plan of action and shows a willingness to work hard and long to achieve measurable results; completes tasks quickly; competes productively against self, time allocation, and others.

***Follows procedures**:* Understands, follows, and encourages other to follow prescribed policies and procedures, even when it is inconvenient to do so; improves performance by telling others where policies and procedures interfere with productivity.

TECHNICAL KNOWLEDGE AND JOB SKILLS

RESOURCES

***Allocates money**:* Uses or prepares budgets, makes cost and revenue forecasts, keeps detailed records to track budget performance, and makes appropriate adjustments.

***Allocates material and facility resources**:* Acquires, stores, and distributes materials, supplies, parts, equipment, space, or final products to make best use of them.

***Allocates human resources**:* Assesses knowledge and skills and distributes work accordingly, evaluates performance, and provides feedback.

INFORMATION

***Acquires and evaluates information**:* Identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy.

***Organises and maintains information**:* Organises, processes, and maintains written or computerized records and other forms of information in a systematic fashion.

***Interprets and communicates information**:* Selects and analyses information and communicates the results to others using oral, written, graphic, pictorial, or multimedia methods.

***Uses computers to process information**:* Employs computers to acquire, organise, analyse and communicate information.

SYSTEMS

***Understands systems**:* Knows how social, organisational, and technological systems work, and operates effectively within them.

***Monitors and corrects performance**:* Distinguishes trends, predicts impact of actions on systems operations, diagnoses deviations in the function of a system/organisation, and takes necessary action to correct performance.

***Improves and designs systems**:* Makes suggestions to modify existing systems to improve products or services, and develops new or alternative systems.

TECHNOLOGY

***Selects technology**:* Judges which set of procedures, tools, or machines, including computers and their programs, will produce the desired results; helps others learn.

***Applies technology to task**:* Understands the overall intent and the proper procedures for setting up and operating machines, including computers and their programming systems.

***Maintains and troubleshoots technology**:* Prevents, identifies, or solves problems in machines, computers, and other technologies.

Green (1999: 9-10)

Green (1999: 8) adapted the model illustrated above from a verbal competency model of the Secretary's Commission on Achieving Necessary Skills (SCANS), a project initiated by the U.S. Department of Labor.

This model made use of two main categories under which to classify competencies, namely performance skills and technical knowledge and job skills, and various sub-categories to indicate the competencies needed in detail. This study will concentrate mainly on the performance competencies of rugby referees and, therefore, the outcome will be a competency index rather than a competency model.

2.4 COMPETENCIES OF RUGBY UNION REFEREES

In a study done by Dickson (2000: personal e-mail), the competencies to officiate rugby union matches at senior level were identified. He also determined which competencies are most important for refereeing at different competitive levels of senior rugby, and which competencies require major focus in officiating education programmes. The study by Dickson provided some valuable lessons for this study.

In order to identify the essential competencies required for successful rugby refereeing, Dickson study (2000: personal e-mail) used a hybrid form of the Behavioral Anchored Rating Scale (BARS). BARS has been utilised to develop performance criteria for such diverse areas as university teaching, policing, firefighting and nursing.

The use of BARS methodology presented two advantages to Dickson's project:

- It has been clearly established that BARS methodology encompasses extensive occupational analysis.
- A whole range of occupational "experts" are used to identify competencies. The "experts" are selected on the basis of their knowledge, familiarity, expertise, and previous experience with the role under investigation.

In combination, these two points encourage diverse perspectives during the competency identification process, and thus ensure that the role of rugby refereeing is not biased towards any one stakeholder group.

The BARS process resulted in 41 competencies being identified, which were divided into five broader performance dimensions. The competencies, identified by the Dickson study (2000: personal e-mail), are discussed in section 2.4.1 – 2.4.5.

2.4.1 COMPETENCIES PERTINENT TO MANAGEMENT OF PLAY (ON THE FIELD)

The following competencies pertain to the management of the game (Dickson study, 2000: personal e-mail):

- Sanction players appropriately for transgressions of the Law.
- Demonstrate authority when controlling specific game situations.
- Judge player transgressions consistently.
- Be impartial to all players (e.g. ignore personality clashes, player status, etc.).
- Organise the mechanics of set plays (e.g. make sure the scrum packs safely).
- Work collaboratively with touch judges (e.g. making decisions, player management, etc.).
- Utilise captains and senior players to manage difficult players/situations (e.g. chat on the run).
- Be aware of field marking abnormalities.
- Discourage negative tactics (e.g. sledging, time-wasting).
- Maintain a safe environment for players (e.g. check studs for sharp projections).

The second competency refers to communication.

2.4.2 COMPETENCIES PERTINENT TO COMMUNICATION

The Dickson study (2000: personal e-mail) identified the following competencies for communication:

- Verbal communications of game requirements and decisions to players (e.g. instruct players at the breakdown).
- Non-verbal communication of game requirements and decisions.
- Use whistle loudly, clearly and appropriately.
- Demonstrate standardised signals correctly (e.g. try, scrum etc.).
- Maintain composure when communicating to players.
- Develop a positive rapport with:
    - players
    - coaches
    - administrators
    - officials (i.e. other referees and touch judges)
    - support staff (e.g. trainers)

The third competency refers to decision-making.

2.4.3 COMPETENCIES PERTINENT TO DECISION-MAKING

The following competencies pertain to decision-making (Dickson study, 2000: personal e-mail):

- Demonstrate consistency when applying the Laws.

- Adapt decision-making to the specific conditions of each game (e.g. weather, interpretation of Laws, playing surface, skill levels of different grades).
- Allow maximum application of the advantage Law to encourage positive play.
- Provide consistent application of the advantage Law to encourage positive play.
- Ensure the spirit of the Law is upheld (e.g. sin-bin for deliberate infringement).
- Adjudicate fairly and correctly throughout the game based upon an accurate knowledge and interpretation of the Law.
- Distinguish between intentional and unintentional foul play (e.g. a ball carrier, who, because of his rapid change in body position, is taken in a high tackle).

The fourth competency refers to game preparation and analysis.

2.4.4 COMPETENCIES PERTINENT TO GAME PREPARATION AND ANALYSIS

The following competencies, identified by the Dickson study (2000: personal e-mail) pertain to game preparation and analysis:

- Demonstrate outcomes of specific training programs undertaken (e.g. physical, psychological).
- Display a professional appearance at all times (e.g. indress, on and off the field, calm and controlled manner).
- Prepare conscientiously for each game (i.e. physically, psychologically, nutritionally).
- Demonstrate a level of athleticism appropriate to the standard of the game.
- Evaluate performance through:

- self-analysis (e.g. video, worksheets, referee coaching reports).
- referee-coach reports.
- player feedback.
- coach feedback.

- Demonstrate a willingness to implement lessons learned from suggestions and feedback (i.e. an “action plan” to improve performance).

The last competency refers to the knowledge of rugby law and understanding of the game (on and off the field).

2.4.5 COMPETENCIES PERTINENT TO KNOWLEDGE OF RUGBY LAW AND UNDERSTANDING OF THE GAME

The following competencies pertain to knowledge of rugby Law and understanding of the game (Dickson study, 2000: personal e-mail):

- Apply rugby Law definitions in game situations (e.g. definition of ruck, maul, tackle).
- Demonstrate an accurate knowledge of the Law in examinations.
- Take actions appropriate to specific situations (e.g. injury, collapsed scrums).
- Understand strategies and techniques used by players (e.g. player organisation in scrums and line-outs, variations, variations of binding etc.).
- Display effective positional play (e.g. best view of critical incidents, avoid impairing player movement).

Based on the list of competencies described above, a survey instrument which employed a 4-point Likert scale, was designed by Dickson (2000: personal e-mail) to assess competencies from the perspectives of importance, proficiency and

improvement priority. This survey was sent to a wide sample of rugby stakeholders, i.e. referees, referee coaches, referee managers, players and coaches, at several competitive levels of rugby.

The responses were analysed according to the Rasch Scaling Model. This technique is a relatively new form of analysis, and represents an advance on traditional techniques by its capacity to categorically or uncategorically identify the position of an item (i.e. competency) on a continuum, e.g. importance (Dickson study, 2000: personal e-mail).

The conclusions and overall findings of the research by Dickson (2000: personal e-mail) confirmed the variety of tasks referees are required to undertake. Numerous on-field roles and responsibilities (e.g. decision-making), plus expectations and obligations carried out away from the competitive arena (e.g. maintenance of fitness) were identified as essential to effective refereeing. One of the most important areas of referee performance to emerge from the research is the consistent application of Laws during a game.

The competencies identified in the study demonstrated the unique requirements of rugby refereeing at a number of levels, and confirmed the assumption that officiating requirements need to be developed specifically for each individual sport (Dickson study, 2000: personal e-mail).

2.5 COMPETENCIES WITHIN THE HUMAN RESOURCE CONTEXT

Rugby referees form an important part of the human resources of their different unions or societies and, therefore, it is important to study their competencies within the human resource context. “There is a growing interest in competency, competency development and the measurement of competency and therefore a

number of initiatives emphasising the importance of a competency-based approach have been taken in the management development area" (Elkin 2001: 20-25).

It is necessary to understand why competencies can be used to recruit or develop employees, in this case rugby union referees, for better performance and productivity. The competency-based approach, and how it came about, needs to be understood, especially in the human resource context.

It was during the 1980's that profound changes in competency-based development took place. In the past, survival had been the main concern of most organisations. Human resource development was often regarded as expensive and there was pressure to demonstrate that expenditure on human resource development would produce an acceptable return (Elkin 2001: 20-25).

There is increased emphasis on accountability and responsibility in all areas of management, including human resource development, and there has been a switch of emphasis towards individually based learning. Human resource practitioners have become much more learner-centered. There is now a situational imperative for human resource development practitioners to demonstrate their effectiveness (Elkin 2001: 20-25).

Management competencies are much more than the mere skills necessary to do the job; they are clusters of skills, knowledge and values. Lists of competencies can also include personal attributes, such as self-confidence, or a pro-active mind-set (Weightman 1994: 23). According to Weightman (1994: 23), the competency approach in human resource management emphasises that there is more than one way of being an effective or competent manager. It emphasises that instead of training managers in one particular technique we need to consider a variety of ways to develop the various competencies.

Weightman (1994: 23) went further and encouraged organisations to apply clusters to their own staff to find the particular management abilities statistically associated with good performance.

Ashton (1996: 14-19) described the interesting Holiday Inn Worldwide case-study in which a competency-based human resource strategy was successfully implemented. This case-study is discussed in more detail below.

2.5.1 IMPLEMENTATION OF COMPETENCY-BASED HUMAN RESOURCE STRATEGIES

The following is a discussion of the process Holiday Inn Worldwide followed to implement a successful competency-based human resource strategy. When this case-study is extrapolated to rugby referees, it would be necessary to identify competencies according to past individual performances and future outcomes as well.

After the research of Ashton (1996: 14-19), Holiday Inn Worldwide successfully implemented competency-based human resource strategies, which directly link compensation and individual performance to business objectives.

According to Ashton (1996: 14-19) identifying competencies accurately was a critical task for this organisation. He defined these competencies as “effective predictors of job performance” relative to key organisational criteria, and then sought role models among employees to identify desired and proven attributes. High and low performers were selected by management for behavioural event interviews with external consultants. Through prompting, they described career highlights, job challenges and difficulties in behavioural terms, which enabled characteristics and patterns to emerge.

As a result, high performance role models were constructed and refined on the basis of nine core competencies of value to the organisation. The following seven competencies were initially piloted by Ashton (1996: 14-19) before group-wide implementation:

i. *Customer service orientation*: Understanding and acting on the needs of others to better serve them.
ii. *Flexibility*: Being able to adapt and work effectively in varied groups and situations.
iii. *Commitment to organisational values*: Acting consistently, in accordance with corporate values and standards.
iv. *Achievement orientation*: A desire for improved performance, challenging objectives and standards of excellence.
v. *Initiative and proactivity*: Self-motivation, persistence and going beyond the job description for potential outcomes.
vi. *Organisational influence:* Influencing others effectively.
vii. *Creative problem solving:* Identifying patterns in problem situations that are not obviously related and finding solutions.

These initial seven competencies, each backed by a performance rating scale of one to seven, were then reinforced by two others:

i. *Enablement:* Inspiring acceptance of added responsibilities and accountabilities.
ii. *Developing others:* To enhance talent or performance.

2.5.2 COMPETENCY-BASED HUMAN RESOURCE STRATEGIES WITH REGARDS TO RUGBY REFEREE COMPETENCIES

From the previous discussion of competencies, the competencies of rugby union referees may consequently be seen as effective predictors of job performance relative to key criteria set by the individual unions or the governing body, SARFU.

In the case of Holiday Inn, Ashton (1996: 14-19) identified seven competencies before their group-wide implementation. Holiday Inn supported these seven competencies by a performance rating scale, before introducing two more competencies. The same type of strategy will be followed in the identification of the most important competencies a high potential or successful rugby referee must possess.

Certain competencies will be identified and measured according to past experiences and performances, before a final conclusion will be made as to what encompasses the most important competencies that a rugby union referee needs in order to be successful at the highest level.

2.6 SUMMARY

The ultimate goal of rugby union referees is to be successful, to follow a professional approach and to win more respect from players, coaches and supporters. There is a need to support this goal by identifying the generic and most important competencies a rugby referee needs to possess in order to perform successfully at the highest level. To identify such competencies the term competency was defined.

Subsequently the main difference between competence and competency was found to be that competence refers to skill and the standard of performance reached, while competency refers to the behaviour by which it is achieved. Various uses and stakeholders involved with the term competency were discussed to indicate how widely varied the concept of competency is.

Various definitions and descriptions of the term competency were analysed and the following generic elements were derived:

- Individual competency is a written description of measurable work habits and personal skill used to achieve a work objective. The competencies of referees need to be in a written format to be able to measure the success or failure of a referee on the field.
- A competency is observable performance.
- A competency is something that can be demonstrated.
- A competency must indicate the standard or quality of the outcome of the referee's performance.
- Competencies are the underlying attributes of a referee, and involve the knowledge, skill, ability or characteristic associated with high performance.

The scope of competencies and an illustration of the competency continuum were discussed. An example of a competency model was provided which identified some competencies, especially for rugby union referees drawn from Scot Dickson in a research study similar to this one.

Referees are part of the human resources within their different unions and societies, so the role and understanding of competencies within a human resource context was also discussed briefly. A case-study of how Holiday Inn Worldwide implemented a competency-based human resource strategy was provided as an illustrative example.

This chapter dealt with the term competency and what is meant by competencies. This will make it easier to identify the generic competencies of rugby union referees that will help the Blue Bulls Rugby Union to best select aspirant referees.

CHAPTER 3

REFEREEING

3.1 INTRODUCTION

"Continual growth and interest in sport has created enormous demand for high quality sport officials. This has resulted in administrators, at all levels of sport, constantly seeking people who are competent at officiating. However, it would seem that the determination of what constitutes a competent official, and their subsequent identification and development, is far more complex than simply finding someone who exhibits a thorough knowledge of game rules. Skills related to communication, athleticism, decision-making, legal responsibilities, and player management are increasingly being viewed as necessary. Additionally, issues such as referee training assessment, stress, and referee retention are now inextricably linked to modern officiating" (Dickson study, 2000: personal e-mail).

Mascarenhas, Collins & Mortimer (2002: 328) quoted *The Guardian* of 29 October 2001 as follows: "As sport becomes more pressured, referees are ever more accountable for their decisions and, reflecting this performance demand, governing bodies now sanction, or even demote, referees when they apply the laws inconsistently".

Expert referees must make decisions that are appropriate to the nuances of a particular game, allowing the game to flow, using the whistle only when necessary and when not doing so may adversely affect the tempo or temper of the game (Mascarenhas *et al* 2002: 328). This is an aspect of game management.

Bracewell (2001: http://www.rfu.com) is of the opinion that it is too easily said that a match cannot take place without a referee. He emphasises that there is a difference between a game and a match. A game is the type of sport being played,

whereas a match is the fixture taking place. He is of the opinion that referees are trying to manage matches for the enjoyment of all participants, from players to spectators. Bracewell (2001: http://www.rfu.com) wrote that for referees to manage a match effectively they will have to make decisions that reward constructive, legal play and they will have to punish negative, illegal play. The referees must decide what is acceptable and what is not.

In an interview with Jerry Seeman, the United States National Football League's Director of Officials, he was asked what it takes to be a good official. Seeman's response was:" Someone who can be decisive in a professional manner, a person who isn't on an emotional roller-coaster. The official must be the ultimate professional" (Hartill 1998: 22). He continued that good referees must have good people skills and they must have the courage to make the tough calls at the right time, and a strong conscience to believe in what they are doing.

The role and importance of rugby referees increased when the sport turned professional. Although most referees in South Africa, and the Blue Bulls Rugby Referees' Society, operate on an amateur level, their role is nonetheless highlighted by all the attention the top referees get in the media. It is, therefore, important to consider those aspects that might influence, or have a bearing on, refereeing in general.

Stress, burnout and giving up refereeing are some of the aspects that might influence referee performances. Crowds can also play a vital role in the decisions referees make, while decision-making itself will always play a big part in refereeing. These aspects, among others, will be discussed in the following chapter.

3.2 REFEREE STRESS, BURNOUT AND RESIGNING

Stress, burnout and referees that resign can have a negative impact on rugby refereeing. This section discusses various aspects of stress, burnout and resigning of referees in general.

3.2.1 SOURCES OF STRESS, BURNOUT AND INTENTION TO TERMINATE

In a study done by Rainey (1999: 578), 721 of 1500 questionnaires sent to basketball referees to assess sources of stress, burnout and intention to terminate refereeing were completed. In this study, exploratory and confirmatory factor analyses revealed five correlated sources of stress factors namely:

- Performance concerns
- Fear of physical harm
- Lack of recognition
- Time pressure
- Interpersonal conflict

Research on stress indicated that interpersonal conflict, fear of physical harm, time pressure and performance concerns are sources of stress for sport officials. Burnout in sport officials is often related to performance concerns, time pressure and interpersonal conflict, and burnout is a consistent predictor of the intention to terminate.

Rugby referees, especially the referees at a more senior level, are under pressure to perform. Rugby is such a popular sport in South Africa that it attracts a lot of attention which adds to the stress upon the individual referees. The public, the

coaches, the management of teams and the players themselves are the parties responsible for placing the referees under the most stress to perform at their optimum levels for big occasions.

Fear of physical harm should not be overlooked as a factor, as was illustrated in 2002 when Mr. Dave McHugh of Ireland was tackled by a South African rugby supporter during a test match played in Durban between South Africa and New Zealand.

3.2.2 INFLUENCE OF STRESS ON THE PERFORMANCE OF RUGBY UNION REFEREES

Stress will always be a component of refereeing performance that must be considered, because there will be interpersonal conflict on and off the field of play.

In a study by Rainey and Hardy (1997: 728), the purpose was to examine stress experienced by rugby union referees during their season. This study supported the growing conclusion that most sport officials do not experience much stress associated with their duties.

Six hundred and eighty-two rugby referees from the rugby unions of Wales (*n*=126), Scotland (*n*=140), and England (*n*=416), participated in this study. The mean number of years of refereeing experience was 8,5 years. There was no significant difference among the three groups in years of experience. A 3-item rating scale which measured the referee's general perceptions of the amount of stress they experienced while refereeing during the ongoing rugby season was used.

The three items the referees rated were:

i. How much stress was experienced while refereeing this season?
ii. How much pressure was experienced while refereeing this season?
iii. How much tension was experienced while refereeing this season?

Participants responded on a 5 point scale, whereby a response of one meant "none" and a response of five meant "a great deal".

Rainey and Hardy (1997: 728) found the mean score for the entire sample to be 2,5 (SD=.6), indicating stress between the "very little" and "moderate" amounts. Only 5% of the respondents had mean scores of "quite a bit" or a "great deal" of stress. These results proved the notion that referees do not experience high levels of stress over an entire season.

However, studies to date have required respondents to rate stress across all or most of a season, and the ratings were not in response to specific game experiences. It may therefore be useful to have officials rate their stress one match at a time before coming to any conclusions. The level of officiating also influences the end results. Specific game situations and the buildup to certain big matches were not considered in the final results.

In a South African context the stress levels of referees might differ according to certain matches. In general the same results might be obtained if a similar study were to be done under South African conditions over an entire season. It is, however, important to note that certain "big" matches can influence the way the referees think, e.g. a referee refereeing the Currie Cup final in front of 60 000 people, will obviously experience higher stress levels in the buildup to the match than under ordinary match circumstances.

3.3 CROWD INFLUENCE

The influence crowds have on referees is sometimes neglected, although it can be an important factor in the final performances of referees.

Serb (1999: 32), in an interview with Jerry Markbreit, one of the United States best-known National Football League officials, received the following response to a question about the inevitable criticism received when officiating a popular sport: “No matter how a call goes, the crowd is going to boo. So when you make a call, the important thing is to know you made the right call, even if it ends up being wrong. You can’t hedge or be uncertain about things – you have to be clear”.

3.3.1 ASSAULT ON REFEREES

A factor of crowd interference that is not always considered is the threat of assault of referees. Assault of referees can also be a source of stress as previously mentioned under 3.2.1. During a rugby test played in Durban between the Springboks and New Zealand in August 2002, a South African supporter ran onto the field of play and tackled the referee Mr. Dave McHugh of Ireland (http://www.supersportzone.co.za). Mr. Van Zyl, the supporter, was charged with common assault and found guilty by the court. Another example of crowd influence occurred when seven fans were arrested at Ellispark during a test between the Springboks and Australia, in 2002, for throwing beer bottles onto the field, and endangering both the players and match officials (http:www.supersportzone.co.za).

Rainey and Hardy (1999: 105) undertook a study to examine assaults against sport officials by a survey of rugby referees. The following hypotheses were stated before the results was analysed:

i. Only a small percentage of responding referees would report that they have been assaulted at some point in their career.
ii. A sizeable percentage of the assaults could be considered dangerous and serious.
iii. Most of the assailants would be adults.
iv. Alcohol consumption by assailants would be a factor in a moderate percentage of the assaults.
v. A sizeable percentage of the assailants would go unpunished.

The participants in this study were 682 rugby union referees (678 men and 4 women) from Great Britain. Participants ranged in age from 16 to 65 years, with a mean age of 41 years (SD=7,8 years). Their refereeing experience ranged from 1 to 45 years, with a mean of 8,5 years experience (SD=6,5 years). Questionnaires were mailed directly to participating referees.

The results of the study by Rainey and Hardy (1999: 105) revealed the following:

- Players were the most common assailants (71%), followed by fans (24%).
- Only one referee reported that he was assaulted by a coach. The overwhelming majority of assaults (79%) occurred in adult competitions, and adults carried out 84% of the assaults.
- Many of the assaults were relatively minor incidents, such as pushing, grabbing or shoving (42%). However, many others (47%) were more serious attacks, such as punching, kicking or choking.
- Four referees (11%) reported that they had been “head-butted” by their assailants. Almost one third of the assaults were associated with special game circumstances, e.g. 11% of the assaults occurred in matches with

"special rivals" and 19% occurred during championship matches. Another special circumstance investigated was the use of alcohol by assailants.

- Eight of the referees (21%) reported that their assailants had consumed alcohol, and seven of those assailants were fans or spectators.

From the results of this study it is clear that most assailants are the players, with the crowd also playing a role in a high percentage of assaults. Referees must consider this aspect of crowd behaviour and be able to deal with it if they are to successfully cope as a referee at the highest level. Another factor of crowd behaviour that might influence a referee is crowd noise.

3.3.2 CROWD NOISE

Nevill, Balmer & Williams (2001: 261-272) undertook a study regarding crowd noise and years of experience upon refereeing decisions in football. They feel the existence of home advantage in sport is well-known and that there is a growing evidence that crowd noise plays a crucial part in this phenomenon. They undertook a quantitative study to examine the influence of crowd noise upon refereeing decisions in association football, or soccer.

The results of the study showed that the presence of crowd noise had a dramatic effect on the decisions made by referees. Those viewing the challenges with background crowd noise were more uncertain in their decision-making and awarded significantly fewer fouls (15,5%) against the home team, compared with those watching the recordings in silence. The conclusion, therefore, was that the noise of the crowd did indeed influence the referee's decisions to favour the home team. The authors suggested that referees decisions are influenced by the salient nature of crowd noise, the potential use of heuristic strategies, and the need to avoid potential crowd displeasure by making a decision in favour of the home team.

For the execution of this study, Nevill *et al* (2002: 261-271) used recorded videotapes to investigate whether the presence or absence of crowd noise might influence qualified referees when assessing various tackles or challenges. Binary logistic regression was used to assess the effect of crowd noise and the years of experience on the referee's decisions.

3.4 DECISION-MAKING BY REFEREES IN RUGBY UNION

One of the most important aspects of being a referee is the ability to make decisions. MacMahon and Ste-Marie (2002: 570) undertook two studies regarding decision making of experienced rugby referees.

The conclusion of the studies of MacMahon and Ste-Marie (2002: 570) were:

- Study 1 yielded no differences in the detection of infractions as a function of experience; however, referees of high experience used significantly more sources of information than the group with low experience across all categories of information.
- In Study 2, there were no significant differences between referees and players, with the exception that referees displayed greater use of episodic memory information in decision-making.

MacMahon and Ste-Marie (2002: 570) questioned referees, 12 with high and 12 with low experience, to make decisions concerning various videotaped rugby plays and to report verbally the information they used in this process, to provide measures of declarative knowledge base and accuracy in detecting infractions. In a second study, they matched 12 of the referees with 12 players in terms of playing experience. All were tested using the same materials and procedures.

The first section of each videotape sequence consisted of a freeze frame of a rugby play. Following this, 5-6 seconds of footage was shown with the screen going blank before the completion of the action (section 2). In the third and final section of the tape sequence, the same action was shown, however, it was viewed in its full completion. At the blank screen juncture at the end of section 2, participants were asked:

i. What action do you think will follow?
ii. What would your call on this be?
iii. What information did you use to formulate the action and call?

After the third section of the test item was shown, the decision was made as to whether an infraction was present. Participants also indicated any additional information used to make the infraction decision at this point.

MacMahon and Ste-Marie (2002: 570) noted that the scarcity of experienced referees for recruitment necessitated a loosening of inclusion criteria for the studies, with referee groups classified as high in experience (10 years or more) and low in experience (5 years or fewer). This lack of a clearly drawn distinction between groups may have adversely affected the results of the testing, where the “expert” samples may not have truly been experts.

This study proved that, with experience, the decision-making of referees will improve. The experienced referees base their decisions on more sources of information and will therefore make correct decisions most of the time. There are certain functions of rugby union referees that have stayed the same over the years the game has been played. During the early stages of rugby union Marsberg, Twentyman-Jones, Carolin & Heatlie (1933: 62) described the functions a referee should perform according to their studies.

3.5 FUNCTIONS OF RUGBY UNION REFEREES

Referees have various functions to fulfill in a wide variety of sports. Every sport has its own rules and regulations and the officials (referees) are there to make sure these rules and regulations are forced onto the participants. The functions of referees also change over time, although the basis for refereeing will stay much the same as in the formative years of each sport. Rugby union is no exception. The Laws of the game have changed dramatically since the game was first played, although the functions of rugby referees today are still much the same as in 1933. Marsberg *et al* (1933: 62) described the functions of a rugby union referee in 1933 as follows:

- The referee is the sole timekeeper and judge of fact.
- The referee is the sole judge of the Laws.
- The referee is not allowed to contract out of the Laws of the game by agreeing with both teams to vary, or not to recognise, any of the Laws.
- The referee may not give any instructions or directions to either team prior to a match.
- The referee may, before arriving at a decision, consult with the Touch Judges on any point of fact related to their function, or with regard to time.
- The referee may not consult with anyone else except with regards to time, and then only if the information supplied by the Touch Judges is insufficient.
- The referee may allow extra time for delays.
- The referee has the power to stop a match before the time has expired if, in his opinion, the full time cannot be played.
- In the case of his being unable to officiate the whole period of a match, he shall have the power to appoint a substitute to take his place, failing an agreement by the captains of the respective teams.
- The referee cannot alter any decisions once given.
- It rests with the referee to impose penalties for irregularities, and to give all necessary directions within the Laws. The referee has full power to decide if

any parts of a player's dress, including boots and projections thereon, are dangerous, and in that case must order such a player to remove the same and not allow him to take further part in the match until after such removal.

- The referee must not allow anyone but the players on to the playing enclosure during a match, except with his permission.
- The referee must not allow any player to leave the playing enclosure without his permission, which should only be granted in special circumstances.
- The referee must carry a whistle. The whistle, when blown, stops the match for the time being.

Most of the above functions are still valid today, and not only for rugby union but also for various other sports.

3.6 FUNCTIONS OF REFEREES IN OTHER SPORTS

Healy (1999: http://www.olympichandball.org) developed a guide to refereeing in handball, which is available on the Irish Olympic Handball Association (IOHA) refereeing index website. The following are some of the generic guidelines that could also be applicable in other sport codes:

- Before the game the referees are responsible for:
  - Inspecting the playing courts, the goals and the balls
  - Deciding which balls shall be used (two balls must be available for each match)
  - Ensuring that both teams are wearing the proper uniforms
  - Ensuring that the number of players and officials in the substitution area is within the set limits
  - Establishing the presence and identity of the "responsible team official"
  - Conducting the coin toss to establish choice of sides

- During a match referees are responsible for:
  - Ensuring the game is played in accordance with the rules, and penalizing any infractions
  - Keeping note of score, and also any warnings, suspensions, disqualifications and exclusions
  - Controlling the playing time
  - Ensuring that after the game the score sheet is completed correctly

- Referees have the right to suspend a game temporarily or permanently

Even less well-known sports have some kind of refereeing guideline. The following are guidelines to which all referees in Canada must adhere during arm wrestling tournaments (http://www.canadaref.tripod.com):

- In order to referee an arm wrestling tournament in Canada you must be certified by the Canadian Arm Wrestling Federation (C.A.W.F.).
- Referees must conduct themselves in a professional manner at all times. They may not drink alcohol during the competition, smoke in the immediate area of the arm wrestling table, use any profanity, be abusive toward anyone or make any kind of offensive gestures.
- Referees cannot compete in the same competitions in which they are refereeing.
- Referees must wear a striped referees shirt, black pants, socks and shoes. C.A.W.F badge must be worn on left sleeve. Level badge on right sleeve. Both must be one inch from top of black band.
- Referee may not congratulate a competitor during the competition. They may, however, congratulate both competitors at the same time.

3.7 SUMMARY

Sport has become very popular worldwide and with this growing interest the demand for high quality officials has increased. Mascarenhas *et al* (2002: 328) quoted *The Guardian* of 29 October 2001: “As sport becomes more pressured, referees are ever more accountable for their decisions and, reflecting this performance demand, governing bodies now sanction, or even demote, referees when they apply the laws inconsistently”.

The role and importance of rugby referees has increased as the sport turned professional. Although most referees in South Africa, and the Blue Bulls Rugby Referees’ Society, operate on an amateur level, the importance of their role is highlighted by all the attention the top referees receive in the media. It is, therefore, important to consider all the aspects that might influence, or are relevant to, refereeing in general.

Research has consistently indicated that interpersonal conflict, fear of physical harm, time pressure and performance concerns are the main sources of stress for sport officials.

A study by Rainey and Hardy (1997: 728) demonstrated that referees in general experience moderate levels of stress when measured during an entire season. However, it is important to note that the stress levels for different matches can vary, and depend on the importance of the specific match.

Crowd influence, which is often neglected, can also have an important impact on the performance of referees. A study by Rainey (1999: 578) indicated that although players are the more common assailants, crowds are responsible for a high percentage of assaults on officials.

Nevill *et al* (2002: 261-272) did a research study regarding crowd noise and years of experience upon refereeing decisions in football. The result of this study showed that the presence of crowd noise has a dramatic effect on the decisions made by referees. The authors suggested that referees decisions are influenced by the salient nature of crowd noise, the potential use of heuristic strategies, and the need to avoid potential crowd displeasure by making a decision in favour of the home team.

MacMahon and Ste-Marie (2002: 570) made a study of the decision-making of rugby union referees. The study proved that, with experience, the decision-making of referees will improve. The experienced referees base their decisions on more sources of information and will, therefore, make the correct decisions most of the time. There are certain functions of rugby union referees that have remained the same over the years the game has been played.

Some generic functions of rugby union referees have been listed, as well as some generic functions of sport officials in general. This chapter has focused on the importance of officiating (refereeing) in sport and, in particular, the importance of refereeing in rugby union, which has become one of the most popular sports in the world.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 INTRODUCTION

The purpose of this study is to identify the generic competencies that a rugby union referee needs in order to become successful at the highest level and to assist the Blue Bulls Rugby Referees' Society to identify new referee recruits. The research will therefore focus on the identification of these core competencies. This chapter will explain the research procedure followed, and will also describe the statistical procedures and techniques used in the study.

Although the study is conducted in accordance with the requirements of the Blue Bulls Rugby Referees' Society, rugby union is such a global sport that the study had to be expanded to include other rugby unions in South Africa in order to generalize the final conclusions. For this reason, and to obtain a broader perspective, the insights of players were also sought.

The two main research strategies used are the quantitative and qualitative research methods. In this study, quantitative research is predominant, but qualitative research was also used to identify the competencies employed in the questionnaires.

Before discussing quantitative and qualitative research in more detail, it is necessary to note the differences between quantitative research and qualitative research. Neuman (2000: 123) summarised these differences in the following table:

Table 4.1: Differences between Quantitative and Qualitative research.

QUANTITATIVE	QUALITATIVE
Test hypothesis that the researcher begins with.	Capture and discover meaning once the researcher becomes immersed in the data.
Concepts are in the form of distinct variables.	Concepts are in the form of themes, motifs, generalisations and taxonomies.
Measures are systematically created before data collection and are standardized.	Measures are created in an *ad hoc* manner and are often specific to the individual setting or researcher.
Data are in the form of numbers from precise measurement.	Data are in the form of words and images from documents, observations and transcripts.
Theory is largely causal and is deductive.	Theory can be causal or noncausal and is often deductive.
Procedures are standard, and replication is assumed.	Research procedures are particular and replication is very rare.
Analysis proceeds by using statistics, tables, or charts and discussing how the results relates to the hypothesis.	Analysis proceeds by extracting themes or generalisations from evidence and organising data to present a coherent, consistent picture.

Neuman (2000: 123)

4.2 QUALITATIVE RESEARCH

Qualitative research was used to identify the competencies addressed in the questionnaire and to determine how the systems and policies at the Blue Bulls Rugby Referees' Society function. Quantitative research was used to measure these competencies and to obtain statistical results.

As mentioned in Table 4.1, qualitative research is data collection in the form of words or pictures. Qualitative research is categorised into:

- field research, where the researcher conducts case studies on a small group of people for some length of time, and
- historical-comparative research, which examines aspects of social life in a past historical era or across different cultures (Neuman 2000: 33).

In this study, qualitative research was used to gather data on the core competencies a rugby referee should possess. Although the Delphi technique, in the form of a questionnaire, was used to determine the competencies to be used throughout the study, interviews were also conducted with experts to identify a list of relevant competencies.

Interviews were conducted with management at the Blue Bulls Rugby Referees' Society, and with players (both senior and junior level), to gather their input based upon their knowledge. Interviews with approximately ten senior coaches were also conducted to obtain their views. Together with the information gathered from these interviews, personal experience and inputs from De Beer (2003: unpublished interview) were utilised to draw up a list of competencies. Existing research on rugby union referee competencies was studied to get an external viewpoint (the Dickson study, 2000: personal e-mail) on the applicable competencies.

Interviews were also conducted with Horn (2002: unpublished interview) and Rhoodt (2002: unpublished interview) to get a comprehensive picture of the problems experienced by the Blue Bulls Rugby Referees' Society. They provided useful insights into how the current processes and systems function within the Society.

4.3 QUANTITATIVE RESEARCH

In this study survey research was used, using the Delphi technique to determine what the Blue Bulls referees opinions are about the required competencies of a referee and to ensure that important competencies were not excluded.

As explained in Table 4.1, quantitative research is the collection of data in the form of numbers. This type of research can be conducted in various ways, with the most popular being:

- *Experiments:* Uses the logic and principles found in natural science research. Experiments can be conducted in laboratories or in real life. They usually involve a relatively small number of people and address a well-focused question. Experiments are most effective for explanatory research.
- *Surveys:* Often used in descriptive or explanatory research. In survey research, the researcher asks many people numerous questions in a short time period. The researcher typically summarizes answers to questions in percentages, tables or graphs. Surveys give the researcher a picture of what many people think or report doing.
- *Content analysis:* Is a technique for examining information, or content, in written or symbolic material.
- *Existing statistics:* A researcher locates a source of previously collected information, often in the form of government reports or previously conducted surveys (Neuman 2000: 33-36).

A largely used quantitative data gathering technique is the survey technique. The growth of survey research is discussed in section 4.3.1.

4.3.1 GROWTH OF SURVEY RESEARCH

The survey research technique is the most widely used data gathering technique in the social sciences. The history of the modern survey can be traced back to ancient forms of the census. A census includes information on characteristics of the entire population in a territory (Neuman 2000: 247).

Despite initial uncertainty, survey research grew through the 1970's. More researchers learned about survey research, and the method gained in popularity. Neuman (2000: 249) identified five factors that contributes to the growth of survey research:

i. *Computers:* Computer technology made the statistical analysis of large-scale data much easier and faster.
ii. *Organisations:* Organisations realised the importance of research.
iii. *Data storage:* The collection, storage and sharing of information of hundreds of variables for thousands of respondents expanded the use of surveys.
iv. *Funding:* More funds were made available for survey research by governments.
v. *Methodology:* Substantial research was conducted on ways to improve the validity of surveys. The survey technique advanced as errors were identified and eliminated.

There are also various types of survey research. The various types of survey research are discussed in section 4.3.2.

4.3.2 TYPES OF SURVEY RESEARCH

This study made use of mail and self-administered questionnaires to gather data. Face to face interviews, however, were also used in the initial phases of the study.

Neuman (2000: 271) identified the following types of surveys, and some of the advantages and disadvantages associated with each type:

- Mail and self-administered questionnaires:
  - *Advantages:* Researcher can give questionnaires directly to respondents or mail them to respondents who read instructions, then record their answers. It is an inexpensive way of gathering data and can be conducted by a single researcher. A researcher can send questionnaires to a wide geographical area, and mailed questionnaires offer anonymity and avoid interviewer bias.
  - *Disadvantages:* A slow response rate is usually the biggest drawback of mailed questionnaires. A researcher cannot control the conditions under which a mail questionnaire is completed, and the mail questionnaire limits the kinds of questions that a researcher can use.
- Telephone interviews:
  - *Advantages:* A popular survey method, because a large part of the population can be reached by telephone. This method is also very flexible.
  - *Disadvantages:* Relatively high costs and limited interview time are disadvantages of telephone interviews.
- Face to face interviews:
  - *Advantages:* Face to face interviews have the highest response rates and allow for comprehensive questionnaires. Well-trained interviewers can ask all types of questions, especially complex questions, and can probe more extensively.

- *Disadvantages:* High costs are the biggest disadvantage of face to face interviews, and interviewer bias is greatest in face to face interviews.

In section 4.4 the population and sample size used during the study will be discussed.

4.4 POPULATION AND SAMPLE

The knowledge of rugby referees and rugby players at the top level of South African rugby were utilised during this study. Section 4.4 discusses the population and sample size of the research study.

4.4.1 SIZE OF THE POPULATION AND SAMPLE

The decision was made to involve all the qualified referees of the various South African rugby unions, as well as the 2003 Currie Cup players within the country. The number of qualified referees within the various unions and societies is unknown. The Blue Bulls referees participated separately, so this required two questionnaires.

Players were involved in the study to get a more complete view of what the competencies needed by a top class referee to be successful are, and to avoid using only the viewpoint of the referees.

In the first questionnaire (attached as Appendix 1) that went to the Blue Bulls referees, 47 out of 54 active referees responded. During the second survey (second questionnaire attached as Appendix 2), using a similar questionnaire, which was updated using the results received from the initial survey, 32 of the Blue Bulls referees responded.

A total of 149 referees from all over South Africa responded, with a total of 42 players getting involved, excluding the Blue Bulls referees. Table 4.2 indicates the number of referee respondents from the Blue Bulls Rugby Referees' Society with Table 4.3 indicating the response rate of the referees within the other South African unions and societies. Table 4.4 indicates the response rate of the players that participated in the study.

Table 4.2: Response rate of referees within the Blue Bulls Rugby Referees Society (BBRRS).

Number of active referees within the BBRRS = 54	
Number of respondents for the first questionnaire sent out	**Percentage (%) of responses**
47	87%
Number of respondents for the second questionnaire sent out	**Percentage (%) of responses**
32	59%

Table 4.3: Response rate of the qualified referees within the other South African rugby unions and societies.

RUGBY UNION	NUMBER OF RESPONDENTS
Boland Cavaliers	1
Border Bulldogs	0
Eastern Province Elephants	5
North West Falcons	0
Griqualand West	5
Gauteng Lions	69
Free State Cheetahs	10
Leopards	0
Mpumalanga Pumas	0
Natal Sharks	3
Northen Free State Griffons	0
South Western District's Eagles	6
Western Province	50
TOTAL	**149**

This total excludes the responses from the Blue Bulls referees. The second questionnaire that went to the Blue Bulls referees is very similar to the questionnaire that went to the other referees and players from all over the country, and therefore this questionnaire's results were used to calculate the final weighted competency index. The total population of referees used in this study is therefore **181 referees.**

Table 4.4: Response rate of the players who partipated in the study.

PROVINCE	NUMBER OF RESPONDENTS
Blue Bulls	35
Boland Cavaliers	0
Border Bulldogs	0
Eastern Province Elephants	0
North West Falcons	0
Griqualand West	0
Gauteng Lions	0
Free State Cheetahs	1
Leopards	0
Mpumalanga Pumas	0
Natal Sharks	6
Northen Free State Griffons	0
South Western District's Eagles	0
Western Province	0
TOTAL	**42**

The total number of players that responded, after the questionnaire was sent to all the unions, is 42 players.

Between the 181 referees and the 42 players, the total responses that were used to calculate the final weighted competency is **223**.

From the first questionnaire (initial questionnaire attached as Appendix 1) certain biographical details were obtained. These details are discussed in section 4.4.2.

4.4.2 CHARACTERISTICS OF THE 47 BLUE BULLS REFEREES WHO RESPONDED

The biographical details of the Blue Bulls referees who participated in the first questionnaire were obtained to get an indication of the make-up of the referees within this society. This questionnaire included the following biographical details:

- Age
- Gender
- Years involved as a Blue Bull referee
- Level at which referees

The results of the biographical details are put forward in Table 4.5:

Table 4.5: Biographical details of the Blue Bulls referees.

									TOTAL
AGE	**15-20**	**21-25**	**26-30**	**31-35**	**36-40**	**41-45**	**46 >**		
	5	3	7	9	2	7	14		47
GENDER	**MALE**	**FEMALE**							
	45	2							47
YEARS INVOLVED	**1-3**	**4-6**	**7-10**	**11-15**	**16-20**	**21-30**	**31 >**		
	14	11	9	2	3	4	4		47
LEVEL OF REFEREEING	**CARLTON (PROVINCIAL AND INTERNATIONAL)**	**SENIOR RESERVE**	**RESERVE**	**2A**	**2B**	**3A**	**3B**	**4TH**	
	15	8	2	2	3	3	11	3	47

The above table indicates that 32% (15 out of the 47 respondents) are at either international or provincial level, or that they referee at top club level within their region. This makes their contribution more reliable to the study. A small percentage

of the referees are at a low level, which also indicates that the results obtained from the Blue Bulls referees should be reliable based on the referee's level of experience.

It is clear that, at this stage, males dominate the refereeing scene but with the interest in women's rugby increasing, more female referees are sure to become involved in the future. The age distribution among the Blue Bulls referees is fairly even as is the years of experience. Only 14 out of the 47 referees (29,78%) have less than 4 years experience which, again, helps with the reliability of the input from the referees study.

4.5 CONSTRUCTING THE QUESTIONNAIRES

4.5.1 INTRODUCTION

The expert opinion of the qualified referees from the various unions and societies and the 2003 Currie Cup players, were gathered by means of a questionnaire. A questionnaire was used for the following reasons:

- It is a cheap way of getting the opinions of the participants, as not all of the unions and societies are easily accessible.
- The competencies used are easy to define and explain in the form of a questionnaire.
- Data capture is more precise and effective.

The final questionnaire (attached as Appendix 3), and the competencies included, was compiled after two questionnaires (attached as Appendix one and Appendix two) went to the Blue Bulls referees. The first two questionnaires served to establish which competencies to include in the final questionnaire and to help define the final competencies in the most effective way. The final questionnaire

(third questionnaire) did not show any significant changes from the second questionnaire that went to the Blue Bulls referees and, therefore, the 32 Blue Bulls referee respondents were also included in the sample for the final weighted competency index.

Certain guidelines should be followed before the compilation of questionnaires. A good questionnaire forms an integrated whole, according to Neuman (2000: 251). The researcher should include introductory remarks and instructions for clarification, and measure each variable with one or more survey questions. Neuman (2000: 251) points out that there are two key principles for good survey questions:

I. Avoid confusion, and
II. Keep the respondent's perspective in mind.

Good survey questions give the researcher valid and reliable measures. Good questions also help respondents to understand the question and to feel that their answers are meaningful. There are ten things to avoid when writing survey questions, although Newman's list does not include every possible error:

i. Avoid jargon, slang and abbreviations
ii. Avoid ambiguity, confusion and vagueness
iii. Avoid emotional language and prestige bias
iv. Avoid double-barrelled questions
v. Avoid leading questions
vi. Avoid asking questions that are beyond respondent's capabilities
vii. Avoid false premises
viii. Avoid asking about future intentions
ix. Avoid double negatives
x. Avoid overlapping or unbalanced response categories

The results of the questionnaires were captured and analysed using the software programmes Excel 2000 Professional and SPSS Version 11,5.

4.5.2 RESEARCH PHASES OF THE STUDY

This study was conducted in three phases. The first two phases included only the Blue Bulls referees, whereas the last phase surveyed all the other qualified referees in South Africa, as well as players who participated in Currie Cup rugby or higher during the 2003 season.

4.5.2.1 PHASE 1 AND 2 OF THE EMPIRICAL STUDY: DETERMINING THE CONTENT OF THE QUESTIONNAIRE (DELPHI TECHNIQUE)

The Delphi technique was applied to determine which competencies to include in the study's final questionnaire.

A short cover letter, explaining the research objectives, was sent to all 54 active referees within the Blue Bulls Rugby Referees' Society. Together with this letter a draft questionnaire containing 41 competencies, established by means of qualitative research, was attached. An open-ended section was included for referees to add any relevant competency they felt had been left out of the list provided.

Forty-seven of the Blue Bulls referees participated in the first round of the study, which helped to exclude some irrelevant competencies and to add more of the required competencies. The contribution of these referees helped the competencies to be defined in a more understandable way.

The second questionnaire contained a list of 36 competencies, and it was again sent to all Blue Bulls referees. A number of 32 of the 54 active referees responded during this round. This questionnaire, again, provided opportunity for the referees to include any additional competencies they felt were important.
The results of both questionnaires sent to the Blue Bull referees were analysed and certain conclusions were reached. The end result of this process was a list of competencies, which according to the Blue Bull referees, are the most important competencies for a referee to possess. These above-mentioned phases contributed to the drafting of a third questionnaire, which was very similar to the last questionnaire sent to the Blue Bull referees.

4.5.2.2 PHASE 3: FINAL QUESTIONAIRE OF THE STUDY

During the third phase of the study the final questionnaire, compiled after all the above processes had been completed, was sent to all the referee unions and societies within South Africa. This final questionnaire was also sent to all the Currie Cup teams for 2003.

Reliability, and an effort to obtain only expert opinion, are the reasons why only Currie Cup players, and higher, within South Africa were chosen for the study. These players know the game best and are the most experienced players in the country.

4.5.3 QUESTIONNAIRES TO BLUE BULLS REFEREES

The first draft of the questionnaire, together with an explanatory cover letter, was sent to the 54 active referees within the Blue Bulls Rugby Referees' Society. The purpose of this questionnaire was to find out which competencies are important, according to the respondents, but also to narrow down the list of competencies to be used in the study. This survey also helped to define more accurately the competencies to be used in the study.

The first questionnaire included a section for the participants to include biographical information, namely, age, gender, years involved as a qualified referee and the level at which the respondent is officiating.

A total number of 41 competencies, with a short definition of each, were included in the first questionnaire. An open space was included at the end of the questionnaire for additional competencies perceived as important, but not listed. The participants were asked to rate on a 5 point Likert scale the relative importance of each competency listed. The scale used for this questionnaire was:

1 - irrelevant
2 - less important
3 - average
4 - more important
5 - very important

This questionnaire, including the list of 41 competencies, is attached as Appendix 1.

The second questionnaire (attached as Appendix 2) that was sent to the Blue Bulls referees was compiled after taking into consideration the results and comments from the first questionnaire. Again, a cover letter was attached to explain the process. Thirty-two of the 54 active Blue Bulls referees completed this questionnaire.

This questionnaire consisted of 36 competencies (after analysis of the results obtained from the first questionnaire) that had to be rated by the referees. Some of the definitions used in the first questionnaire were improved upon to promote better understanding of the terms. Certain competencies used in the first questionnaire were excluded, and certain competencies given as additional competencies by the Blue Bulls referees were added. The scale used to rate the competencies also changed slightly to make it more understandable for the participants.

Again, a 5 point Likert scale was used with the values being:

1 - irrelevant
2 - less important
3 - important
4 - very important
5 - a definite competency to possess

The second questionnaire is attached as Appendix 2. This questionnaire was used to compile the final questionnaire for purposes of this study. Only slight changes were made and, therefore, the results of this second questionnaire were used for comparative purposes and were added to the data for the final weighted competency index.

4.5.4 FINAL QUESTIONNAIRE OF THE STUDY

The last questionnaire (attached as Appendix 3) used in this study was compiled from the data received during the first two surveys sent to the Blue Bulls referees. This questionnaire was sent to all the other rugby referee's societies in South Africa, with the request that all their active referees complete the questionnaire. A total of 149 referees responded. All the players taking part in Currie Cup rugby during 2003 were also requested to participate in the study. A total of 42 players responded to the request.

Again a 5 point Likert scale was used with only the last value changing from "a definite" to "essential".

The 36 competencies used in this questionnaire, with their definitions, were:

i) **Trustworthiness**
(ability to make the players trust you and know that the laws will be applied consistently and fairly)

ii) **Concentration/Focus**
(ability to stay focused during a match and not to allow the mind to wander/fluctuate)

iii) **Objectivity/Impartiality**
(being able to treat both sides the same; not to pick sides)

iv) **Honesty/Integrity**
(the ability to be honest with players, on and off the field)

v) **Self-confidence**
(belief in own ability to select appropriate courses of action)

vi) **Commitment**
(dedication to do best when preparing for games; know the rules; always giving best when refereeing a match)

vii) **Composure**
(to be calm during difficult situations)

viii) **Consistency**
(consistency in the way rules are applied during a match)

ix) **Decisiveness**
(the ability to reach quick and firm decisions)

x) **Fitness**
(fitness in terms of physical ability to keep up with play during a match)

xi) **Judgment**
(ability to evaluate and judge situations during a match correctly)

xii) **Resoluteness**
(the ability to stand by a decision after it has been made, right or wrong)

xiii) **Conflict handling**
(ability to manage conflict situations on the field, e.g. fights during play)

xiv) **Flexibility**
(in terms of using the laws, applying the advantage rule)

xv) **Player control**
(getting the players to conform and play according to the rules of the game)

xvi) **Respect**
(treating the players on and off the field with the dignity they deserve as human beings)

xvii) **Athleticism**
(athletic ability, e.g. speed, agility, etc.)

xviii) **Authority**
(demonstrate authority; show that referee is in charge and the players accept the rulings unconditionally)

xix) **Problem analysis**
(ability to consider all the facts and quickly analyse situations on the field)

xx) **Technical skills in terms of law application**
(all the detail regarding the laws and their application during play)

xxi) **Communication on the field - oral**
(ability to communicate in a manner that the message is very clear / the players know exactly what is expected of them)

xxii) **Ambition**
(a strong desire to be a successful referee)

xxiii) **Stress tolerance**
(ability to handle stress on and off the field of play)

xxiv) **Eyesight**
(being able to see the action on the field, “broad” vision during a match)

xxv) **Preparation**
(spend time to prepare mentally and physically before matches and in the lead up to big games)

xxvi) **Technical skills in general**
(e.g. knowledge on scrum techniques in general, and not only in terms of rugby laws)

xxvii) **Leadership**
(leadership ability of the referee on and off the field of play)

xxviii) **Initiative**
(the ability to take initiative on the field; act before something happens)

xxix) **Persuasiveness**
(the ability to be convincing)

xxx) **Frustration tolerance**
(being able to handle frustrating situations by staying calm)

xxxi) **Rapport with players**
(ability to make real interpersonal contact and form relationships with players off the field)

xxxii) **Dynamism**
(the ability to be dynamic and to stand out on the field)

xxxiii) **Competitiveness**
(the referee should care how well he performs in relation to other referees: "he should want to be the best referee")

xxxiv) **Creativity/Innovation**
(creative and innovative in terms of how issues are resolved)

xxxv) **Mental toughness**
(strong character of mind)

xxxvi) **Influence on players**
(the ability to influence player's attitudes positively)

The Delphi technique was used to ensure high content validity of the above competencies that were included in questionnaire three (attached as Appendix 3). The Delphi technique is discussed in section 4.5.5.

4.5.5 UTILISING THE DELPHI TECHNIQUE TO ENSURE HIGH CONTENT VALIDITY OF FINAL QUESTIONNAIRE

The Delphi technique was utilised to ensure that the final questionnaire of this study had a high content validity. This is established by the expert opinion of the referees that participated in the study.

"The Delphi technique was developed in the late 1940's by Rand Corporation, an independent think-tank. The Delphi technique has a unique method for eliciting and refining group judgment as it is based on the notion that a group of experts is

better than one expert, when exact knowledge is not available. A small group of experts selected from a particular industry have to respond independently, in a designated time frame, to a problem scenario. After each round, the information is consolidated and edited. Unlike focus groups, the respondents do not converse with the other study participants, but they are given feedback from the other respondents after each set of questions" (Kaynak *et al* 1994: 18-29).

Dick (2000: http://www.scu.edu.au) defined the Delphi technique on the *Resource Papers in Action Research* website, 2000, as "a process which uses an expert panel to make complex decisions". He is of the opinion that the Delphi technique's most common use is for future forecasting by a panel of experts. It typically employs several rounds of a mailed survey.

Nehiley (2000: http://www.scu.edu.au) writes that the Delphi approach is a technique for gathering data that is similar to focus groups. One of the advantages of the Delphi approach is that, unlike focus groups, the Delphi groups do not have to meet. Nehiley defines the technique as "a method of generating ideas and facilitating consensus among individuals who have special knowledge to share, but who are not always in contact with each other. A Delphi study carefully selects individuals who have knowledge necessary to analyse a specific problem." He went further by stating that the Delphi technique tries to choose the necessary participants purposively and puts them together for the purpose of analysis.

In his 2000 paper, Nehiley provides the following steps on how to conduct an effective Delphi study:

i. First a panel of experts must be identified to serve on the Delphi panel. The panelist's primary qualification should be their special knowledge. This knowledge can be gained through experience or advanced education. Another key qualification is that panelists be willing to share their information.

In this study the active and qualified Blue Bulls referees were used as a panel of experts. Their knowledge was gained through experience as well as training courses. These referees were all willing to share their thoughts and opinions on the topic of competency.

ii. Invite an appropriate number of panelists to participate. This follows the identification stage.

All 54 active Blue Bull referees received the two rounds of questionnaires. Only 47 of the referees responded.

iii. Prepare and distribute the initial survey instrument. The initial survey may contain open-ended probes or specific closed-ended questions, depending on the focus of the research.

iv. Receive and analyse the initial wave of data.

The first questionnaire was analysed, and certain important competencies identified by the panel of experts were added, while other less important competencies were excluded.

v. Prepare and distribute the second survey instrument. Most often panelists are asked, with the second wave, to clarify and rank order survey items suggested during the first wave. When panelists receive the second survey instrument, it will be the first time they will have seen the responses of the other panel members. It is often appropriate at this time to ask for additional ideas, clarification, and elaborations based on the initial survey responses.

At the conclusion of the second questionnaire that was sent to the Blue Bulls referees, the participants were asked to indicate any uncertainties or unclear definitions in the questionnaire.

vi. Receive and analyse the second wave of data. Care should be exerted to include all of the new ideas and suggestions, for the main purpose of the Delphi study is to generate new ideas.

vii. Repeat the process with additional questionnaires, if necessary.

viii. Prepare and distribute a final report to panel members. One of the motivations for participating in a Delphi panel, particularly for specialists, is to learn firsthand, before others, what the results of the Delphi study are.

“Delphi is not a procedure intended to challenge statistical or model-based procedures, against which human judgment is generally shown to be inferior: it is intended for use in judgment and forecasting situations in which pure model-based statistical methods are not practical or possible because of the lack of appropriate historical/economic/technical data, and thus where some form of human judgmental input is necessary. Four key features may be regarded as necessary for defining a procedure as a “Delphi”. These are: anonymity, iteration, controlled feedback and the statistical aggregation of group response” (Rowe and Wright 1999: 353-375).

4.6 COMPUTATION OF DATA

Weighted indexes were used to establish final lists of competencies for the various response groups. This section discusses the index compilation process, how to work with the exponential function and the final calculation of the weighted indexes.

4.6.1 UTILISING WEIGHTED INDEXES TO IDENTIFY THE REQUIRED COMPETENCIES OF REFEREES

In this study, weighted indexes were used to compare and establish a final list of important competencies for rugby referees to possess. This section will provide an example of how such an index is calculated and will also include the reasoning behind the method used.

Neuman (2000: 176) is of the opinion that weighted scales and weighted indexes are interchangeable. He defines a scale as a measure in which a researcher captures the intensity, direction, level, or potency of a variable construct. It arranges responses or observation on a continuum. A scale can use a single indicator or multiple indicators. Most are at the ordinal level of measurement.

Neuman (2000: 176) defined an index as follows:”An index is a measure in which a researcher adds or combines several distinct indicators of a construct into a single score. This composite score is often a simple sum of the multiple indicators. Indexes are often measured at the interval or ratio level”.

4.6.1.1 INDEX COMPILATION

In a weighted index, a researcher values or weighs some items more than others. The size of weights can come from theoretical assumptions, the theoretical definition, or a statistical technique such as factor analysis. Weighting changes the theoretical definition of the construct Neuman (2000: 179).

In this study indexes were drawn up using the frequencies from the various competencies included in the questionnaires. Tables were compiled after analysis of the frequencies, which indicated the exact number of responses for each competency within the various scales (these tables are provided in Chapter 5). In the first questionnaire to the Blue Bulls referees, for example, the following results, as can be seen in Table 4.6, were obtained for the competency “ambition”.

Table 4.6: Results for competency “Ambition”.

COMPETENCY	IRRELEVANT	LESS IMPORTANT	AVERAGE	IMPORTANT	VERY IMPORTANT
Ambition	1 referee	5 referees	2 referees	10 referees	29 referees

All the questionnaires, within the certain categories, were analyzed as such and similar tables compiled. These tables can be seen as individual matrixes, which mean that it is a table used to represent data in an orderly way
(Vivier, Swanepoel & Swart, 1994: 146).

4.6.1.2 WORKING WITH THE EXPONENTIAL FUNCTION (NOT NORMAL DISTRIBUTION)

After analysis of the data from the questionnaires received, it is clear that the data will not meet the characteristics of a normal distribution function.

Before any analysis of the data is done it is reasonable to predict that this data will form a normal distribution, because a representative sample was used, that is, a high number of qualified referees and players in the selected category. The rule of comparative judgment states that it is impossible to identify the "most common response" for each object or concept being judged. Although different people arrive at somewhat different judgments, the individual judgments cluster around the single most common response. The dispersion of individual judgments around the common response follows a general statistical pattern called the normal distribution (Neuman 2000: 185).

The assumption that the data used in this study will form a normal distribution can be tested by looking at the characteristics of a normal distribution. Steyn, Smit, Du Toit & Strasheim (1994: 345) define the function of the normal distribution, with the average being μ and the standard deviation being σ, as follows:

$$f(x) = \frac{1}{\sqrt{2\pi}\sigma} e^{-\frac{1}{2}\left(\frac{x-\mu}{\sigma}\right)}$$

According to Steyn *et al* (1994: 345) the characteristics of a normal distribution are as follows:

- the normal distribution is bell-shaped and symmetrical around the average μ
- about 68% of the total surface lies between $\mu - \sigma$ and $\mu + \sigma$
- about 95% of the total surface lies between $\mu - 2\sigma$ and $\mu + 2\sigma$
- about 99,7% of the total surface lies between $\mu - 3\sigma$ and $\mu + 3\sigma$
- the normal distribution is asymptotic to the *x*- axis.

After the data from the final questionnaire was analysed it was clear that the data did not meet the characteristics of a normal distribution function. This proof is provided in Chapter 5 of the study, but an example is given below:

In the first questionnaire that was sent to the Blue Bulls referees, one referee rated the competency “ambition” as irrelevant, while five referees rated the same competency as less important for a referee to possess. Two of the Blue Bulls referees indicated that the competency is of only average value, and ten referees stated that “ambition” is more important to possess. Twenty-nine Blue Bull referees indicated that ambition is very important to possess.

As the data did not adhere to the characteristics of a normal distribution function, and consequently could not be standardized, the exponential function had to be used in the calculation of indexes. The equation of a quadratic function could therefore not be used for this study’s purposes (Vivier *et al* 1994: 43).

In the responses on the importance of various competencies, an upward curve was detected for most of the competencies. Underlying this curve is the exponential function:

$$y = ae^{bx}$$

with “*a”* and “*b”* being constants and “*e”* being the universal constant. *“y”* is the exponential function (Vivier *et al* 1994: 43).

4.6.1.3 CALCULATION OF WEIGHTED INDEXES

Since an exponential equation does not have a median value (average), one side of the curve will always be used as the base value, in most cases 1. For the purposes of this study “one” will be used as the base value in all instances (Vivier *et al* 1994: 44).

In this study as mentioned earlier a 5 point Likert scale was used. The total of any scale will always be 100, and therefore each scale will have a value of 20. This can be seen in Table 4.7.

Table 4.7: Estimated values for each scale used in the 5 point Likert scale.

SCALE	20	20	20	20	20	100
For example	1 (irrelevant)	2 (less important)	3 (average)	4 (more important)	5 (very important)	

To compile an index, the real distance between the scales must be determined.
The first step in the compilation of the indexes is to calculate the *y*-axis of the matrixes (columns determined from the frequency tables attached as Appendix 4). The total will be known as the matrix totals. The totals of these *y*-axis are then divided with each other (the total on the right with the total on the left) to determine an estimated value for each scale. Table 4.8 is provided as an example.

Table 4.8: Example of a matrix total.

Irrelevant	Less important	Average	More important	Very important
27	62	154	510	1152

- The estimated distance of the first scale will be one, because one is used as the base in an exponential equation.
- The difference between scale 1 and 2 will be determined by 62 ÷ 27 = 2.3, meaning the estimated difference between the two scales is 2.3.
- Estimated distance between 2nd and 3rd scale: 154 ÷ 62 = 2.5.
- Estimated distance between 3rd and 4th scale: 510 ÷ 154 = 3.3
- Estimated distance between 4th and 5th scale: 1152 ÷ 510 = 2.25.

The real distances of the matrix are then determined by multiplying the estimated distances with each other. Using the above example, the real distances between the scales will be:

- 1st scale: One, with one being the base
- 2nd scale: 2.3 x 1 = 2.3
- 3rd scale: 2.3 x 2.5 = 5.75
- 4th scale: 5.57 x 3.3 = 18.3
- 5th scale: 18.3 x 2.25 = 41.17

The last step in determining the index is to take the *x*-axis in the matrix and multiply this number (the frequency of the particular scale and competency) with the real distance between the scale, as was calculated above. Using the above examples, real distances and the example of three *x*-axis out of a fictionary matrix, the totals can be calculated as such.

Table 4.9: Three *x*-axis out of a matrix multiplied by the real distance of each scale.

Competency 1	1 x 1 = **1**	5 x 2.3 = **11.5**	2 x 5.75 = **11.14**	10 x 18.3 = **183**	29 x 41.17 = **1193.93**	**1400.57**
Competency 2	0 x 1 = **0**	4 x 2.3 = **9.2**	15 x 5.57 = **83.55**	18 x 18.3 = **329.4**	11 x 41.17 = **452.87**	**875.02**
Competency 3	0 x 1 = **0**	2 x 2.3 = **4.6**	14 x 5.57 = **77.98**	17 x 18.3 = **311.1**	25 x 41.17 = **1029.25**	**1422.93**

The index for the above table will be in the following order after the totals for each cell are calculated: the biggest total will indicate the most important competency, in the case of the example competency three. The least important competency will be the competency with the lowest total, in this case competency two.

Described and explained above, using examples, are the processes to be followed for each of the indexes that will be used in this study.

4.6.1.4 STATISTICAL PROCEDURES AND METHODS

With the help of SPSS, Version 11,5, frequencies will be determined for each item (competency) in the questionnaires received back. These frequencies will be used to compile a table in Excel 2000 Professional indicating exactly how many responses were received per competency.

A factor analysis will be completed for all the respondents to determine how many categories, or factors, of competencies can be identified. Cooper and Schindler (1998: 560) provided the following definition of a factor analysis: “Factor analysis looks for patterns among the variables to discover if any underlying combination of the original variables (a factor) can summarise the original set.”

4.7 COMPARING THE DATA FROM DIFFERENT QUESTIONNAIRES

The main objective of this study is to compile a competency index for rugby referees to be successful at the highest level. It is also necessary to compare some of the individual weighted competency indexes with each other to form an idea of the various perceptions of referees and players from all over the country. This comparison was done graphically and by using analysis of variance (ANOVA). This comparison procedures are discussed below.

4.7.1 GRAPHIC COMPARISON

The weighted competency indexes, compiled up to this point in the study, cannot be compared with each other because the weighted scores are not on the same scale. This difference in weighted scores is because of the different response rates from the referees and players. The Gauteng Lions referees had the highest number of respondents, with a total of 69 referees. The weighted competency index with the least number of respondents was the Free State, with ten respondents. Therefore all the other weighted indexes must be adjusted before any comparisons can be made. All the weighted indexes will be adjusted to the highest response rate, in this case the Gauteng Lions referees.

This calculation will be done as follows:

- The number of respondents from the weighted competency index with the least number of respondents will be divided with 69 (the number of respondents from the Gauteng Lions referees).
- This number will be multiplied by 100 to calculate a percentage.
- The percentage will be divided with 100 to calculate the difference between the original amount and the 69 Gauteng Lions referees.

- This number will be multiplied by the weighted score of each competency in the original weighted competency index, to calculate a “new” weighted score that can be compared across all the weighted competency indexes.
- This calculation can be verified by multiplying the final result of the above calculation with the number of respondents from the weighted competency index with the least respondents. The answer should be 69 or very close to this figure.

After the above calculations are made, all the weighted competency indexes in this study can be compared with each other graphically. It is also necessary to compare the various groups with each other statistically. In this study, analysis of variance (ANOVA) was used.

4.7.2 COMPARISON OF DATA UTILISING ANOVA

Analysis of variance (ANOVA) will be used as the statistical method to compare the data. ANOVA is a parametric test and compare the effects of one factor on a continuous dependent variable (Cooper and Schindler, 1998: 492). To use ANOVA certain conditions must be met (Cooper and Schindler, 1998: 492), namely:

- the samples must be randomly selected from normal populations.
- the populations should have equal variances.
- the distance from one value to its group’s mean should be independent of the distances of other values to that mean (independence of error.)

In this study ANOVA, using SPSS, Version 11,5, will be used to compare the data. ANOVA will be used for the following reasons:

- The data do not fit into a normal distribution
- The size of the groups being compared are fairly even
- ANOVA uses squared deviations of variance unlike *t* tests which use sample standard deviation

4.8. SUMMARY

This chapter contained the research procedure followed and the statistical procedures and techniques used. The difference between quantitative and qualitative research was highlighted, because both techniques were utilised in the study.

Qualitative research was used to gather data on the core competencies a rugby referee should possess. Although the Delphi technique, in the form of a questionnaire, was used to finalising the competencies to be used throughout the study, interviews were conducted with experts to identify a list of relevant competencies. Quantitative research was done by means of various questionnaires, using a 5 point Likert scale, to obtain the relevant data.

Survey research and the different types of survey research were discussed. This study made use of self-administered questionnaires to gather data and face to face interviews were held.

Phases one and two of the study were in the form of questionnaires that went to the Blue Bulls referees to obtain their opinion. The Delphi technique was used to compile a final list of competencies, with their definitions, for use in the study.

In phase three another questionnaire, compiled from the results obtained in the initial two surveys of the Blue Bulls referees, was utilised (attached as Appendix 3). This questionnaire was distributed among all the other rugby unions in South Africa, for their referees and the 2003 Currie Cup players to complete. The response rates were discussed in this chapter.

The way the various questionnaires were compiled was discussed, and all the competencies and their corresponding definitions that were used in the questionnaires were provided.

The measurement techniques, the Delphi technique and indexing, were discussed. The statistical methods that were used and, the various methods for comparing the indexes were presented. The method used to construct the indexes was also discussed.

CHAPTER 5

RESULTS AND ANALYSIS

5.1 INTRODUCTION

In Chapter 4 the research methods were discussed, and the statistical procedures that were applied to answer the research question were presented. In this chapter, the results of the application of the statistical procedures to the gathered data will be presented and discussed.

The findings will be presented and discussed in the following order:

- The weighted competency index for all the respondents, which is the weighted index that indicates the competencies required by a successful rugby referee in view of the total sample (n=223).
- The weighted competency indexes for the Blue Bulls referees and the Blue Bulls players, as well as the weighted competency indexes for the Western Province referees and the Gauteng Lions referees.
- A comparison between the perceptions of the different groups with regards to the relevance of the competencies utilising analysis of variance (ANOVA) and the weighted scores.
- A factor analysis for the competencies.

5.2 WEIGHTED COMPETENCY INDEX FOR RUGBY REFEREES

After analysis of the total sample (n=223, 181 referees and 42 players) that participated in the study, a weighted competency index for rugby referees was drawn up. The procedure that was followed to compile such a weighted competency index was discussed in Chapter 4, paragraph 4.6.1.3.

The first step in the compilation of the weighted competency index was to use the frequency tables (descriptive statistics) to compile a competency matrix. These frequency tables are attached as Appendix 4. In Table 5.1, the number of responses for each option per question is presented.

Table 5.1: Matrix, with the number of responses for each option chosen per question, for all the respondents (n=223).

Competencies	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Trustworthiness	1	4	24	58	136	223
Concentration/Focus	0	5	15	68	135	223
Objectivity/Impartiality	0	1	9	51	162	223
Honesty/Integrity	1	1	24	55	142	223
Self-confidence	0	3	29	88	103	223
Commitment	0	2	21	68	132	223
Composure	1	2	24	96	100	223
Consistency	0	2	13	62	146	223
Decisiveness	0	2	23	89	109	223
Fitness	0	1	21	85	116	223
Judgment	0	2	16	91	114	223
Resoluteness	1	3	32	87	100	223
Conflict handling	1	1	32	88	101	223
Flexibility	0	3	40	100	80	223
Player control	0	3	36	95	89	223
Respect	2	3	35	69	114	223
Athleticism	2	8	61	89	63	223
Authority	0	4	61	90	68	223
Problem analysis	0	3	28	95	97	223

Competencies	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Technical skills - law application	0	2	41	83	97	223
Communication on field - oral	0	3	27	88	105	223
Ambition	3	9	43	76	92	223
Stress tolerance	2	7	46	83	85	223
Eyesight	0	3	34	95	91	223
Preparation	0	4	48	84	87	223
Technical skills - general	0	2	42	82	97	223
Leadership	0	8	65	85	65	223
Initiative	0	8	55	89	71	223
Persuasiveness	6	10	69	80	58	223
Frustration tolerance	0	7	42	93	81	223
Rapport with players	13	42	55	69	44	223
Dynamism	15	50	61	51	46	223
Competitiveness	7	27	47	80	62	223
Creativity/Innovation	2	24	71	80	46	223
Mental toughness	0	11	41	77	94	223
Influence on players	3	15	39	90	76	223
TOTAL	**60**	**285**	**1370**	**2909**	**3404**	

The content of this matrix was used in the following calculations to determine the estimated distances between the 5 points on the questionnaire's scale.

- Estimated distance between the points "irrelevant" and "less important"

  285 ÷60 = **4.75**

- Estimated distance between the points "less important" and "important"

  1370 ÷ 285 = **4.81**

- Estimated distance between the points "important" and "very important"

  2909 ÷1370 = **2.12**

- Estimated distance between the points "very important' and "essential"

  3404 ÷ 2909 = **1.17**

The real distances between the different scale options for this matrix were subsequently determined as follows:

- The first point on the scale will be **1** (1 was used as the base value in all instances)
- The real distance between the points "irrelevant" and "less important"

  4.75 x 1 = **4.75**
- The real distance between the points "less important" and "important"

  4.75 x 4.81 = **22.85**
- The real distance between the points "important" and "very important"

  22.85 x 2.12 = **48.44**
- The real distance between the points "very important" and "essential"

  48.44 x 1.17 = **56.67**

Table 5.2: Required competencies of rugby referees utilising the total sample, n=223 (weighted score for each competency, and calculated using the real distances between the 5 points on the scale).

Competencies	Irrelevant	Less important	Important	Very important	Essential	Weighted Score
Trustworthiness	1 x 1 **= 1**	4 x 4.75 **= 19**	24 x 22.85 **= 548.4**	58 x 48.44 **= 2809.52**	136 x 56.67 **= 7707.12**	11085.04
Concentration/Focus	0 x 1 **= 0**	5 x 4.75 **= 23.75**	15 x 22.85 **= 342.75**	68 x 48.44 **= 3293.92**	135 x 56.67 **= 7650.45**	11310.87
Objectivity/Impartiality	0 x 1 **= 0**	1 x 4.75 **= 4.75**	9 x 22.85 **= 205.65**	51 x 48.44 **=2470.44**	162 x 56.67 **= 9180.54**	11861.38
Honesty/Integrity	1 x 1 **= 1**	1 x 4.75 **= 4.75**	24 x 22.85 **= 548.4**	55 x 48.44 **= 2664.2**	142 x 56.67 **= 8047.14**	11265.49
Self-confidence	0 x 1 **= 0**	3 x 4.75 **= 14.25**	29 x 22.85 **= 662.65**	88 x 48.44 **= 4262.72**	103 x 56.67 **= 5837.01**	10776.63
Commitment	0 x 1 **= 0**	2 x 4.75 **= 9.5**	21 x 22.85 **= 479.85**	68 x 48.44 **= 3293.92**	132 x 56.67 **= 7480.44**	11263.71
Composure	1 x 1 **= 1**	2 x 4.75 **= 9.5**	24 x 22.85 **= 548.4**	96 x 48.44 **= 4650.24**	100 x 56.67 **= 5667**	10876.14
Consistency	0 x 1 **= 0**	2 x 4.75 **= 9.5**	13 x 22.85 **= 297.05**	62 x 48.44 **= 3003.28**	146 x 56.67 **= 8273.82**	11583.65
Decisiveness	0 x 1 **= 0**	2 x 4.75 **= 9.5**	23 x 22.85 **= 525.55**	89 x 48.44 **= 4311.16**	109 x 56.67 **= 6177.03**	11023.24
Fitness	0 x 1 **= 0**	1 x 4.75 **= 4.75**	21 x 22.85 **= 479.85**	85 x 48.44 **= 4117.4**	116 x 56.67 **= 6573.72**	11175.72
Judgment	0 x 1 **= 0**	2 x 4.75 **= 9.5**	16 x 22.85 **= 365.6**	91 x 48.44 **= 4408.04**	114 x 56.67 **= 6460.38**	11243.52

Competencies	Irrelevant	Less important	Important	Very important	Essential	Weighted Score
Resoluteness	1 x 1 **= 1**	3 x 4.75 **= 14.25**	32 x 22.85 **= 731.2**	87 x 48.44 **= 4214.28**	100 x 56.67 **= 5667**	10627.73
Conflict handling	1 x 1 **= 1**	1 x 4.75 **= 4.75**	32 x 22.85 **= 731.2**	88 x 48.44 **= 4262.72**	101 x 56.67 **= 5723.67**	10723.34
Flexibility	0 x 1 **= 0**	3 x 4.75 **= 14.25**	40 x 22.85 **= 914**	100 x 48.44 **= 4844**	80 x 56.67 **= 4533.6**	10305.85
Player control	0 x 1 **= 0**	3 x 4.75 **= 14.25**	36 x 22.85 **= 822.6**	95 x 48.44 **= 4601.8**	89 x 56.67 **= 5043.63**	10482.28
Respect	2 x 1 **= 2**	3 x 4.75 **= 14.25**	35 x 22.85 **= 799.75**	69 x 48.44 **= 3342.36**	114 x 56.67 **= 6460.38**	10618.74
Athleticism	2 x 1 **= 2**	8 x 4.75 **= 38**	61 x 22.85 **= 1393.85**	89 x 48.44 **= 4311.16**	63 x 56.67 **= 3570.21**	9315.22
Authority	0 x 1 **= 0**	4 x 4.75 **= 19**	61 x 22.85 **= 1393.85**	90 x 48.44 **= 4359.6**	68 x 56.67 **= 3853.56**	9626.01
Problem analysis	0 x 1 **= 0**	3 x 4.75 **= 14.25**	28 x 22.85 **= 639.8**	95 x 48.44 **= 4601.8**	97 x 56.67 **= 5496.99**	10752.84
Technical skills - law application	0 x 1 **= 0**	2 x 4.75 **= 9.5**	41 x 22.85 **= 936.85**	83 x 48.44 **= 4020.52**	97 x 56.67 **= 5496.99**	10463.86
Communication on field - oral	0 x 1 **= 0**	3 x 4.75 **= 14.25**	27 x 22.85 **= 616.95**	88 x 48.44 **= 4262.72**	105 x 56.67 **= 5950.35**	10844.27
Ambition	3 x 1 **= 3**	9 x 4.75 **= 42.75**	43 x 22.85 **= 982.55**	76 x 48.44 **= 3681.44**	92 x 56.67 **= 5213.64**	9923.38
Stress tolerance	2 x 1 **= 2**	7 x 4.75 **= 33.25**	46 x 22.85 **= 1051.1**	83 x 48.44 **= 4020.52**	85 x 56.67 **= 4816.95**	9923.82
Eyesight	0 x 1 **= 0**	3 x 4.75 **= 14.25**	34 x 22.85 **= 776.9**	95 x 48.44 **= 4601.8**	91 x 56.67 **= 5156.97**	10549.92
Preparation	0 x 1 **= 0**	4 x 4.75 **= 19**	48 x 22.85 **= 1096.8**	84 x 48.44 **= 4068.96**	87 x 56.67 **= 4930.29**	10115.05
Technical skills - general	0 x 1 **= 0**	2 x 4.75 **= 9.5**	42 x 22.85 **= 959.7**	82 x 48.44 **= 3972.08**	97 x 56.67 **= 5496.99**	10438.27
Leadership	0 x 1 **= 0**	8 x 4.75 **= 38**	65 x 22.85 **= 1485.25**	85 x 48.44 **= 4117.4**	65 x 56.67 **= 3683.55**	9324.2
Initiative	0 x 1 **= 0**	8 x 4.75 **= 38**	55 x 22.85 **= 1256.75**	89 x 48.44 **= 4311.16**	71 x 56.67 **= 4023.57**	9629.48
Persuasiveness	6 x 1 **= 6**	10 x 4.75 **= 47.5**	69 x 22.85 **= 1576.65**	80 x 48.44 **= 3875.2**	58 x 56.67 **= 3286.86**	8792.21
Frustration tolerance	0 x 1 **= 0**	7 x 4.75 **= 33.25**	42 x 22.85 **= 959.7**	93 x 48.44 **= 4504.92**	81 x 56.67 **= 4590.27**	10088.14
Rapport with players	13 x 1 **= 13**	42 x 4.75 **= 199.5**	55 x 22.85 **= 1256.75**	69 x 48.44 **= 3342.36**	44 x 56.67 **= 2493.48**	7305.09
Dynamism	15 x 1 **= 15**	50 x 4.75 **= 237.5**	61 x 22.85 **= 1393.85**	51 x 48.44 **= 2470.44**	46 x 56.67 **= 2606.82**	6723.61
Competitiveness	7 x 1 **= 7**	27 x 4.75 **= 128.25**	47 x 22.85 **= 1073.95**	80 x 48.44 **= 3875.2**	62 x 56.67 **= 3513.54**	8597.94
Creativity/Innovation	2 x 1 **= 2**	24 x 4.75 **= 114**	71 x 22.85 **= 1622.35**	80 x 48.44 **= 3875.2**	46 x 56.67 **= 2606.82**	8220.37
Mental toughness	0 x 1 **= 0**	11 x 4.75 **= 52.25**	41 x 22.85 **= 936.85**	77 x 48.44 **= 3729.88**	94 x 56.67 **= 5326.98**	10045.96
Influence on players	3 x 1 **= 3**	15 x 4.75 **= 71.25**	39 x 22.85 **= 891.15**	90 x 48.44 **= 4359.6**	76 x 56.67 **= 4306.92**	9631.92

In Table 5.2 the weighted scores were calculated, and then presented as a competency index for rugby referees. The weighted scores of the competencies were then prioritized and presented in Table 5.3 from highest to lowest, ranging from the most important competency (highest weighted score) to the least important competency (lowest weighted score).

Table 5.3: Required competencies of rugby referees (weighted competency index for the total sample).

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORE
1.	Objectivity/Impartiality	11861.38
2.	Consistency	11583.65
3.	Concentration/Focus	11310.87
4.	Honesty/Integrity	11265.49
5.	Commitment	11263.71
6.	Judgment	11243.52
7.	Fitness	11175.72
8.	Trustworthiness	11085.04
9.	Decisiveness	11023.24
10.	Composure	10876.14
11.	Communication on field - oral	10844.27
12.	Self-confidence	10776.63
13.	Problem analysis	10752.84
14.	Conflict handling	10723.34
15.	Resoluteness	10627.73
16.	Respect	10618.74
17.	Eyesight	10549.92
18.	Player control	10482.28
19.	Technical skills - law application	10463.86
20.	Technical skills - general	10438.27
21.	Flexibility	10305.85
22.	Preparation	10115.05
23.	Frustration tolerance	10088.14
24.	Mental toughness	10045.96
25.	Stress tolerance	9923.82
26.	Ambition	9923.38
27.	Influence on players	9631.92
28.	Initiative	9629.48
29.	Authority	9626.01

30.	Leadership	9324.2
31.	Athleticism	9315.22
32.	Persuasiveness	8792.21
33.	Competitiveness	8597.94
34.	Creativity/Innovation	8220.37
35.	Rapport with players	7305.09
36.	Dynamism	6723.61

From Table 5.3 it is observed that the ten most important competencies required of rugby referees, in order of importance, are the following:

- **Objectivity / Impartiality** *(being able to treat both sides the same)*
- **Consistency** *(consistency in the way rules are applied during a match)*
- **Concentration / Focus** *(ability to stay focused during a match and not allow the mind to fluctuate)*
- **Honesty / Integrity** *(the ability to be honest with players, on and off the field)*
- **Commitment** *(dedication to do the best when preparing for games, know the rules, and always giving the best when refereeing a match)*
- **Judgment** *(ability to evaluate and judge situations during a match correctly)*
- **Fitness** *(fitness in terms of physical ability to keep up with play during a match)*
- **Trustworthiness** *(ability to make the players trust you and know that you will apply the laws consistently and fairly)*
- **Decisiveness** *(ability to reach quick and firm decisions)*
- **Composure** *(to be calm during difficult situations)*

5.3 WEIGHTED COMPETENCY INDEXES FOR THE BLUE BULLS REFEREES

The Blue Bulls referees participated in two rounds of surveys to help identify a list of competencies, with definitions, for use in this study. A total of 47 Blue Bulls referees participated during the first round, and 32 Blue Bulls referees in the second round. During 2003, there were only 54 active referees within the society, which indicates that the response rate from this society was very high.

5.3.1 RESULTS OF THE FIRST QUESTIONNAIRE

As discussed in the previous chapter a total of 41 competencies were included in the first draft questionnaire.

Space was provided, on this first draft, for the Blue Bulls referees to include additional competencies they view as important for a rugby referee to possess (Delphi technique applied). Through this open-ended question the following competencies, which were not included in the first draft of thequestionnaire, were added:

- Big match temperament
- Mental toughness
- Neatness
- Loyalty to Society
- Courteousness

Of these additional competencies, the researcher judged that mental toughness was the only relevant competency to be added to the next draft questionnaire. Big match temperament can be seen as part of mental toughness. The definition used for mental toughness is: ”having a strong character of mind”.

A sample of 47 out of 54 active Blue Bulls referees (response rate of 87%) participated in the first round of the survey. This questionnaire presented the following responses, which can be seen in the matrix included as Appendix 5.

5.3.2 RESULTS OF THE SECOND QUESTIONNAIRE

As previously stated the second questionnaire that went to the Blue Bulls referees was compiled after taking into consideration the results obtained from the first questionnaire.

This questionnaire was completed by 32 of the active 54 Blue Bulls referees (response rate of 59%) and included 36 competencies. As indicated earlier, the only additional competency included in this questionnaire was mental toughness. The six competencies that were eliminated from the previous questionnaire were:

- Extroverted
- Introverted
- Biographical elements
- Self-motivation
- Communication – body language
- Teamwork

The matrix compiled from the frequency tables of this questionnaire is presented as Table 5.4.

Table 5.4: Matrix for the Blue Bulls Referees' responses to the second questionnaire.

Competency	Irrelevant	Less important	Important	Very important	A definite	Total number of Respondents
Trustworthiness	0	0	7	9	16	32
Concentration/Focus	0	3	6	9	14	32
Objectivity/Impartiality	0	0	1	13	18	32
Honesty/Integrity	0	0	7	9	16	32
Self-confidence	0	1	5	18	8	32
Commitment	0	1	8	7	16	32
Composure	1	2	3	17	9	32
Consistency	0	1	1	14	16	32
Decisiveness	0	0	3	17	12	32
Fitness	0	0	1	16	15	32
Judgment	0	1	3	14	14	32
Resoluteness	0	0	0	13	19	32
Conflict handling	0	0	6	11	15	32
Flexibility	0	2	6	15	9	32
Player control	0	0	6	16	10	32
Respect	0	1	6	15	10	32
Athleticism	1	3	11	13	4	32
Authority	0	1	10	14	7	32
Problem analysis	0	0	3	17	12	32
Technical skills - law application	0	0	2	18	12	32
Communication on field - oral	0	1	3	14	14	32
Ambition	0	4	5	15	8	32
Stress tolerance	0	3	11	10	8	32
Eyesight	0	0	4	17	11	32
Preparation	0	1	12	11	8	32
Technical skills - general	0	0	7	17	8	32
Leadership	0	0	9	13	10	32
Initiative	0	0	6	16	10	32
Persuasiveness	3	1	9	13	6	32
Frustration tolerance	0	1	9	16	6	32
Rapport with players	0	11	9	8	4	32
Dynamism	2	8	10	8	4	32
Competitiveness	0	8	7	11	6	32
Creativity/Innovation	0	7	11	9	5	32
Mental toughness	0	5	3	13	11	32
Influence on players	1	6	4	11	10	32
TOTALS	8	72	214	477	381	

This matrix was used in the following calculations to determine the estimated distances between the 5 points of this matrix.

- Estimated distance between the points “irrelevant” and “less important”

  72 ÷ 8 = **9**
- Estimated distance between the points “less important” and “important”

  214 ÷ 72 = **2.97**
- Estimated distance between the points “important” and “very important”

  477 ÷214 = **2.23**
- Estimated distance between the points “very important” and “a definite to possess”

  381 ÷ 477 = **0.80**

Subsequently, the real distances for this matrix were determined as follows:

- The first point on the scale will be 1 (1 was used as the base value in all instances)
- The real distance between the points “irrelevant” and “less important”

  9 x 1 = **9**
- The real distance between the points “less important” and “important”

  9 x 2.97 = **26.73**
- The real distance between the points “important” and “very important”

  26.73 x 2.23 = **59.61**
- The real distance between the points “very important” and “a definite to possess”

  59.61 x 0.80 = **47.69**

Table 5.5 indicates the weighted competency index for the Blue Bulls Referees after the second questionnaire (final draft) was received back.

Table 5.5: Weighted competency index for the Blue Bulls referees after questionnaire two.

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORES
1.	Technical skills - law application	1698.72
2.	Fitness	1695.84
3.	Resoluteness	1681.04
4.	Decisiveness	1665.84
5.	Problem analysis	1665.84
6.	Objectivity/Impartiality	1660.08
7.	Eyesight	1644.88
8.	Consistency	1633.31
9.	Self-confidence	1597.15
10.	Judgment	1591.39
11.	Communication on field - oral	1591.39
12.	Player control	1591.04
13.	Initiative	1591.04
14.	Technical skills - general	1582
15.	Composure	1541.77
16.	Respect	1540.43
17.	Conflict handling	1531.44
18.	Flexibility	1501.74
19.	Leadership	1492.4
20.	Frustration tolerance	1489.47
21.	Trustworthiness	1486.64
22.	Ambition	1445.32
23.	Authority	1444.67
24.	Mental toughness	1424.71
25.	Commitment	1403.15
26.	Concentration/Focus	1391.53
27.	Honesty/Integrity	1391.26
28.	Preparation	1366.99
29.	Persuasiveness	1313.64
30.	Stress tolerance	1298.65
31.	Influence on players	1294.53
32.	Athleticism	1287.72
33.	Competitiveness	1200.96
34.	Creativity/Innovation	1131.97
35.	Dynamism	1008.94
36.	Rapport with players	1007.21

The ten most important competencies according to this weighted competency index of the Blue Bulls referees are:

- **Technical skills – law application** *(all the detail regarding the laws and their application during play)*
- **Fitness** *(fitness in terms of physical ability to keep up with play during a match)*
- **Resoluteness** *(ability to keep to a decision after it has been made, right or wrong)*
- **Decisiveness** *(ability to reach quick and firm decisions)*
- **Problem analysis** *(ability to consider all the facts and quickly analyse situations on the field)*
- **Objectivity/Impartiality** *(being able to treat both sides the same)*
- **Eyesight** *(being able to see the action on the field, "broad vision" during a match)*
- **Consistency** *(consistency in the way rules are applied during a match)*
- **Self-confidence** *(belief in own ability to select appropriate courses of action)*
- **Judgment** *(ability to evaluate and judge situations during a match correctly)*

5.4 WEIGHTED COMPETENCY INDEX FOR THE BLUE BULLS PLAYERS

A total of 35 Blue Bulls Currie Cup players completed the questionnaire, which is a high response rate considering a team consists of 15-22 players. An exact response rate cannot be determined because the squad changes as the season progresses. The matrix compiled from the frequency tables of this questionnaire can be seen in Table 5.6.

Table 5.6: Matrix for the Blue Bulls Currie Cup players of 2003.

Competency	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Trustworthiness	1	1	7	9	17	35
Concentration/Focus	0	1	3	12	19	35
Objectivity/Impartiality	0	1	5	5	24	35
Honesty/Integrity	1	1	10	8	15	35
Self-confidence	0	1	11	9	14	35
Commitment	0	1	5	7	22	35
Composure	0	0	7	15	13	35
Consistency	0	0	5	6	24	35
Decisiveness	0	0	10	15	10	35
Fitness	0	1	9	10	15	35
Judgment	0	1	3	12	19	35
Resoluteness	0	3	9	10	13	35
Conflict handling	1	0	7	15	12	35
Flexibility	0	1	6	18	10	35
Player control	0	1	6	15	13	35
Respect	2	0	6	11	16	35
Athleticism	1	3	12	8	11	35
Authority	0	1	10	13	11	35
Problem analysis	0	1	8	11	15	35
Technical skills - law application	0	1	9	7	18	35
Communication on field - oral	0	0	3	11	21	35
Ambition	2	0	8	8	17	35
Stress tolerance	2	0	7	12	14	35
Eyesight	0	1	7	13	14	35
Preparation	0	2	6	12	15	35

Competency	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Technical skills - general	0	0	10	5	20	35
Leadership	0	4	11	5	15	35
Initiative	0	2	10	11	12	35
Persuasiveness	1	1	14	11	8	35
Frustration tolerance	0	2	6	13	14	35
Rapport with players	3	2	11	12	7	35
Dynamism	4	6	10	9	6	35
Competitiveness	1	0	6	12	16	35
Creativity/Innovation	2	1	7	14	11	35
Mental toughness	0	2	10	8	15	35
Influence on players	1	3	8	12	11	35
TOTALS	22	45	282	384	527	

The estimated distances, considering the above matrix, between the 5 points of this matrix is as follows:

- Estimated distance between the points “irrelevant” and “less important”

  45 ÷ 22 = **2.05**
- Estimated distance between the points “less important” and “important”

  282 ÷ 45 = **6.27**
- Estimated distance between the points “important” and “very important”

  384 ÷ 282 = **1.36**
- Estimated distance between the points “very important” and “essential”

  527 ÷ 384 = **1.37**

Subsequently, the real distances for this matrix were determined as follows:

- The first point on the scale will be 1 (1 was used as the base value in all instances)
- The real distance between the points “irrelevant” and “less important”

  2.05 x 1 = **2.05**
- The real distance between the points “less important” and “important”

  2.05 x 6.27 = **12.85**
- The real distance between the points “important” and “very important”

  12.85 x 1.36 = **17.48**
- The real distance between the points “very important” and “essential”

  17.48 x 1.37 = **23.94**

Table 5.7 indicates the competency index for the 35 Blue Bulls Currie Cup players of 2003.

Table 5.7: Weighted competency index for Blue Bulls Currie Cup players.

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORE
1.	Consistency	743.69
2.	Communication on field - oral	733.57
3.	Objectivity/Impartiality	728.26
4.	Commitment	715.34
5.	Concentration/Focus	705.22
6.	Judgment	705.22
7.	Technical skills - general	694.7
8.	Technical skills - law application	670.98
9.	Competitiveness	670.9
10.	Composure	663.37
11.	Trustworthiness	657.3
12.	Problem analysis	656.23
13.	Respect	655.02
14.	Eyesight	654.4
15.	Player control	652.57

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORE
16.	Ambition	651.62
17.	Fitness	651.6
18.	Preparation	650.06
19.	Frustration tolerance	643.6
20.	Conflict handling	640.43
21.	Stress tolerance	636.87
22.	Self-confidence	635.88
23.	Flexibility	633.19
24.	Mental toughness	631.54
25.	Honesty/Integrity	630.49
26.	Decisiveness	630.1
27.	Authority	621.13
28.	Initiative	612.16
29.	Resoluteness	607.82
30.	Creativity/Innovation	602.06
31.	Leadership	596.05
32.	Influence on players	583.05
33.	Persuasiveness	566.75
34.	Athleticism	564.53
35.	Rapport with players	525.79
36.	Dynamism	445.76

According to Table 5.7 the ten most important competencies in the opinion of the Blue Bulls Currie Cup players are:

- **Consistency** *(consistency in the way rules are applied during a match)*
- **Communication on the field – oral** *(ability to communicate in a manner that the message is very clear and the players know exactly what is expected of them)*
- **Objectivity / Impartiality** *(being able to treat both sides the same)*
- **Commitment** *(dedication to do the best when preparing for games, know the rules, and always giving the best when refereeing a match)*
- **Concentration / Focus** *(ability to stay focused during a match and not to allow the mind to fluctuate)*
- **Judgment** *(ability to evaluate and judge situations during a match correctly)*
- **Technical skills – law application** *(all the detail regarding the laws and their application during play)*

- **Technical skills – general** *(e.g. knowledge on scrum techniques in general and not only in terms of the rugby laws)*
- **Competitiveness** *(the referee should care how well he performs in relation to other referees: "he should want to be the best referee")*
- **Composure** *(to be calm during difficult situations)*

5.5 WEIGHTED COMPETENCY INDEX FOR THE GAUTENG LIONS REFEREES

A total of 69 Gauteng Lions referees completed the questionnaire. The frequency tables (descriptive statistics) were used to compile the matrix in Table 5.8.

Table 5.8: Matrix for the Gauteng Lions Referees.

Competency	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Trustworthiness	0	2	6	17	44	69
Concentration/Focus	0	1	4	27	37	69
Objectivity/Impartiality	0	0	1	16	52	69
Honesty/Integrity	0	0	4	14	51	69
Self-confidence	0	1	3	33	32	69
Commitment	0	0	3	28	38	69
Composure	0	0	7	33	29	69
Consistency	0	1	3	19	46	69
Decisiveness	0	1	7	26	35	69
Fitness	0	0	6	32	31	69
Judgment	0	0	5	34	30	69
Resoluteness	1	0	8	31	29	69
Conflict handling	1	0	11	32	25	69
Flexibility	0	0	12	34	23	69
Player control	1	0	12	34	22	69
Respect	0	2	12	20	35	69
Athleticism	0	1	22	28	18	69
Authority	0	0	25	28	16	69
Problem analysis	0	0	9	33	27	69
Technical skills- law application	0	0	16	32	21	69
Communication on field - oral	0	1	13	31	24	69

Competency	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Ambition	1	4	19	22	23	69
Stress tolerance	0	2	18	29	20	69
Eyesight	0	0	15	32	22	69
Preparation	0	1	15	34	19	69
Technical skills - general	0	1	16	28	24	69
Leadership	0	3	25	25	16	69
Initiative	0	5	15	30	19	69
Persuasiveness	0	3	23	25	18	69
Frustration tolerance	0	2	17	28	22	69
Rapport with players	3	16	15	23	12	69
Dynamism	3	19	19	14	14	69
Competitiveness	1	6	21	30	11	69
Creativity/Innovation	0	6	24	28	11	69
Mental toughness	0	3	14	25	27	69
Influence on players	1	5	13	30	20	69
TOTALS	12	86	458	985	943	

The estimated distances, considering the above matrix, between the 5 points of this matrix is as follows:

- Estimated distance between the points “irrelevant” and “less important”

  86 ÷ 12 = **7.17**
- Estimated distance between the points “less important” and “important”

  458 ÷ 86 = **5.33**
- Estimated distance between the points “important” and “very important”

  985 ÷ 458 = **2.15**
- Estimated distance between the points “very important” and “essential”

  943 ÷ 985 = **0.96**

The real distances for the points on this matrix were, subsequently, determined as follows:

- The first point on the scale will be 1 (1 was used as the base value in all instances)
- The real distance between the points “irrelevant” and “less important”

  7.17 x 1 = **7.17**
- The real distance between the points “less important” and “important”

  7.17 x 5.33 = **38.21**
- The real distance between the points “important” and “very important”

  38.21 x 2.15 = **82.15**
- The real distance between the points “very important” and “essential”

  82.15 x 0.96 = **78.86**

Table 5.9: Weighted competency index for the Gauteng Lions referees.

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORE
1.	Objectivity/Impartiality	5453.33
2.	Commitment	5411.51
3.	Self-confidence	5356.27
4.	Judgment	5349.95
5.	Honesty/Integrity	5324.8
6.	Consistency	5310.21
7.	Fitness	5302.72
8.	Concentration/Focus	5295.88
9.	Composure	5265.36
10.	Problem analysis	5184.06
11.	Decisiveness	5170.64
12.	Resoluteness	5140.27
13.	Trustworthiness	5109.99
14.	Flexibility	5065.4
15.	Conflict handling	5021.61
16.	Player control	4987.54
17.	Communication on field - oral	4943.19
18.	Eyesight	4936.87
19.	Technical skills- law application	4896.22

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORE
20.	Respect	4875.96
21.	Preparation	4871.76
22.	Technical skills - general	4811.37
23.	Mental toughness	4739.42
24.	Frustration tolerance	4699.03
25.	Stress tolerance	4661.67
26.	Influence on players	4575.28
27.	Initiative	4571.84
28.	Athleticism	4567.47
29.	Authority	4517.21
30.	Ambition	4376.75
31.	Persuasiveness	4373.57
32.	Leadership	4292.27
33.	Competitiveness	4178.39
34.	Creativity/Innovation	4127.72
35.	Rapport with players	3526.64
36.	Dynamism	3119.36

From Table 5.9 the ten most important competencies in the view of the Gauteng Lions referees are:

- **Objectivity / Impartiality** *(being able to treat both sides the same)*
- **Commitment** *(dedication to do the best when preparing for games, know the rules, and always giving the best when refereeing a match)*
- **Self-confidence** *(belief in own ability to select appropriate courses of action)*
- **Judgment** *(ability to evaluate and judge situations during a match correctly)*
- **Honesty / Integrity** *(ability to be honest with players, on and off the field)*
- **Consistency** *(consistency in the way rules are applied during a match)*
- **Fitness** *(fitness in terms of physical ability to keep up with play during a match)*
- **Concentration / Focus** *(ability to stay focused during a match and not to allow the mind to fluctuate)*
- **Composure** *(to be calm during difficult situations)*
- **Problem analysis** *(ability to consider all the facts and quickly analyse situations on the field)*

5.6 WEIGHTED COMPETENCY INDEX FOR THE WESTERN PROVINCE REFEREES

A total of 50 Western Province referees participated in the study. Descriptive statistics (frequency tables) were used to compile a matrix for the Western Province referees as can be seen in Table 5.10.

Table 5.10: Matrix for the Western Province referees.

Competency	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Trustworthiness	0	1	2	12	35	50
Concentration/focus	0	0	1	11	38	50
Objectivity/Impartiality	0	0	1	12	37	50
Honesty/Integrity	0	0	2	12	36	50
Self-confidence	0	0	5	18	27	50
Commitment	0	0	1	13	36	50
Composure	0	0	4	19	27	50
Consistency	0	0	1	13	36	50
Decisiveness	0	1	1	17	31	50
Fitness	0	0	2	14	34	50
Judgment	0	0	2	15	33	50
Resoluteness	0	0	5	20	25	50
Conflict handling	0	0	4	14	32	50
Flexibility	0	0	9	19	22	50
Player control	0	0	5	18	27	50
Respect	0	0	4	13	33	50
Athleticism	0	0	5	26	19	50
Authority	0	2	8	22	18	50
Problem analysis	0	1	6	17	26	50
Technical skills - law application	0	0	7	21	22	50
Communication on field - oral	0	0	3	21	26	50
Ambition	1	1	4	20	24	50
Stress tolerance	0	1	3	18	28	50
Eyesight	0	1	4	17	28	50
Preparation	0	0	5	18	27	50
Technical skills - general	0	1	4	20	25	50

Competency	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Leadership	0	0	8	27	15	50
Initiative	0	1	11	18	20	50
Persuasiveness	2	2	13	20	13	50
Frustration tolerance	0	1	7	19	23	50
Rapport with players	5	4	15	15	11	50
Dynamism	5	7	15	13	10	50
Competitiveness	4	6	7	15	18	50
Creativity/Innovation	0	4	16	19	11	50
Mental toughness	0	1	7	20	22	50
Influence on players	0	0	9	18	23	50
TOTALS	17	35	206	624	918	

The above matrix was used to determine the estimated distances between points on the scale used. The estimated distances between the 5 points of this matrix were determined as follows:

- Estimated distance between the points “irrelevant” and “less important”

  35 ÷ 17 = **2.06**
- Estimated distance between the points “less important” and “important”

  206 ÷ 35 = **5.89**
- Estimated distance between the points “important” and “very important”

  624 ÷ 206 = **3.03**
- Estimated distance between the points “very important” and “essential”

  918 ÷ 624 = **1.47**

The real distances for the points on this matrix were determined as follows:

- The first point on the scale will be 1 (1 was used as the base value in all instances)
- The real distance between the points “irrelevant” and “less important”

  2.06 x 1 = **2.06**
- The real distance between the points “less important” and “important”

  2.06 x 5.89 = **12.13**
- The real distance between the points “important” and “very important”

  12.13 x 3.03 = **36.75**
- The real distance between the points “very important” and “essential”

  36.75 x 1.47 = **54.02**

Table 5.11: Weighted competency index for the Western Province referees.

NUMBER DESCENDING	COMPETENCIES	WEIGHTED SCORE
1.	Concentration/Focus	2469.14
2.	Objectivity/Impartiality	2451.87
3.	Commitment	2434.6
4.	Consistency	2434.6
5.	Honesty/Integrity	2409.98
6.	Fitness	2375.44
7.	Judgment	2358.17
8.	Trustworthiness	2358.02
9.	Decisiveness	2313.56
10.	Respect	2308.93
11.	Conflict handling	2291.66
12.	Communication on field – oral	2212.66
13.	Stress tolerance	2212.51
14.	Composure	2205.31
15.	Eyesight	2187.89
16.	Player control	2180.69
17.	Preparation	2180.69
18.	Self-confidence	2180.69
19.	Resoluteness	2146.15
20.	Technical skills - general	2136.08
21.	Problem analysis	2104.11
22.	Ambition	2083.06

NUMBER DESCENDING	COMPETENCIES	WEIGHTED SCORE
23.	Technical skills - law application	2045.1
24.	Athleticism	2042.53
25.	Frustration tolerance	2027.68
26.	Influence on players	2013.13
27.	Mental toughness	2010.41
28.	Flexibility	1995.86
29.	Leadership	1899.59
30.	Authority	1882.02
31.	Initiative	1877.39
32.	Competitiveness	1624.88
33.	Persuasiveness	1601.07
34.	Creativity/Innovation	1488.61
35.	Rapport with players	1340.66
36.	Dynamism	1219.32

From Table 5.11 the ten most important competencies according to the Western Province referees are:

- **Concentration / Focus** *(ability to stay focused during a match and not to allow the mind to fluctuate)*
- **Objectivity / Impartiality** *(being able to treat both sides the same)*
- **Commitment** *(dedication to do the best when preparing for games, know the rules, and always giving the best when refereeing a match)*
- **Consistency** *(consistency in the way rules are applied during a match)*
- **Honesty / Integrity** *(ability to be honest with players, on and off the field)*
- **Fitness** *(fitness in terms of physical ability to keep up with play during a match)*
- **Judgment** *(ability to evaluate and judge situations during a match correctly)*
- **Trustworthiness** *(ability to make the players trust you and to know that you will apply laws consistently and fairly)*
- **Decisiveness** *(ability to reach quick and firm decisions)*
- **Respect** *(treating the players on and off the field with the dignity they deserve as human beings)*

5.7 WEIGHTED COMPETENCY INDEX FOR THE FREE STATE REFEREES

A total of 10 Free State referees responded to the competency questionnaire. Although the total of 10 respondents is insufficient to compile a useful individual weighted competency index, the weighted index was still compiled to help determine tendencies between the various response groups. The matrix for these referees can be seen in Appendix 6.

Table 5.12: Weighted competency index for the Free State referees.

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORE
1.	Problem analysis	505.6
2.	Decisiveness	492.14
3.	Influence on players	478.68
4.	Judgment	471.54
5.	Technical skills - general	471.54
6.	Frustration tolerance	471.54
7.	Trustworthiness	464.4
8.	Concentration/focus	464.4
9.	Honesty/Integrity	464.4
10.	Leadership	464.4
11.	Fitness	458.08
12.	Flexibility	458.08
13.	Eyesight	458.08
14.	Commitment	437.48
15.	Resoluteness	437.48
16.	Player control	437.48
17.	Respect	437.48
18.	Authority	437.48
19.	Communication on field - oral	437.48
20.	Composure	430.34
21.	Athleticism	430.34
22.	Ambition	430.34
23.	Conflict handling	424.02
24.	Initiative	424.02
25.	Objectivity/Impartiality	423.2
26.	Consistency	416.88

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORE
27.	Technical skills - law application	416.88
28.	Mental toughness	403.42
29.	Self-confidence	396.28
30.	Persuasiveness	357.49
31.	Competitiveness	337.4
32.	Stress tolerance	329.75
33.	Preparation	321.84
34.	Creativity/Innovation	309.97
35.	Dynamism	263.73
36.	Rapport with players	250.27

In the above competency index some competencies had the same weighted score because of the low response rate from the Free State referees. It is interesting to note that the three most important competencies, all with different weighted scores, are:

- **Problem analysis** *(ability to consider all the facts and quickly analyse situations on the field)*
- **Decisiveness** *(ability to reach quick and firm decisions)*
- **Influence on players** *(ability to influence players' attitudes positively)*

5.8 COMPETENCY MATRIXES FROM OTHER UNIONS / SOCIETIES

The following referee and players unions and societies did respond, but in too low numbers to warrant the compilation of weighted competency indexes:

Table 5.13: Referee and player unions and societies with low response numbers.

REFEREE SOCIETY/UNION OR CURRIE CUP TEAM	NUMBER OF RESPONSES
Natal referees	3
Griquas referees	5
South Western Districts referees	6
Eastern Province referees	5
Natal Sharks Currie Cup players	6

Because of the low responses from some of the referee and player unions and societies from Table 5.13, only their competency matrixes will be provided, and not in the form of weighted competency indexes. This data was used in the compilation of the weighted competency index for all the respondents and the matrixes are included as Appendix 7.

Some referee unions/societies and Currie Cup players' responses were too low to warrant the inclusion of a separate competency matrix. These responses were, however, included in the compilation of the final weighted competency index (Table 5.3) and are, therefore, also important to mention. Table 5.14 indicates the referee unions/societies and Currie cup teams that did not respond, or presented only one response, and could not be included separately as competency matrixes or competency indexes.

Table 5.14: Referee Unions/Societies and Currie Cup teams with no response, or a response rate of one.

REFEREE SOCIETY/UNION OR CURRIE CUP TEAM	NUMBER OF RESPONSES
Boland Cavaliers Referees	1
Border Bulldogs Referees	0
Falcons Referees	0
North West Leopards Referees	0
Griffons Referees	0
Free State Cheetahs Players	1
Boland Cavaliers Players	0
Border Bulldogs Players	0
Griqualand West Players	0
Gauteng Lions Players	0
North West Leopard Players	0
Mpumalanga Pumas Players	0
Northern Free State Griffons Players	0
South Western Districts Eagles Players	0
Western Province Players	0
Falcons Players	0
Natal Sharks Players	0

As mentioned in Chapter 4 it is important to compare the perception of the various response groups. The following section will discuss these comparisons in more detail.

5.9 COMPARISON OF THE PERCEPTIONS OF THE DIFFERENT GROUPS WITH REGARD TO THE RELEVANCE OF THE COMPETENCIES

The weighted competency indexes, compiled for the different groups, cannot be compared with each other because the weighted scores are not on the same scale.

This difference in weighted scores occurs because of the different response rates from the referees and players. The Gauteng Lions referees had the most respondents, their total being 69 referees. The weighted competency index with the least number of respondents was that of the Free State referees with ten respondents. Therefore, all the other weighted indexes must be adjusted before any comparisons can be made. The analysis of variance (ANOVA) method was utilised for the comparison of different groups as was discussed in Chapter 4.

5.9.1 COMPARISON BETWEEN FOUR GROUPS UTILISING ANOVA

An ANOVA was completed because the data does not meet the requirements of a normal distribution. The descriptive data for the ANOVA between the four groups are attached as Appendix 8. The four groups used for the comparison are:

- Gauteng Lions referees (n=69)
- Western Province referees (n=50)
- Blue Bulls players (n=35)
- Blue Bulls referees (n=32)

Table 5.15: ANOVA for four groups.

Competency		Sum of Squares	Mean Square	Significance Value
Trustworthiness	Between Groups	5.665	1.888	.038
	Within Groups	119.781	.658	
	Total	125.446		
Concentration/Focus	Between Groups	9.097	3.032	**.001***
	Within Groups	94.967	.522	
	Total	104.065		
Objectivity/Impartiality	Between Groups	2.189	.730	.097
	Within Groups	62.096	.341	
	Total	64.285		
Honesty/Integrity	Between Groups	13.410	4.470	**.000***
	Within Groups	95.084	.522	
	Total	108.495		
Self-confidence	Between Groups	5.861	1.954	.014
	Within Groups	97.601	.536	
	Total	103.462		
Commitment	Between Groups	5.286	1.762	.013
	Within Groups	87.193	.479	
	Total	92.478		
Composure	Between Groups	4.639	1.546	.038
	Within Groups	98.377	.541	
	Total	103.016		
Consistency	Between Groups	1.748	.583	.243
	Within Groups	75.542	.415	
	Total	77.290		
Decisiveness	Between Groups	6.581	2.194	**.005***
	Within Groups	89.398	.491	
	Total	95.978		
Fitness	Between Groups	5.973	1.991	**.005***
	Within Groups	80.974	.445	
	Total	86.946		
Judgment	Between Groups	2.855	.952	.096
	Within Groups	80.591	.443	
	Total	83.446		
Resoluteness	Between Groups	8.450	2.817	**.003***
	Within Groups	104.690	.575	
	Total	113.140		
Conflict handling	Between Groups	6.469	2.156	.012
	Within Groups	104.994	.577	
	Total	111.462		
Flexibility	Between Groups	1.614	.538	.425
	Within Groups	104.752	.576	
	Total	106.366		
Player control	Between Groups	3.501	1.167	.093
	Within Groups	97.897	.538	
	Total	101.398		

Competency		Sum of Squares	Mean Square	Significance Value
Respect	Between Groups	6.527	2.176	.030
	Within Groups	130.210	.715	
	Total	136.737		
Athleticism	Between Groups	12.776	4.259	**.001***
	Within Groups	134.670	.740	
	Total	147.446		
Authority	Between Groups	1.940	.647	.398
	Within Groups	118.796	.653	
	Total	120.737		
Problem analysis	Between Groups	1.031	.344	.599
	Within Groups	99.985	.549	
	Total	101.016		
Technical skills - law application	Between Groups	2.280	.760	.258
	Within Groups	101.956	.560	
	Total	104.237		
Communication on field - oral	Between Groups	4.781	1.594	.026
	Within Groups	91.864	.505	
	Total	96.645		
Ambition	Between Groups	77.614	25.871	.156
	Within Groups	2675.031	14.698	
	Total	2752.645		
Stress tolerance	Between Groups	12.289	4.096	**.001***
	Within Groups	137.802	.757	
	Total	150.091		
Eyesight	Between Groups	3.621	1.207	.092
	Within Groups	100.896	.554	
	Total	104.516		
Preparation	Between Groups	8.137	2.712	**.005***
	Within Groups	112.766	.620	
	Total	120.903		
Technical skills - general	Between Groups	3.364	1.121	.146
	Within Groups	112.276	.617	
	Total	115.640		
Leadership	Between Groups	4.544	1.515	.103
	Within Groups	132.021	.725	
	Total	136.565		
Initiative	Between Groups	2.068	.689	.421
	Within Groups	132.884	.730	
	Total	134.952		
Persuasiveness	Between Groups	1.302	.434	.715
	Within Groups	174.289	.958	
	Total	175.591		
Frustration tolerance	Between Groups	3.682	1.227	.149
	Within Groups	124.108	.682	
	Total	127.790		

Competency		Sum of Squares	Mean Square	Significance Value
Rapport with players	Between Groups	1.776	.592	.724
	Within Groups	244.574	1.344	
	Total	246.349		
Dynamism	Between Groups	.321	.107	.974
	Within Groups	263.292	1.447	
	Total	263.613		
Competitiveness	Between Groups	9.962	3.321	.034
	Within Groups	205.162	1.127	
	Total	215.124		
Creativity/Innovation	Between Groups	3.665	1.222	.255
	Within Groups	162.980	.895	
	Total	166.645		
Mental toughness	Between Groups	2.303	.768	.423
	Within Groups	148.756	.817	
	Total	151.059		
Influence on players	Between Groups	7.277	2.426	.059
	Within Groups	174.530	.959	
	Total	181.806		

** The mean difference is significant at the 0.05 level.*

From Table 5.15 the following competencies were significantly different between the four groups (mean difference is significant at the 0.05 level):

- Concentration / Focus
- Honesty / Integrity
- Decisiveness
- Fitness
- Resoluteness
- Athleticism
- Stress tolerance
- Preparation

In Table 5.16 a multiple comparison Scheffe for the ANOVA was completed. This comparison helps in identifying between which of the four groups the competencies were significantly different.

Table 5.16: Multiple comparisons Scheffe of ANOVA for the competencies that show significant differences.

Dependent Variable	(I) Main groupings	(J) Main groupings	Mean Difference (I-J)	Std. Error	Significance Value
Concentration/ Focus	WP refs	Lions refs	.29	.134	.199
		Bulls refs	.68	.164	**.001***
		Bulls players	.34	.159	.211
	Lions refs	WP refs	-.29	.134	.199
		Bulls refs	.39	.154	.103
		Bulls players	.05	.150	.991
	Bulls refs	WP refs	-.68	.164	**.001***
		Lions refs	-.39	.154	.103
		Bulls players	-.34	.177	.305
	Bulls players	WP refs	-.34	.159	.211
		Lions refs	-.05	.150	.991
		Bulls refs	.34	.177	.305
Honesty/Integrity	WP refs	Lions refs	.00	.134	1.000
		Bulls refs	.34	.164	.242
		Bulls players	.68	.159	**.001***
	Lions refs	WP refs	.00	.134	1.000
		Bulls refs	.34	.155	.194
		Bulls players	.68	.150	**.000***
	Bulls refs	WP refs	-.34	.164	.242
		Lions refs	-.34	.155	.194
		Bulls players	.34	.177	.289
	Bulls players	WP refs	-.68	.159	**.001***
		Lions refs	-.68	.150	**.000***
		Bulls refs	-.34	.177	.289
Decisiveness	WP refs	Lions refs	.18	.130	.578
		Bulls refs	.25	.159	.489
		Bulls players	.56	.154	**.005***
	Lions refs	WP refs	-.18	.130	.578
		Bulls refs	.06	.150	.980
		Bulls players	.38	.145	.085
	Bulls refs	WP refs	-.25	.159	.489
		Lions refs	-.06	.150	.980
		Bulls players	.31	.171	.347
	Bulls players	WP refs	-.56	.154	**.005***
		Lions refs	-.38	.145	.085
		Bulls refs	-.31	.171	.347
Fitness	WP refs	Lions refs	.28	.124	.174
		Bulls refs	.17	.151	.733
		Bulls players	.53	.147	**.006***
	Lions refs	WP refs	-.28	.124	.174
		Bulls refs	-.11	.143	.906
		Bulls players	.25	.138	.363
	Bulls refs	WP refs	-.17	.151	.733
		Lions refs	.11	.143	.906
		Bulls players	.35	.163	.197
	Bulls players	WP refs	-.53	.147	**.006***
		Lions refs	-.25	.138	.363
		Bulls refs	-.35	.163	.197
Resoluteness	WP refs	Lions refs	.14	.141	.807
		Bulls refs	-.22	.172	.634
		Bulls players	.46	.167	.062

Dependent Variable	(I) Main groupings	(J) Main groupings	Mean Difference (I-J)	Std. Error	Significance Value
	Lions refs	WP refs	-.14	.141	.807
		Bulls refs	-.36	.162	.173
		Bulls players	.32	.157	.256
	Bulls refs	WP refs	.22	.172	.634
		Lions refs	.36	.162	.173
		Bulls players	.68	.186	**.004***
	Bulls players	WP refs	-.46	.167	.062
		Lions refs	-.32	.157	.256
		Bulls refs	-.68	.186	**.004***
Athleticism	WP refs	Lions refs	.37	.160	.157
		Bulls refs	.75	.195	**.003***
		Bulls players	.57	.190	.033
	Lions refs	WP refs	-.37	.160	.157
		Bulls refs	.38	.184	.234
		Bulls players	.20	.179	.744
	Bulls refs	WP refs	-.75	.195	**.003***
		Lions refs	-.38	.184	.234
		Bulls players	-.18	.210	.860
	Bulls players	WP refs	-.57	.190	.033
		Lions refs	-.20	.179	.744
		Bulls refs	.18	.210	.860
Stress tolerance	WP refs	Lions refs	.49	.162	.030
		Bulls refs	.74	.197	**.003***
		Bulls players	.43	.192	.171
	Lions refs	WP refs	-.49	.162	.030
		Bulls refs	.25	.186	.608
		Bulls players	-.06	.181	.992
	Bulls refs	WP refs	-.74	.197	**.003***
		Lions refs	-.25	.186	.608
		Bulls players	-.31	.213	.549
	Bulls players	WP refs	-.43	.192	.171
		Lions refs	.06	.181	.992
		Bulls refs	.31	.213	.549
Preparation	WP refs	Lions refs	.41	.146	**.051***
		Bulls refs	.60	.178	.012
		Bulls players	.30	.173	.404
	Lions refs	WP refs	-.41	.146	**.051***
		Bulls refs	.19	.168	.751
		Bulls players	-.11	.163	.922
	Bulls refs	WP refs	-.60	.178	.012
		Lions refs	-.19	.168	.751
		Bulls players	-.30	.193	.493
	Bulls players	WP refs	-.30	.173	.404
		Lions refs	.11	.163	.922
		Bulls refs	.30	.193	.493

** The mean difference is significant at the 0.05 level.*

From Table 5.16 the significant differences between the four groups can be individually seen, for the competencies that had a significant difference in Table 5.15. The descriptive data of the ANOVA, attached as Appendix 8, includes the mean (average) scores for each of the four groups. This mean score indicated which of the groups rated specific competencies higher.

- Concentration / Focus
  - The significant difference for this competency is between the Blue Bulls referees and the Western Province referees. The Western Province referees rated this competency higher (mean score of 4.74) compared to the Blue Bulls referees (mean score of 4.06).
- Honesty / Integrity
  - The significant difference for this competency is between the Western Province referees and the Blue Bulls players, and also between the Gauteng Lions referees and the Blue Bulls players. In both cases the Gauteng Lions referees and the Western Province referees (both with mean scores of 4.68) rated “Honesty/Integrity” higher compared with the Blue Bulls players (mean score of 4.00).
- Decisiveness
  - The significant difference for this competency is between the Western Province referees who rated “Decisiveness” higher (mean score of 4.56) compared to the Blue Bulls players (mean score of 4.00).
- Fitness
  - The significant difference for this competency is between the Western Province referees and the Blue Bulls players, with the Western Province referees rating the competency higher (mean score of 4,64) compared to the Blue Bulls players (mean score of 4.11).

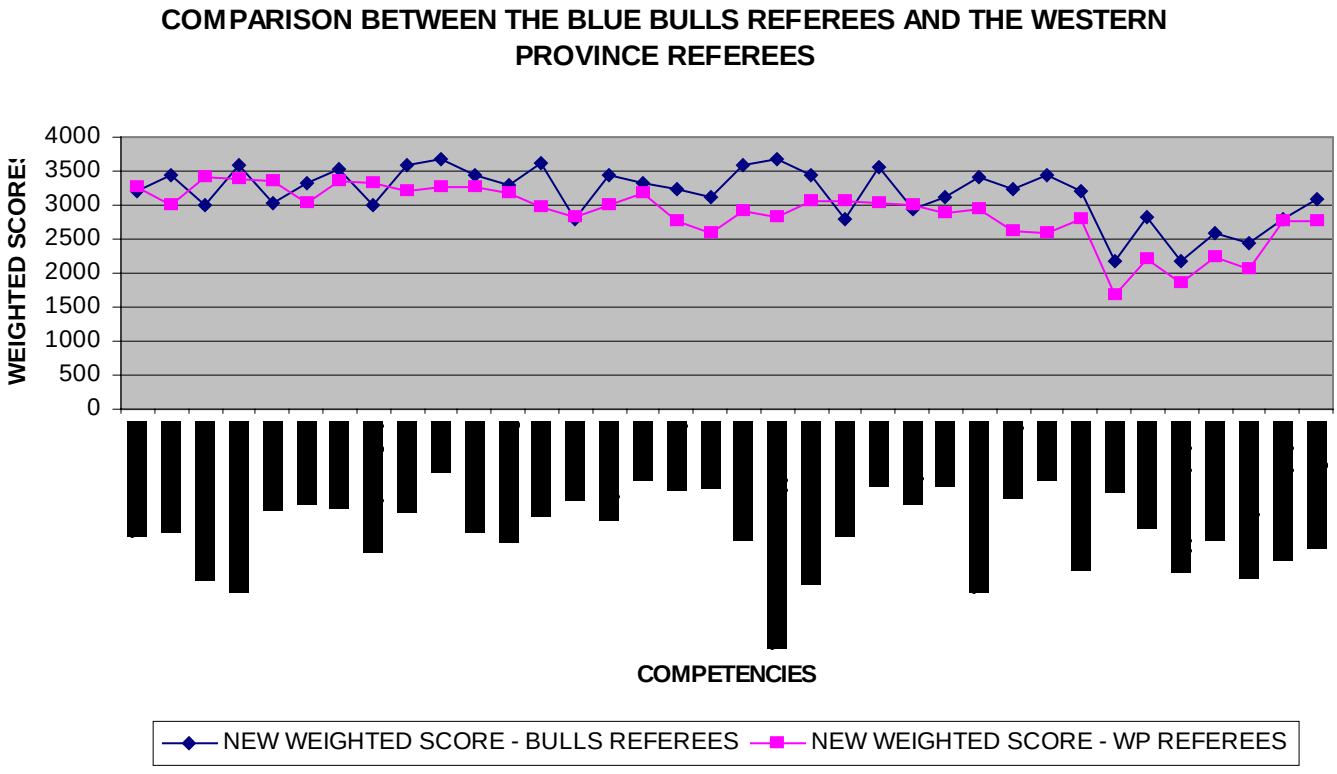
- Resoluteness
  - The significant difference for this competency is between the Blue Bulls players (mean score of 3.94) and the Blue Bulls referees (mean score of 4.63). The Blue Bulls referees rated the competency higher compared to the players.
- Athleticism
  - The significant difference for this competency is between Blue Bulls referees (mean score of 3.53) and the Western Province referees (mean score of 4.28). The Western Province referees rated "Athleticism" higher compared to the Blue Bulls referees.
- Stress tolerance
  - The significant difference for this competency is between the Blue Bulls referees and the Western Province referees, with the Western Province referees rating the competency higher (mean score of 4.46) compared to the Blue Bulls referees (mean score of 3.72).
- Preparation
  - The significant difference for this competency is between the Western Province referees (mean score of 4.44) and the Gauteng Lions referees (mean score of 4.03).

It is interesting to note that the significant differences of three competencies occur between the Blue Bulls referees and the Western Province referees, and on three occasions between the Blue Bulls players and the Western Province referees. The Western Province referees rated the competencies higher in all instances. This finding is supported by the graphical comparison of these specific competencies, where there are significant differences, in the graphical comparison between the Blue Bulls referees and the Western Province referees, figure 5.1.

5.9.2 GRAPHICAL COMPARISON OF THE COMPETENCIES IDENTIFIED BY THE BLUE BULLS REFEREES (n=32) AND THE WESTERN PROVINCE REFEREES (n=50) UTILISING THE WEIGHTED SCORES

Both the Blue Bulls and the Western Province referees original weighted scores were adjusted to the 69 respondents from the Gauteng Lions referees to make a graphical comparison possible. This comparison is presented in Figure 5.1.

Figure 5.1:



From Figure 5.1 it is clear that some differences do occur between the perceptions of the Western Province referees and Blue Bulls referees with regard to the importance of some of the competencies. This observation supports the finding from the ANOVA between the four groups (Table 5.16).

Figure 5.1 also indicated that the competencies “Trustworthiness”, “Athleticism” and “Influence on players” had the same weighted score from both the Western Province and Blue Bulls referees. The following competencies were rated very similarly by the two referee societies:

- Objectivity / Impartiality
- Commitment
- Composure
- Consistency
- Honesty / Integrity
- Judgment
- Conflict handling
- Respect
- Stress tolerance
- Ambition
- Mental toughness

5.9.3 GRAPHICAL COMPARISON OF THE COMPETENCIES IDENTIFIED BY THE BLUE BULLS REFEREES (N=32) AND THE BLUE BULLS CURRIE CUP PLAYERS (N=35) UTILISING THE WEIGHTED SCORES

Figure 5.2:

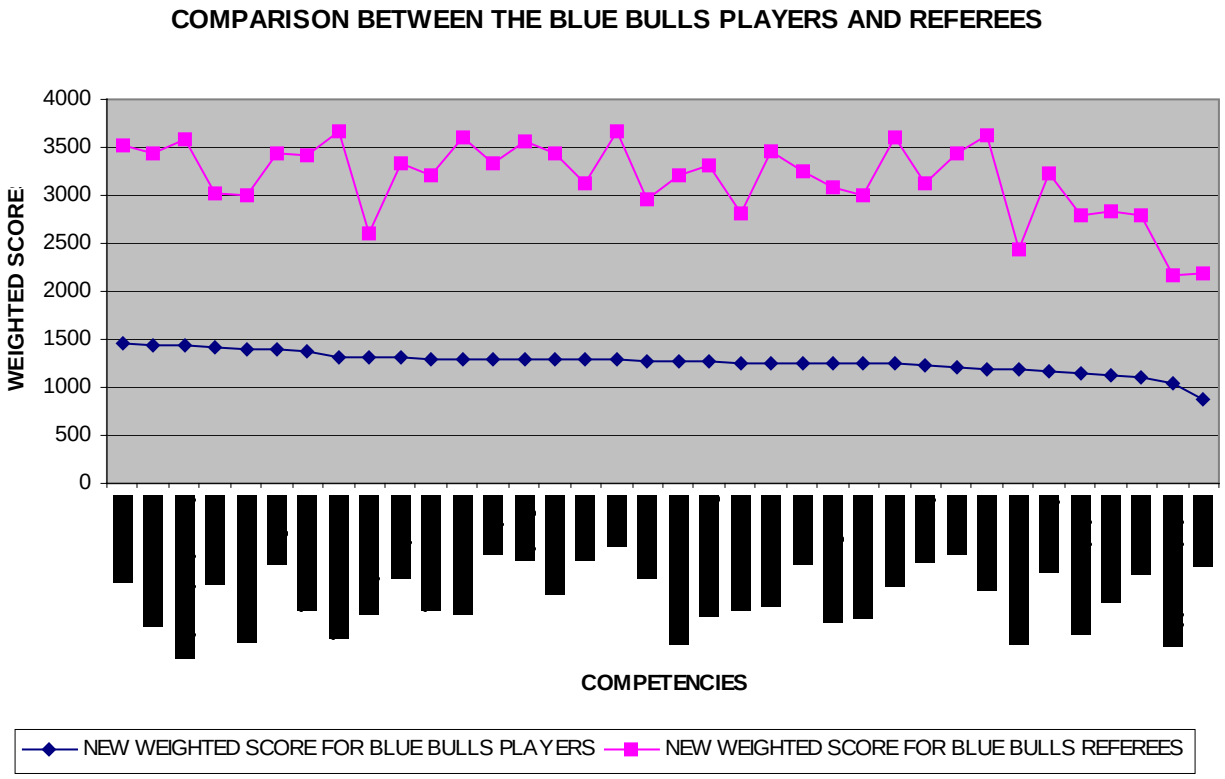


Figure 5.2 indicates that the Blue Bulls referees rated all the competencies higher than the Blue Bulls players, however, there are no statistically significant differences between the ratings of the Blue Bulls referees and the Blue Bulls Currie Cup players, and this is supported by the results of the ANOVA, paragraph 5.9.1.

5.9.4 COMPARISON BETWEEN THREE GROUPS UTILISING ANOVA

An analysis of variance (ANOVA) was also completed between the three referee groups with the highest response rate. The descriptive data for the ANOVA between these referee groups are attached as Appendix 9. The three referee groups with the highest response rate were:

- Gauteng Lions referees (n=69)
- Western Province referees (n=50)
- Blue Bulls referees (n=32)

Table 5.17: ANOVA between three groups.

Competency		Sum of Squares	Mean Square	Significance Value
Trustworthiness	Between Groups	2.240	1.120	.141
	Within Groups	83.495	.564	
	Total	85.735		
Concentration/Focus	Between Groups	8.982	4.491	**.000***
	Within Groups	74.567	.504	
	Total	83.550		
Objectivity/Impartiality	Between Groups	1.018	.509	.137
	Within Groups	37.353	.252	
	Total	38.371		
Honesty/Integrity	Between Groups	2.863	1.431	.027
	Within Groups	57.084	.386	
	Total	59.947		
Self-confidence	Between Groups	3.145	1.573	.036
	Within Groups	68.630	.464	
	Total	71.775		
Commitment	Between Groups	5.127	2.563	**.003***
	Within Groups	62.621	.423	
	Total	67.748		
Composure	Between Groups	4.184	2.092	.022
	Within Groups	79.406	.537	
	Total	83.589		
Consistency	Between Groups	1.687	.843	.115
	Within Groups	56.856	.384	
	Total	58.543		
Decisiveness	Between Groups	1.476	.738	.211
	Within Groups	69.398	.469	

Competency		Sum of Squares	Mean Square	Significance Value
	Total	70.874		
Fitness	Between Groups	2.238	1.119	.048
	Within Groups	53.431	.361	
	Total	55.669		
Judgment	Between Groups	2.829	1.415	.033
	Within Groups	60.191	.407	
	Total	63.020		
Resoluteness	Between Groups	2.918	1.459	.050
	Within Groups	70.804	.478	
	Total	73.722		
Conflict handling	Between Groups	4.336	2.168	.017
	Within Groups	77.108	.521	
	Total	81.444		
Flexibility	Between Groups	1.319	.660	.319
	Within Groups	84.866	.573	
	Total	86.185		
Player control	Between Groups	3.276	1.638	.043
	Within Groups	75.611	.511	
	Total	78.887		
Respect	Between Groups	5.108	2.554	.017
	Within Groups	90.667	.613	
	Total	95.775		
Athleticism	Between Groups	11.148	5.574	**.000***
	Within Groups	93.527	.632	
	Total	104.675		
Authority	Between Groups	1.937	.968	.220
	Within Groups	93.825	.634	
	Total	95.762		
Problem analysis	Between Groups	.287	.144	.750
	Within Groups	73.699	.498	
	Total	73.987		
Technical skills - law application	Between Groups	2.279	1.140	.101
	Within Groups	72.356	.489	
	Total	74.636		
Communication on field - oral	Between Groups	3.197	1.598	.050
	Within Groups	77.121	.521	
	Total	80.318		
Ambition	Between Groups	75.195	37.597	.124
	Within Groups	2632.289	17.786	
	Total	2707.483		
Stress tolerance	Between Groups	12.216	6.108	**.000***
	Within Groups	98.831	.668	
	Total	111.046		
Eyesight	Between Groups	3.324	1.662	.043
	Within Groups	76.610	.518	
	Total	79.934		
Preparation	Between Groups	8.128	4.064	**.001***
	Within Groups	84.481	.571	
	Total	92.609		

Competency		Sum of Squares	Mean Square	Significance Value
Technical skills - general	Between Groups	3.039	1.519	.075
	Within Groups	85.133	.575	
	Total	88.172		
Leadership	Between Groups	4.357	2.178	.031
	Within Groups	90.478	.611	
	Total	94.834		
Initiative	Between Groups	1.836	.918	.270
	Within Groups	102.998	.696	
	Total	104.834		
Persuasiveness	Between Groups	1.042	.521	.584
	Within Groups	142.746	.965	
	Total	143.788		
Frustration tolerance	Between Groups	3.633	1.817	.065
	Within Groups	96.566	.652	
	Total	100.199		
Rapport with players	Between Groups	1.136	.568	.657
	Within Groups	199.831	1.350	
	Total	200.967		
Dynamism	Between Groups	.176	.088	.940
	Within Groups	209.692	1.417	
	Total	209.868		
Competitiveness	Between Groups	1.127	.563	.623
	Within Groups	175.562	1.186	
	Total	176.689		
Creativity/Innovation	Between Groups	1.795	.897	.344
	Within Groups	123.437	.834	
	Total	125.232		
Mental toughness	Between Groups	2.069	1.035	.270
	Within Groups	115.785	.782	
	Total	117.854		
Influence on players	Between Groups	6.442	3.221	.032
	Within Groups	135.558	.916	
	Total	**142.000**		

** The mean difference is significant at the 0.05 level*

From Table 5.17 the competencies that show a significant difference between the Gauteng Lions referees, WP referees and the Blue Bulls referees are:

- Concentration / Focus
- Commitment
- Athleticism
- Stress tolerance
- Preparation

In Table 5.18 the significant differences as identified above are analysed in terms of which referee groups had a significant difference over which other referee group.

Table 5.18: Multiple comparison Scheffe for ANOVA between three groups for competencies that showed significant differences.

Dependent Variable	(I) Main groups of referees	(J) Main groups of referees	Mean Difference (I-J)	Std. Error	Significance Value
Concentration/Focus	WP refs	Lions refs	.29	.132	.091
		Bulls refs	.68	.161	**.000***
	Lions refs	WP refs	-.29	.132	.091
		Bulls refs	.39	.152	.042
	Bulls refs	WP refs	-.68	.161	**.000***
		Lions refs	-.39	.152	.042
Athleticism	WP refs	Lions refs	.37	.148	.049
		Bulls refs	.75	.180	**.000***
	Lions refs	WP refs	-.37	.148	.049
		Bulls refs	.38	.170	.084
	Bulls refs	WP refs	-.75	.180	**.000***
		Lions refs	-.38	.170	.084
Stress tolerance	WP refs	Lions refs	.49	.152	**.007***
		Bulls refs	.74	.185	**.000***
	Lions refs	WP refs	-.49	.152	**.007***
		Bulls refs	.25	.175	.355
	Bulls refs	WP refs	-.74	.185	**.000***
		Lions refs	-.25	.175	.355
Preparation	WP refs	Lions refs	.41	.140	.015
		Bulls refs	.60	.171	**.003***
	Lions refs	WP refs	-.41	.140	.015
		Bulls refs	.19	.162	.520
	Bulls refs	WP refs	-.60	.171	**.003***
		Lions refs	-.19	.162	.520
Commitment	WP refs	Lions refs	.19	.121	.283
		Bulls refs	.51	.147	**.003***
	Lions refs	WP refs	-.19	.121	.283
		Bulls refs	.32	.139	.075
	Bulls refs	WP refs	-.51	.147	**.003***
		Lions refs	-.32	.139	.075

** The mean difference is significant at the 0.05 level.*

Table 5.18 indicates that the significant differences for the five competencies were in all cases between the Blue Bulls referees and the Western Province referees. This again supports the findings of the ANOVA between the four groups (paragraph 5.9.1) and the comparison between the Western Province referees and the Blue Bulls referees utilising the weighted scores (paragraph 5.9.2). Another significant difference was between the Gauteng Lions referees and the Western Province referees for the competency “Stress tolerance”.

A comparison between the total number of referee respondents (n=181) and the total number of player respondents (n=42) was also completed on the mean scores for these groups. This comparison, for the sake of comprehensiveness, is attached as Appendix 10.

5.9.5 SUMMARY OF THE PERCEPTIONS OF THE LARGE GROUPS OF PARTICIPANTS ON THE COMPETENCIES OF SUCCESSFUL REFEREES

The most important competencies from the perceptions of the various unions and societies have been summarized and is presented in Table 5.19.

These competencies were taken from the original weighted indexes. The respondents with no individual weighted competency indexes are also included, and their competency matrixes were used to determine the most important competencies. Only unions/societies that had more than three respondents were considered for this table.

Table 5.19: Most important competencies as rated by the referees and players.

RESPONDENT	MOST IMPORTANT COMPETENCIES	RESPONDENT	MOST IMPORTANT COMPETENCIES
Blue Bulls referees	o Technical skills – law application o Fitness o Resoluteness o Decisiveness o Problem analysis o Objectivity / Impartiality o Eyesight	Blue Bulls Currie Cup players	o Consistency o Communication on the field – oral o Objectivity / Impartiality o Commitment o Concentration / Focus o Judgment o Technical skills - general
Gauteng Lions referees	o Objectivity / Impartiality o Commitement o Self-confidence o Judgment o Honesty / Integrity o Consistency o Fitness	Western Province referees	o Concentration / Focus o Objectivity / Impartiality o Commitment o Consistency o Honesty / Integrity o Fitness o Judgment
Free State referees	o Problem analysis o Decisiveness o Influence on players	Griqua referees	o Objectivity / Impartiality o Fitness o Dynamism
Natal referees	o Concentration / Focus o Objectivity / Impartiality o Self-confidence o Decisiveness o Fitness o Technicall skills – law application	SWD referees	o Concentration / Focus o Trustworthiness o Objectivity / Impartiality o Honesty / Integrity o Decisiveness o Fitness o Conflict handling o Communication on field – oral
Eastern Province referees	o Concentration / Focus o Objectivity / Impartiality o Ambition	Natal Sharks players	o Objectivity / Impartiality o Honesty / Integrity o Consistency o Technical skills – law application o Influence on players

5.10 FACTOR ANALYSIS

A factor analysis was completed for all the respondents (n=223) to determine how many categories or factors of competencies were identified. Table 5.20 includes the statistical results after the analysis.

Table 5.20: Statistical results of the factors analysis.

COMPETENCY	FACTOR	
	1	**2**
Trustworthiness	.200	.504
Concentration / Focus	.113	.723
Objectivity / Impartiality	.364	.650
Honesty / Integrity	.142	.580
Self-confidence	.232	.635
Commitment	.263	.668
Composure	.228	.588
Consistency	.143	.639
Decisiveness	.262	.594
Fitness	.238	.411
Judgment	.337	.599
Resoluteness	.249	.432
Conflict handling	.429	.536
Flexibility	.354	.520
Player control	.509	.486
Respect	.551	.412
Athleticism	.524	.342
Authority	.567	.305
Problem analysis	.438	.541
Technical skills – law application	.433	.436
Communication on the field – oral	.437	.336
Ambition	.407	.243

COMPETENCY	FACTOR	
Stress tolerance	.578	.398
Eyesight	.426	.504
Preparation	.497	.443
Technical skills – general	.454	.349
Leadership	.733	.221
Initiative	.631	.331
Persuasiveness	.720	.220
Frustration tolerance	.592	.398
Rapport with players	.646	.132
Dynamism	.764	.754
Competitiveness	.624	.384
Creativity / Innovation	.785	.137
Mental toughness	.608	.312
Influence on players	.649	.265

The highest value for each competency indicates under which factor the competency is categorised.

The following competencies' values were too close to each other to warrant inclusion in any of the two factors. These competencies can be categorised under any of the two factors.

- Technical skills – law application
- Preparation
- Technical skills – general

It is important to note that both the competencies where "Technical skills" are required could be categorised under any one of the two factors.

From Table 5.20 the competencies were classified under a factor 1 and factor 2 and presented in Table 5.21.

Table 5.21: Competencies categorised under the two factors of the analysis.

FACTOR 1	FACTOR 2
Player control	Trustworthiness
Respect	Concentration / Focus
Athleticism	Objectivity / Impartiality
Authority	Honesty / Integrity
Communication on the field – oral	Self-confidence
Leadership	Commitment
Initiative	Composure
Persuasiveness	Consistency
Frustration tolerance	Decisiveness
Rapport with players	Fitness
Dynamism	Judgment
Competitiveness	Resoluteness
Creativity / Innovation	Conflict handling
Mental toughness	Flexibility
Influence on players	Problem analysis
	Eyesight

According to this table, 15 competencies were categorised under factor 1 and 16 competencies under factor 2. It would seem that the competencies that are categorised under factor 2 are all the competencies that were rated as the most important competencies from all the referee and player participants (Table 5.19). Therefore the label for the competencies that fall under factor 2 can be “Very important competencies” and the label for the competencies that fall under factor 1, “Important competencies”.

The identification of two categories may also be ascribed to the clearness of the meaning of the competencies in each category. The factor 2 competencies may be more clearly defined and the meaning thereof better known to the participants, whereas, the meaning of the competencies in factor 1 may be less clear and more vague to the participants. This can serve as a reason for the “very important competencies” attributed to the competencies in factor 2.

Included as Appendix 11 are the weighted competency indexes for the following groups, included for easier reading:

- Blue Bulls referees
- Blue Bulls players
- Gauteng Lions referees
- Western Province referees
- Free State referees

5.11 SUMMARY

In this chapter the results of the analysis of the data were discussed. A weighted competency index for rugby referees was compiled to determine the most important competencies a rugby referee must possess.

Weighted competency indexes were also compiled for the:

- Blue Bulls referees (n=32)
- Blue Bulls players (n=35)
- Gauteng Lions referees (n=69)
- Western Province referees (n=50)
- Free State referees (n=10)

The referee and player unions/societies with a response rate too low to warrant individual competency indexes were indicated and their matrixes attached as Appendix 7.

Comparisons between the perceptions of the different groups with regards to the relevance of the competencies were completed. Analysis of variance (ANOVA) between four groups and three groups were presented, and the comparison

between the Blue Bulls referees and the Western Province referees as well as the Blue Bulls players and Blue Bulls referees utilising the weighted scores.

A table (Table 5.19) with the most important competencies as rated by the referees and players was included. A factor analysis was presented to determine how many categories or factors of competencies were identified.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.1 INTRODUCTION

The aim of the study was to identify the competencies required by a referee to become successful at the highest level. In this chapter the relevant conclusions and recommendations are made, based on the results presented in Chapter 5.

6.2 REQUIRED COMPETENCIES OF RUGBY REFEREES

The ten most important competencies a rugby referee should possess are:

- **Objectivity / Impartiality** *(being able to treat both sides the same)*
- **Consistency** *(consistency in the way rules are applied during a match)*
- **Concentration / Focus** *(ability to stay focused during a match and not allow the mind to fluctuate)*
- **Honesty / Integrity** *(the ability to be honest with players, on and off the field)*
- **Commitment** *(dedication to do the best when preparing for games, know the rules, and always giving the best when refereeing a match)*
- **Judgment** *(ability to evaluate and judge situations during a match correctly)*
- **Fitness** *(fitness in terms of physical ability to keep up with play during a match)*
- **Trustworthiness** *(ability to make the players trust you and know that you will apply the laws consistently and fairly)*
- **Decisiveness** *(ability to reach quick and firm decisions)*

- **Composure** *(to be calm during difficult situations)*

Other important competencies are the following:

- Communication on the field – oral
- Self-confidence
- Problem analysis
- Conflict handling
- Resoluteness
- Respect
- Eyesight
- Player control
- Technical skills – law application
- Technical skills – general
- Flexibility
- Preparation
- Frustration tolerance
- Mental toughness
- Stress tolerance
- Ambition
- Influence on players
- Initiative
- Authority
- Leadership
- Athleticism
- Persuasiveness
- Competitiveness
- Creativity/Innovation
- Rapport with players
- Dynamism

6.3 COMPARISON OF PERCEPTIONS BETWEEN REFEREE AND PLAYER GROUPS

After an analysis of variance (ANOVA) the following significant differences were observed within groups and/or between referee and players groups:

- Concentration / Focus
  - The significant difference for this competency is between the Blue Bulls referees and the Western Province referees. The Western Province referees rated this competency higher (mean score of 4.74) compared to the Blue Bulls referees (mean score of 4.06).
- Honesty / Integrity
  - The significant difference for this competency is between the Western Province referees and the Blue Bulls players, and also between the Gauteng Lions referees and the Blue Bulls players. In both cases the Gauteng Lions referees and the Western Province referees (both with mean scores of 4.68) rated “Honesty/Integrity” higher compared with the Blue Bulls players (mean score of 4.00).
- Decisiveness
  - The significant difference for this competency is between the Western Province referees who rated “Decisiveness” higher (mean score of 4.56) compared to the Blue Bulls players (mean score of 4.00).
- Fitness
  - The significant difference for this competency is between the Western Province referees and the Blue Bulls players, with the Western Province referees rating the competency higher (mean score of 4,64) compared to the Blue Bulls players (mean score of 4.11).

- Resoluteness
  - The significant difference for this competency is between the Blue Bulls players (mean score of 3.94) and the Blue Bulls referees (mean score of 4.63). The Blue Bulls referees rated the competency higher compared to the players.
- Athleticism
  - The significant difference for this competency is between Blue Bulls referees (mean score of 3.53) and the Western Province referees (mean score of 4.28). The Western Province referees rated "Athleticism" higher compared to the Blue Bulls referees.
- Stress tolerance
  - The significant difference for this competency is between the Blue Bulls referees and the Western Province referees, with the Western Province referees rating the competency higher (mean score of 4.46) compared to the Blue Bulls referees (mean score of 3.72).
- Preparation
  - The significant difference for this competency is between the Western Province referees (mean score of 4.44) and the Gauteng Lions referees (mean score of 4.03).

It is interesting to note that the significant differences of three competencies occur between the Blue Bulls referees and the Western Province referees, and on three occasions between the Blue Bulls players and the Western Province referees. The Western Province referees rated the competencies higher in all instances.

Although statistical significant, no special meaning should be attached to these differences. One group may take some of the competencies for granted and rate it lower, although they still consider the competencies to be important. Also, the environmental circumstances in which the questionnaires were completed may have differed and could have contributed to the different ratings.

6.4 CATEGORIES FROM COMPETENCIES

The factor analysis revealed that the 36 competencies can be classified in two clear categories or factors. Only three competencies did not fall clearly into a specific category and could, therefore, be included in either of the two categories.

The two categories were labeled as

- Very important competencies, and
- Important competencies

The **"Very important competencies"** included the following:

- Trustworthiness
- Concentration / Focus
- Objectivity / Impartiality
- Honesty / Integrity
- Self-confidence
- Commitment
- Composure
- Consistency
- Decisiveness
- Fitness
- Judgment
- Resoluteness
- Conflict handling
- Flexibility
- Problem analysis
- Eyesight

The **"Important competencies"** included the following:

- Player control
- Respect
- Athleticism
- Authority
- Communication on the field – oral
- Leadership
- Initiative
- Persuasiveness
- Frustration tolerance
- Rapport with players
- Dynamism
- Competitiveness
- Creativity / Innovation
- Mental toughness
- Influence on players

6.5 RECOMMENDATIONS

The following recommendations can be made with regards to improving the competence of referees:

- The ten most important competencies identified through this study should be incorporated into selection and training programmes for new referee recruits.
- A test battery should be developed to measure the ten most important competencies. This may be utilised as a screening (selection) battery to reduce the drop-out rate among the recruits.
- In the short-term the identified competencies may be incorporated in a rating scale and utlised by a knowledgeable panel to assess recruits as well as referees. Development areas (competencies not on the required level) can be identified in this way and individualised training and development

programmes can be introduced to develop high potential faster, and to improve the general standard of refereeing.

Recommendations with regards to the execution of the study are the following:

- The study can be expanded to include the opinions of more players. The number of players that were included in the sample was too low to apply more comprehensive statistical procedures. A large group of referees and players will allow the application of the *t*-test to determine possible differences in opinions between the groups.
- The study can be expanded internationally to compare the differences between the perceptions of South African referees with referees from other countries.

6.6 LIMITATIONS OF THE STUDY

The following limitations and consequences were experienced during the completion of the study:

- The relative low response rate from some of the referee unions/societies and Currie Cup teams limited the statistical analysis to an extent.
- The physical distance between the researcher and most of the sample made it difficult to manage the logistics of the data gathering process.
- A very limited number of studies have been done in this field and this limited the availability of literature.

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APPENDIX 1

QUESTIONNAIRE ONE

Dear Participant (Blue Bull Referee)

I am a Masters' student in Human Resource Management at the University of Pretoria and am currently doing research on the topic "Generic Competencies of Rugby Union Referees".

The purpose of the study is to identify the competencies that are required of rugby referees and that enable them to referee matches effectively. Eventually the information gathered from you can lead to an improved selection procedure to identify new referees at entree level. As the game of rugby is becoming more professional, and so much hinges on the proficiency of referees, we would like to improve the effectiveness of the identification process all the time. You will be helping us with this.

Please read the instructions and complete the attached questionnaire. It should take approximately 10 minutes of your time. There are no wrong answers, only your view as someone who has had close experiences with the game of rugby and is passionate about it.

After completing this questionnaire you will be requested to complete a further questionnaire very similar to the first with the purpose to narrow down the expert opinion regarding the competencies required by referees. Therefore it will be appreciated if you will supply your biographical details for reference to the second survey. It will not be used on an individual basis and only for statistical analysis during the research.

ANTON DE VILLIERS
FEBRUARY 2003

PROF HANNES DE BEER
UNIVERITY OF PRETORIA

PERSONAL DETAILS

NAME AND SURNAME: ……

Please indicate with an (x).

AGE: 15-20	
21-25	
26-30	
31-35	
36-40	
41-45	
46 AND OLDER	

GENDER : MALE	
FEMALE	

YEARS INVOLVED AS A NORTHENS REFEREE	

LEVEL REFEREE:	
CARLTON	
SENIOR RESERVE	
LEAGUE 2A	
LEAGUE 2B	
LEAGUE 3A	
LEAGUE 3B	
4TH LEAGUE	

YOU ARE KINDLY REQUESTED TO INDICATE WHICH OF THE FOLLOWING COMPETENCIES YOU THINK ARE IMPORTANT OR LESS IMPORTANT FOR A RUGBY UNION REFEREE TO POSSESS. IF THERE ARE COMPETENCIES YOU CONSIDER IMPORTANT OR RELEVANT BUT WHICH ARE NOT LISTED PLEASE INDICATE THEM IN THE SPACE PROVIDED.

PLEASE RANK THE COMPETENCIES MENTIONED ON THE FOLLOWING SCALE BY TICKING (X) IN THE COLUMN OF CHOICE.

1 - IRRELEVANT
2 - LESS IMPORTANT
3 - AVERAGE
4 - MORE IMPORTANT
5 - VERY IMPORTANT

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	AVERAGE	MORE IMPORTANT	VERY IMPORTANT
1.	**Ambition** (a strong desire to be a successful referee)					
2.	**Athleticism** (athletic ability e.g. speed, versitality etc.).					
3.	**Authority** (demonstrate authority when controlling specific game situations)					

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	AVERAGE	MORE IMPORTANT	VERY IMPORTANT
4.	**Biographical elements** - e.g. Age, gender etc. (are these aspects important to be a good referee, although it is not a competency as such).					
5.	**Commitment** (be committed to do his best when preparing for games, know the rules, and committed when refereeing a match).					
6.	**Communication on the field** – oral (letting the players know exactly what is expected of them by means of verbal communication)					
7.	**Communication on the field** – body language (letting the players know what is expected of them in terms of the body language used like hand signals)					
8.	**Competitiveness** (is it necessary for a good referee to be competitive by nature).					
9.	**Composure** (to be calm during difficult situations).					
10.	**Concentration / Focus** (ability to stay focused during a match and not to lose concentration).					

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	AVERAGE	MORE IMPORTANT	VERY IMPORTANT
11.	**Conflict handling** (ability to manage conflict situations on the field, e.g. fights during play)					
12.	**Consistency** (consistency in the way rules are applied during a match)					
13.	**Creativity / Innovation** (creative and innovative in terms of how the matches are handled)					
14.	**Decisiveness** (the ability to reach quick decisions).					
15.	**Dynamism** (is the ability to be dynamic on the field necessary for a good referee)					
16.	**Extrovertiveness** (outgoing personality)					
17.	**Eye site** (being able to see the action on the field, broad vision during a match).					
18.	**Fitness** (fitness in terms of ability to keep up with play during a match)					
19.	**Flexibility** (in terms of using the laws, using the advantage rule)					

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	AVERAGE	MORE IMPORTANT	VERY IMPORTANT
20.	**Frustration tolerance** (being able to handle frustrating situations).					
21.	**Honesty / Integrity** (the ability to be honest with players, on and off the field).					
22.	**Initiative** (the ability to take initiative on the field, be pro-active).					
23.	**Influence on players** (the ability to influence players).					
24.	**Introvertiveness** (referee very quiet and more interested in own thoughts and feelings).					
25.	**Judgment** (ability to judge situations during a match).					
26.	**Leadership** (leadership ability of the referee on and off the field)					
27.	**Objectivity / Impartiality** (being able not to pick sides).					

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	AVERAGE	MORE IMPORTANT	VERY IMPORTANT
28.	**Persuasiveness** (the ability to be convincing).					
29.	**Player control** (the management of players on the field).					
30.	**Preparation** (preparation before matches and in the lead-up to big games).					
31.	**Problem analysis** (ability to analyse situations on the field)					
32.	**Rapport with players** (relationship with players off the field)					
33.	**Resoluteness** (the ability to keep to a decision after it has been made, right or wrong).					
34.	**Respect** (respect for the players on and off the field)					
35.	**Self-confidence** (confidence in own ability to select appropriate courses of action).					
36.	**Self-motivation** (discipline etc. to keep up to date with laws, attend referee meetings, staying fit etc.).					

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	AVERAGE	MORE IMPORTANT	VERY IMPORTANT
37.	**Stress tolerance** (ability to handle stress on and off the field).					
38.	**Technical skills in terms of law application** (all the detail regarding the laws and their application during play).					
39.	**Technical skills in general** (e.g. scrum techniques in general and not in terms of rugby laws).					
40.	**Teamwork** (ability to work in a team e.g. with touch judges).					
41.	**Trustworthiness** (ability to be trusted by the players on the field that the laws will be applied consistently and fair).					

ADDITIONAL COMPETENCIES

_____

_____

_____

_____

Note:

- Please note that the competencies listed in this table serve as a guideline only. None of these competencies have been categorised. This questionnaire only serve to gather the opinion of a panel of experts in the field and further questionnaires will help in narrowing down this expert opinions.
- Knowledge of the rules is not seen as a competency since it is one of the cardinal elements of being a referee.

Looking forward to our second meeting during the second part of this study, which will be in the form of another short questionnaire.

Thank you for your time and participation

Anton de Villiers

APPENDIX 2

QUESTIONNAIRE TWO

May 2003

Dear Blue Bulls Referee

During an earlier occasion you completed a questionnaire in which you rated the importance of 41 competencies that a rugby union referee should possess.

The data received from that survey has now been analysed and a second questionnaire has been developed in which these competencies, and others that you have identified, are incorporated. The items of the revised questionnaire must now be narrowed down further in terms of importance and for this I again need your assistance.

Please read the instructions and complete the attached questionnaire. There are no wrong answers, only your view as someone who has had close experiences with the game of rugby and is passionate about it.

Regards

Anton de Villiers and Prof. Hannes de Beer

INSTRUCTIONS

YOU ARE KINDLY REQUESTED TO INDICATE WHICH OF THE FOLLOWING COMPETENCIES YOU THINK ARE IMPORTANT OR LESS IMPORTANT FOR A RUGBY UNION REFEREE TO POSSESS. IF THERE ARE COMPETENCIES YOU CONSIDER IMPORTANT OR RELEVANT BUT WHICH ARE NOT LISTED PLEASE INDICATE THEM IN THE SPACE PROVIDED.

PLEASE RANK THE COMPETENCIES MENTIONED ON THE FOLLOWING SCALE BY TICKING (X) IN THE COLUMN OF CHOICE.

1 - IRRELEVANT FOR A REFEREE TO POSSESS

2 - LESS IMPORTANT FOR A REFEREE TO POSSESS

3 - IMPORTANT FOR A REFEREE TO POSSESS

4 - VERY IMPORTANT FOR A GOOD REFEREE TO POSSESS

5 - A DEFINITE COMPETENCY TO BE ONE OF THE BEST REFEREES

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	IMPORTANT	VERY IMPORTANT	A DEFINITE COMPETENCY TO HAVE
1.	**Trustworthiness** (ability to make the make the players trust you and know that the laws will be applied consistently and fair).					
2.	**Concentration / Focus** (ability to stay focused during a match and not to allow the mind to fluctuate).					

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	IMPORTANT	VERY IMPORTANT	A DEFINITE COMPETENCY TO HAVE
3.	**Objectivity / Impartiality** (being able to treat both sides the same; not to pick sides).					
4.	**Honesty / Integrity** (the ability to be honest with players, on and off the field).					
5.	**Self-confidence** (belief in own ability to select appropriate courses of action).					
6.	**Commitment** (dedication to do best when preparing for games; know the rules; and always giving best when refereeing a match).					
7.	**Composure** (to be calm during difficult situations).					
8.	**Consistency** (consistency in the way rules are applied during a match).					
9.	**Decisiveness** (the ability to reach quick and firm decisions).					
10.	**Fitness** (fitness in terms of physical ability to keep up with play during a match).					

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	IMPORTANT	VERY IMPORTANT	A DEFINITE COMPETENCY TO HAVE
11.	**Judgment** (ability to evaluate and judge situations during a match correctly).					
12.	**Resoluteness** (the ability to keep to a decision after it has been made, right or wrong).					
13.	**Conflict handling** (ability to manage conflict situations on the field, e.g. fights during play).					
14.	**Flexibility** (in terms of using the laws; applying the advantage rule).					
15.	**Player control** (getting the players to conform and play according to the rules of the game).					
16.	**Respect** (treating the players on and off the field with the dignity they deserve as human beings).					
17.	**Athleticism** (athletic ability e.g. speed, agility, etc.).					
18.	**Authority** (demonstrate authority; show that referee is in charge and the players accept the rulings unconditionally).					

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	IMPORTANT	VERY IMPORTANT	A DEFINITE COMPETENCY TO HAVE
19.	**Problem analysis** (ability to consider all the facts and quickly analyse situations on the field).					
20.	**Technical skills in terms of law application** (all the detail regarding the laws and their application during play).					
21.	**Communication on the field – oral** (ability to communicate in a manner that the message is very clear/ the players know exactly what is expected of them).					
22.	**Ambition** (a strong desire to be a successful referee).					
23.	**Stress tolerance** (ability to handle stress on and off the field).					
24.	**Eyesight** (being able to see the action on the field, “broad vision” during a match).					
25.	**Preparation** (spend time to prepare mentally and physically before matches and in the lead-up to big games).					

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	IMPORTANT	VERY IMPORTANT	A DEFINITE COMPETENCY TO HAVE
26.	**Technical skills in general** (e.g. knowledge on scrum techniques in general and not only in terms of rugby laws).					
27.	**Leadership** (leadership ability of the referee on and off the field).					
28.	**Initiative** (the ability to take initiative on the field; act before something happens).					
29.	**Persuasiveness** (the ability to be convincing).					
30.	**Frustration tolerance** (being able to handle frustrating situations by staying calm).					
31.	**Rapport with players** (ability to make real interpersonal contact and form relationships with players off the field).					
32.	**Dynamism** (the ability to be dynamic and to stand out on the field).					
33.	**Competitiveness** (the referee should care how well he performs in relation to other referees: “he should want to be the best referee”).					

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	IMPORTANT	VERY IMPORTANT	A DEFINITE COMPETENCY TO HAVE
34.	**Creativity / Innovation** (creative and innovative in terms of how issues are resolved).					
35.	**Mental toughness** (strong character of mind).					
36.	**Influence on players** (the ability to influence players' attitudes positively).					

ADDITIONAL COMPETENCIES

Note:

- Please note that the competencies listed in this table serve as a guideline only. None of these competencies have been ategorized. This questionnaire only serve to gather the opinion of a panel of experts in the field.
- Knowledge of the game rules is not seen as a competency since it is one of the cardinal elements of being a referee.
- If there is a question/competency that was difficult to assess because the meaning is not quite clear to you, please provide the number(s) of the question(s) and state what is unclear in the space provided here:

……
……

Thank you for your time and participation

Anton de Villiers

APPENDIX 3

QUESTIONNAIRE THREE

June 2003

Dear Referee / Player

I am a Masters' student in Human Resource Management at the University of Pretoria and I am currently doing research on the topic "Generic Competencies of Rugby Union Referees". I am working closely with Kosie Horn of the Blue Bulls Rugby Referees' Society and I have the society's full support.

The purpose of the study is to identify the competencies that are required of rugby referees, which enable them to referee matches effectively. Eventually the information obtained from you can lead to an improved selection procedure to identify new referees at entry level. As the game of rugby is becoming more professional and so much hinges on the proficiency of referees, we would like to improve the effectiveness of the identification process. You will be helping us to achieve this goal.

You will form part of phase two of the project. In this phase as many referees as possible outside the Blue Bulls Society will be surveyed by the following questionnaire. Furthermore as many players as possible, from Currie Cup level upwards, will be requested to participate in the study.

During phase one of the project a two round survey (consisting of a questionnaire similar to this one) was distributed to the Blue Bull referees. The data received was analysed and used in the drawing up of this questionnaire.

Please read the instructions and complete the attached questionnaire. It should take approximately 10 minutes of your time. There are no wrong answers, only your view as someone who has had close experience of the game of rugby and is passionate about it.

Regards

Anton de Villiers

Prof JJ de Beer
(study leader)

INSTRUCTIONS

YOU ARE KINDLY REQUESTED TO INDICATE WHICH OF THE FOLLOWING COMPETENCIES YOU THINK ARE ESSENTIAL OR LESS IMPORTANT FOR A RUGBY UNION REFEREE TO POSSESS.

PLEASE RANK THE COMPETENCIES MENTIONED ON THE FOLLOWING SCALE BY TICKING (X) IN THE COLUMN OF CHOICE.

1 - IRRELEVANT FOR A REFEREE TO POSSESS
2 - LESS IMPORTANT FOR A REFEREE TO POSSESS
3 - IMPORTANT FOR A REFEREE TO POSSESS
4 - VERY IMPORTANT FOR A GOOD REFEREE TO POSSESS
5 - AN ESSENTIAL COMPETENCY TO BE ONE OF THE BEST REFEREES

REFEREES:
Level of referee:…… Province (Union/Society):……

PLAYERS: Highest level of representation:……

Province currently playing for:……

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	IMPORTANT	VERY IMPORTNAT	ESSENTIAL
1.	**Trustworthiness** (ability to make the make the players trust you and know that the laws will be applied consistently and fair).					
2.	**Concentration / Focus** (ability to stay focused during a match and not to allow the mind to fluctuate).					

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	IMPORTANT	VERY IMPORTNAT	ESSENTIAL
3.	**Objectivity / Impartiality** (being able to treat both sides the same; not to pick sides).					
4.	**Honesty / Integrity** (the ability to be honest with players, on and off the field).					
5.	**Self-confidence** (belief in own ability to select appropriate courses of action).					
6.	**Commitment** (dedication to do best when preparing for games; know the rules; and always giving best when refereeing a match).					
7.	**Composure** (to be calm during difficult situations).					
8.	**Consistency** (consistency in the way rules are applied during a match).					
9.	**Decisiveness** (the ability to reach quick and firm decisions).					
10.	**Fitness** (fitness in terms of physical ability to keep up with play during a match).					

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	IMPORTANT	VERY IMPORTNAT	ESSENTIAL
11.	**Judgment** (ability to evaluate and judge situations during a match correctly).					
12.	**Resoluteness** (the ability to keep to a decision after it has been made, right or wrong).					
13.	**Conflict handling** (ability to manage conflict situations on the field, e.g. fights during play).					
14.	**Flexibility** (in terms of using the laws; applying the advantage rule).					
15.	**Player control** (getting the players to conform and play according to the rules of the game).					
16.	**Respect** (treating the players on and off the field with the dignity they deserve as human beings).					
17.	**Athleticism** (athletic ability e.g. speed, agility, etc.).					
18.	**Authority** (demonstrate authority; show that referee is in charge and the players accept the rulings unconditionally).					

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	IMPORTANT	VERY IMPORTNAT	ESSENTIAL
19.	**Problem analysis** (ability to consider all the facts and quickly analyse situations on the field).					
20.	**Technical skills in terms of law application** (all the detail regarding the laws and their application during play).					
21.	**Communication on the field** – oral (ability to communicate in a manner that the message is very clear/ the players know exactly what is expected of them).					
22.	**Ambition** (a strong desire to be a successful referee).					
23.	**Stress tolerance** (ability to handle stress on and off the field).					
24.	**Eyesight** (being able to see the action on the field, "broad vision" during a match).					
25.	**Preparation** (spend time to prepare mentally and physically before matches and in the lead-up to big games).					

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	IMPORTANT	VERY IMPORTNAT	ESSENTIAL
26.	**Technical skills in general** (e.g. knowledge on scrum techniques in general and not only in terms of rugby laws).					
27.	**Leadership** (leadership ability of the referee on and off the field).					
28.	**Initiative** (the ability to take initiative on the field; act before something happens).					
29.	**Persuasiveness** (the ability to be convincing).					
30.	**Frustration tolerance** (being able to handle frustrating situations by staying calm).					
31.	**Rapport with players** (ability to make real interpersonal contact and form relationships with players off the field).					
32.	**Dynamism** (the ability to be dynamic and to stand out on the field).					

NO.	COMPETENCY	IRRELEVANT	LESS IMPORTANT	IMPORTANT	VERY IMPORTNAT	ESSENTIAL
33.	**Competitiveness** (the referee should care how well he performs in relation to other referees: "he should want to be the best referee").					
34.	**Creativity / Innovation** (creative and innovative in terms of how issues are resolved).					
35.	**Mental toughness** (strong character of mind).					
36.	**Influence on players** (the ability to influence players' attitudes positively).					

Note:

- Please note that the competencies listed in this table serve as a guideline only. None of these competencies have been categorised. This questionnaire only serves to gather the opinion of a panel of experts in the field.
- Knowledge of the game rules is not seen as a competency since it is one of the cardinal elements of being a referee.
- If there is a question/competency that was difficult to assess because the meaning is not quite clear to you, please provide the number(s) of the question(s) and state what is unclear in the space provided here:

……
……

Thank you for your time and participation

Anton de Villiers

APPENDIX 4

FREQUENCIES FOR THE RESPONSES OF THE TOTAL POPULATION (N=223)

Trustworthiness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	irrelevant	1	.4	.4	.4
	less important	4	1.8	1.8	2.2
	important	24	10.8	10.8	13.0
	very important	58	26.0	26.0	39.0
	essential	136	61.0	61.0	100.0
	Total	223	100.0	100.0	

Concentration/Focus

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	5	2.2	2.2	2.2
	important	15	6.7	6.7	9.0
	very important	68	30.5	30.5	39.5
	essential	135	60.5	60.5	100.0
	Total	223	100.0	100.0	

Objectivity/Impartiality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	1	.4	.4	.4
	important	9	4.0	4.0	4.5
	very important	51	22.9	22.9	27.4
	essential	162	72.6	72.6	100.0
	Total	223	100.0	100.0	

Honesty/Integrity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	irrelevant	1	.4	.4	.4
	less important	1	.4	.4	.9
	important	24	10.8	10.8	11.7
	very important	55	24.7	24.7	36.3
	essential	142	63.7	63.7	100.0
	Total	223	100.0	100.0	

Self-confidence

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	3	1.3	1.3	1.3
	important	29	13.0	13.0	14.3
	very important	88	39.5	39.5	53.8
	essential	103	46.2	46.2	100.0
	Total	223	100.0	100.0	

Commitment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	2	.9	.9	.9
	important	21	9.4	9.4	10.3
	very important	68	30.5	30.5	40.8
	essential	132	59.2	59.2	100.0
	Total	223	100.0	100.0	

Composure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	irrelevant	1	.4	.4	.4
	less important	2	.9	.9	1.3
	important	24	10.8	10.8	12.1
	very important	96	43.0	43.0	55.2
	essential	100	44.8	44.8	100.0
	Total	223	100.0	100.0	

Consistency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	2	.9	.9	.9
	important	13	5.8	5.8	6.7
	very important	62	27.8	27.8	34.5
	essential	146	65.5	65.5	100.0
	Total	223	100.0	100.0	

Decisiveness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	2	.9	.9	.9
	important	23	10.3	10.3	11.2
	very important	89	39.9	39.9	51.1
	essential	109	48.9	48.9	100.0
	Total	223	100.0	100.0	

Fitness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	1	.4	.4	.4
	important	21	9.4	9.4	9.9
	very important	85	38.1	38.1	48.0
	essential	116	52.0	52.0	100.0
	Total	223	100.0	100.0	

Judgment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	2	.9	.9	.9
	important	16	7.2	7.2	8.1
	very important	91	40.8	40.8	48.9
	essential	114	51.1	51.1	100.0
	Total	223	100.0	100.0	

Resoluteness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	irrelevant	1	.4	.4	.4
	less important	3	1.3	1.3	1.8
	important	32	14.3	14.3	16.1
	very important	87	39.0	39.0	55.2
	essential	100	44.8	44.8	100.0
	Total	223	100.0	100.0	

Conflict handling

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	irrelevant	1	.4	.4	.4
	less important	1	.4	.4	.9
	important	32	14.3	14.3	15.2
	very important	88	39.5	39.5	54.7
	essential	101	45.3	45.3	100.0
	Total	223	100.0	100.0	

Flexibility

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	3	1.3	1.3	1.3
	important	40	17.9	17.9	19.3
	very important	100	44.8	44.8	64.1
	essential	80	35.9	35.9	100.0
	Total	223	100.0	100.0	

Player control

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	3	1.3	1.3	1.3
	important	36	16.1	16.1	17.5
	very important	95	42.6	42.6	60.1
	essential	89	39.9	39.9	100.0
	Total	223	100.0	100.0	

Respect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	irrelevant	2	.9	.9	.9
	less important	3	1.3	1.3	2.2
	important	35	15.7	15.7	17.9
	very important	69	30.9	30.9	48.9
	essential	114	51.1	51.1	100.0
	Total	223	100.0	100.0	

Athleticism

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	irrelevant	2	.9	.9	.9
	less important	8	3.6	3.6	4.5
	important	61	27.4	27.4	31.8
	very important	89	39.9	39.9	71.7
	essential	63	28.3	28.3	100.0
	Total	223	100.0	100.0	

Authority

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	4	1.8	1.8	1.8
	important	61	27.4	27.4	29.1
	very important	90	40.4	40.4	69.5
	essential	68	30.5	30.5	100.0
	Total	223	100.0	100.0	

Problem analysis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	3	1.3	1.3	1.3
	important	28	12.6	12.6	13.9
	very important	95	42.6	42.6	56.5
	essential	97	43.5	43.5	100.0
	Total	223	100.0	100.0	

Technical skills - law application

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	2	.9	.9	.9
	important	41	18.4	18.4	19.3
	very important	83	37.2	37.2	56.5
	essential	97	43.5	43.5	100.0
	Total	223	100.0	100.0	

Communication on field - oral

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	3	1.3	1.3	1.3
	important	27	12.1	12.1	13.5
	very important	88	39.5	39.5	52.9
	essential	105	47.1	47.1	100.0
	Total	223	100.0	100.0	

Ambition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	irrelevant	3	1.3	1.3	1.3
	less important	9	4.0	4.0	5.4
	important	43	19.3	19.3	24.7
	very important	76	34.1	34.1	58.7
	essential	92	41.3	41.3	100.0
	Total	223	100.0	100.0	

Stress tolerance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	irrelevant	2	.9	.9	.9
	less important	7	3.1	3.1	4.0
	important	46	20.6	20.6	24.7
	very important	83	37.2	37.2	61.9
	essential	85	38.1	38.1	100.0
	Total	223	100.0	100.0	

Eyesight

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	3	1.3	1.3	1.3
	important	34	15.2	15.2	16.6
	very important	95	42.6	42.6	59.2
	essential	91	40.8	40.8	100.0
	Total	223	100.0	100.0	

Preparation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	4	1.8	1.8	1.8
	important	48	21.5	21.5	23.3
	very important	84	37.7	37.7	61.0
	essential	87	39.0	39.0	100.0
	Total	223	100.0	100.0	

Technical skills - general

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	2	.9	.9	.9
	important	42	18.8	18.8	19.7
	very important	82	36.8	36.8	56.5
	essential	97	43.5	43.5	100.0
	Total	223	100.0	100.0	

Leadership

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	8	3.6	3.6	3.6
	important	65	29.1	29.1	32.7
	very important	85	38.1	38.1	70.9
	essential	65	29.1	29.1	100.0
	Total	223	100.0	100.0	

Initiative

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	8	3.6	3.6	3.6
	important	55	24.7	24.7	28.3
	very important	89	39.9	39.9	68.2
	essential	71	31.8	31.8	100.0
	Total	223	100.0	100.0	

Persuasiveness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	irrelevant	6	2.7	2.7	2.7
	less important	10	4.5	4.5	7.2
	important	69	30.9	30.9	38.1
	very important	80	35.9	35.9	74.0
	essential	58	26.0	26.0	100.0
	Total	223	100.0	100.0	

Frustration tolerance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	7	3.1	3.1	3.1
	important	42	18.8	18.8	22.0
	very important	93	41.7	41.7	63.7
	essential	81	36.3	36.3	100.0
	Total	223	100.0	100.0	

Rapport with players

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	irrelevant	13	5.8	5.8	5.8
	less important	42	18.8	18.8	24.7
	important	55	24.7	24.7	49.3
	very important	69	30.9	30.9	80.3
	essential	44	19.7	19.7	100.0
	Total	223	100.0	100.0	

Dynamism

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	irrelevant	15	6.7	6.7	6.7
	less important	50	22.4	22.4	29.1
	important	61	27.4	27.4	56.5
	very important	51	22.9	22.9	79.4
	essential	46	20.6	20.6	100.0
	Total	223	100.0	100.0	

Competitiveness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	irrelevant	7	3.1	3.1	3.1
	less important	27	12.1	12.1	15.2
	important	47	21.1	21.1	36.3
	very important	80	35.9	35.9	72.2
	essential	62	27.8	27.8	100.0
	Total	223	100.0	100.0	

Creativity/Innovation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	irrelevant	2	.9	.9	.9
	less important	24	10.8	10.8	11.7
	important	71	31.8	31.8	43.5
	very important	80	35.9	35.9	79.4
	essential	46	20.6	20.6	100.0
	Total	223	100.0	100.0	

Mental toughness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less important	11	4.9	4.9	4.9
	important	41	18.4	18.4	23.3
	very important	77	34.5	34.5	57.8
	essential	94	42.2	42.2	100.0
	Total	223	100.0	100.0	

Influence on players

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	irrelevant	3	1.3	1.3	1.3
	less important	15	6.7	6.7	8.1
	important	39	17.5	17.5	25.6
	very important	90	40.4	40.4	65.9
	essential	76	34.1	34.1	100.0
	Total	223	100.0	100.0	

APPENDIX 5

Matrix for the Blue Bulls referees responses of the first questionnaire

Competency	Irrelevant	Less important	Average	More important	Very important	Number of responses
Ambition	1	5	2	10	29	47
Athleticism	0	0	0	15	32	47
Authority	0	0	1	15	31	47
Biographical elements	4	13	15	11	4	47
Commitment	0	0	0	7	40	47
Communication - oral	0	0	4	13	30	47
Communication - body language	0	0	1	14	32	47
Competitiveness	2	2	10	18	15	47
Composure	0	0	1	6	40	47
Concentration / Focus	0	0	1	4	42	47
Conflict handling	0	1	0	13	33	47
Consistency	0	0	1	6	40	47
Creativity / Innovation	0	0	10	27	10	47
Decisiveness	0	0	0	10	37	47
Dynamism	0	0	6	25	16	47
Extrovertiveness	2	4	24	14	3	47
Eyesight	0	0	4	15	28	47
Fitness	0	0	1	9	37	47
Flexibility		1	1	12	33	47
Frustration tolerance	0	0	7	22	18	47
Honesty / Integrity	0	0	3	3	41	47
Initiative	1	2	6	18	20	47
Influence on players	1	5	7	26	8	47
Introvertiveness	11	17	10	5	4	47
Good judgment	0	1	1	10	35	47
Leadership	1	1	6	18	21	47

Competency	Irrelevant	Less important	Average	More important	Very important	Number of responses
Objectivity / Impartiality	0	1	0	4	42	47
Persuasiveness	1	2	13	11	20	47
Player control	0	0	2	12	33	47
Preparation	0	1	3	16	27	47
Problem analysis	0	0	2	14	31	47
Rapport with players	2	6	6	16	17	47
Resoluteness	0	0	0	13	34	47
Respect	0	0	2	12	33	47
Self-confidence	0	0		6	41	47
Self-motivation	0	0	1	7	39	47
Stress tolerance	1	0	2	15	29	47
Technical skills - law application	0	0	2	14	31	47
Technical skills - general	0	0	5	16	26	47
Teamwork	0	0	4	16	27	47
Trustworthiness	0	0	2	2	43	47
TOTALS	27	62	166	520	1152	

APPENDIX 6

Matrix for the Free State Referees

Competency	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Trustworthiness	0	0	0	5	5	10
Concentration/focus	0	0	0	5	5	10
Objectivity/Impartiality	0	0	0	3	7	10
Honesty/integrity	0	0	0	5	5	10
Self-confidence	0	0	2	3	5	10
Commitment	0	0	2	5	3	10
Composure	0	0	1	4	5	10
Consistency	0	0	2	4	4	10
Decisiveness	0	0	1	7	2	10
Fitness	0	0	2	6	2	10
Judgment	0	0	1	6	3	10
Resoluteness	0	0	2	5	3	10
Conflict handling	0	0	3	5	2	10
Flexibility	0	0	2	6	2	10
Player control	0	0	2	5	3	10
Respect	0	0	2	5	3	10
Athleticism	0	0	1	4	5	10
Authority	0	0	2	5	3	10
Problem analysis	0	0	0	7	3	10
Technical skills - law application	0	0	2	4	4	10
Communication on field - oral	0	0	2	5	3	10
Ambition	0	0	1	4	5	10
Stress tolerance	0	1	3	2	4	10
Eyesight	0	0	2	6	2	10
Preparation	0	0	6	2	2	10
Technical skills - general	0	0	1	6	3	10
Leadership	0	0	0	5	5	10
Initiative	0	0	3	5	2	10
Persuasiveness	0	1	4	4	1	10
Frustration tolerance	0	0	1	6	3	10
Rapport with players	1	3	3	3	0	10
Dynamism	1	3	2	3	1	10
Competitiveness	1	2	2	5	0	10
Creativity/innovation	0	1	6	3	0	10
Mental toughness	0	0	3	4	3	10
Influence on players	0	0	2	7	1	10

APPENDIX 7

MATRIXES OF REFEREE AND PLAYERS UNION'S / SOCIETY'S WITH A LOW RESPONSE RATE

NATAL REFEREES

Competencies	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Trustworthiness	0	0	1	0	2	3
Concentration/focus	0	0	0	0	3	3
Objectivity/Impartiality	0	0	0	0	3	3
Honesty/integrity	0	0	1	1	1	3
Self-confidence	0	0	0	0	3	3
Commitment	0	0	0	0	0	3
Composure	0	0	0	1	2	3
Consistency	0	0	0	1	2	3
Decisiveness	0	0	0	0	3	3
Fitness	0	0	0	0	3	3
Judgment	0	0	0	2	1	3
Resoluteness	0	0	1	0	2	3
Conflict handling	0	0	0	2	1	3
Flexibility	0	0	0	2	1	3
Player control	0	0	1	1	1	3
Respect	0	0	1	0	2	3
Athleticism	0	0	0	2	1	3
Authority	0	0	0	2	1	3
Problem analysis	0	0	0	2	1	3
Technical skills - law application	0	0	0	0	3	3
Communication on field - oral	0	0	0	1	2	3
Ambition	0	0	0	2	1	3
Stress tolerance	0	0	0	2	1	3
Eyesight	0	0	0	2	1	3
Preparation	0	0	0	2	1	3
Technical skills - general	0	0	0	2	1	3
Leadership	0	0	1	1	1	3
Initiative	0	0	1	1	1	3
Persuasiveness	0	0	1	1	1	3
Frustration tolerance	0	0	0	1	2	3

Competencies	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Rapport with players	0	0	0	1	2	3
Dynamism	0	0	0	1	2	3
Competitiveness	0	0	0	1	2	3
Creativity/innovation	0	0	1	1	1	3
Mental toughness	0	0	0	0	3	3
Influence on players	0	0	0	2	1	3

According to this matrix the Natal referees were of the opinion that the following are the most important competencies.

- Concentration/Focus
- Objectivity/Impartiality
- Self-confidence
- Decisiveness
- Fitness
- Technical skills – law application
- Mental toughness

All three respondents rated these competencies as essential.

GRIQUAS REFEREES

Competency	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Trustworthiness	0	0	0	1	4	5
Concentration/focus	0	0	0	1	4	5
Objectivity/Impartiality	0	0	0	0	5	5
Honesty/integrity	0	0	0	2	3	5
Self-confidence	0	0	1	2	2	5
Commitment	0	0	1	1	3	5
Composure	0	0	0	2	3	5
Consistency	0	0	0	1	4	5
Decisiveness	0	0	0	1	4	5
Fitness	0	0	0	0	5	5
Judgment	0	0	0	1	4	5

Competency	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Resoluteness	0	0	0	2	3	5
Conflict handling	0	0	0	1	4	5
Flexibility	0	0	0	1	4	5
Player control	0	0	0	1	4	5
Respect	0	0	0	1	4	5
Athleticism	0	0	1	2	2	5
Authority	0	0	0	1	4	5
Problem analysis	0	0	0	1	4	5
Technical skills - law application	0	0	0	1	4	5
Communication on field - oral	0	0	0	1	4	5
Ambition	0	0	0	1	4	5
Stress tolerance	0	0	1	1	3	5
Eyesight	0	0	1	1	3	5
Preparation	0	0	0	1	4	5
Technical skills - general	0	0	1	1	3	5
Leadership	0	0	0	2	3	5
Initiative	0	0	1	1	3	5
Persuasiveness	0	0	0	2	3	5
Frustration tolerance	0	0	1	1	3	5
Rapport with players	1	0	0	1	3	5
Dynamism	0	0	0	0	5	5
Competitiveness	0	0	0	2	3	5
Creativity/innovation	0	0	1	1	3	5
Mental toughness	0	0	0	0	5	5
Influence on players	0	0	0	1	4	5

After taking the above matrix (which was compiled using the frequency tables from SPSS 11,5) into consideration, the following competencies can be seen as the most important from the Griqua referees opinions:

- Objectivity/Impartiality
- Fitness
- Dynamism
- Mental toughness

This four competencies were all rated as essential for a top referee to possess by the Griqua referees.

SOUTH WESTERN DISTRICTS REFEREES

Competency	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Trustworthiness	0	0	0	1	5	6
Concentration/focus	0	0	0	0	6	6
Objectivity/Impartiality	0	0	0	1	5	6
Honesty/integrity	0	0	0	1	5	6
Self-confidence	0	0	0	2	4	6
Commitment	0	0	0	2	4	6
Composure	0	0	0	2	4	6
Consistency	0	0	0	2	4	6
Decisiveness	0	0	0	1	5	6
Fitness	0	0	0	1	5	6
Judgment	0	0	1	1	4	6
Resoluteness	0	0	0	4	2	6
Conflict handling	0	0	0	1	5	6
Flexibility	0	0	1	2	3	6
Player control	0	0	1	1	4	6
Respect	0	0	1	1	4	6
Athleticism	0	0	1	2	3	6
Authority	0	0	1	1	4	6
Problem analysis	0	0	0	4	2	6
Technical skills - law application	0	0	1	1	4	6
Communication on field - oral	0	0	0	1	5	6
Ambition	0	0	1	1	4	6
Stress tolerance	0	0	0	3	3	6
Eyesight	0	0	0	2	4	6
Preparation	0	0	0	1	5	6
Technical skills - general	0	0	1	1	4	6
Leadership	0	0	1	2	3	6
Initiative	0	0	1	3	2	6
Persuasiveness	0	0	2	1	3	6
Frustration tolerance	0	0	1	3	2	6
Rapport with players	0	0	1	2	3	6
Dynamism	0	1	1	0	4	6
Competitiveness	0	1	0	1	4	6
Creativity/innovation	0	0	2	1	3	6
Mental toughness	0	0	1	1	4	6
Influence on players	0	1	0	1	4	6
TOTALS	0	3	19	55	139	

According to the matrix of the South Western Districts referees the following are the most important competencies for a referee to possess:

- Concentration / Focus (this is the only competency that all six SWD referees rated as essential, the other competencies only received five responses of essential)
- Trustworthiness
- Objectivity / Impartiality
- Honesty / Integrity
- Decisiveness
- Fitness
- Conflict handling
- Communication on the field – oral

EASTERN PROVINCE REFEREES

Competencies	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Trustworthiness	0	0	0	2	3	5
Concentration/focus	0	0	0	1	4	5
Objectivity/Impartiality	0	0	0	1	4	5
Honesty/integrity	0	0	0	2	3	5
Self-confidence	0	0	0	2	3	5
Commitment	0	0	0	2	3	5
Composure	0	0	0	2	3	5
Consistency	0	0	0	2	3	5
Decisiveness	0	0	0	2	3	5
Fitness	0	0	0	2	3	5
Judgment	0	0	0	3	2	5
Resoluteness	0	0	1	2	2	5
Conflict handling	0	0	0	4	1	5
Flexibility	0	0	1	1	3	5
Player control	0	0	1	2	2	5
Respect	0	0	1	2	2	5
Athleticism	0	0	1	1	3	5
Authority	0	0	1	2	2	5
Problem analysis	0	0	1	3	1	5

Competencies	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Technical skills - law application	0	0	2	1	2	5
Communication on field - oral	0	0	0	1	4	5
Ambition	0	0	2	1	2	5
Stress tolerance	0	0	1	2	2	5
Eyesight	0	0	0	3	2	5
Preparation	0	0	0	3	2	5
Technical skills - general	0	0	1	1	3	5
Leadership	0	0	0	3	2	5
Initiative	0	0	0	3	2	5
Persuasiveness	0	1	2	1	1	5
Frustration tolerance	0	0	0	3	2	5
Rapport with players	0	2	1	2	0	5
Dynamism	0	2	1	1	1	5
Competitiveness	0	1	2	2	0	5
Creativity/innovation	0	1	2	2	0	5
Mental toughness	0	0	0	4	1	5
Influence on players	0	0	1	3	1	5
TOTALS	0	7	22	74	77	

According to the above matrix the Eastern Province referees rated the following competencies as the most important. All these competencies received four essential responses.

- Concentration / Focus
- Objectivity / Impartiality
- Ambition

NATAL SHARKS CURRIE CUP PLAYERS

Competency	Irrelevant	Less important	Important	Very important	Essential	Total respondents
Trustworthiness	0	0	1	1	4	6
Concentration/focus	0	0	0	2	4	6
Objectivity/Impartiality	0	0	0	0	6	6
Honesty/integrity	0	0	0	1	5	6
Self-confidence	0	0	2	2	2	6
Commitment	0	0	1	2	3	6
Composure	0	0	0	3	3	6
Consistency	0	0	0	1	5	6
Decisiveness	0	0	0	4	2	6
Fitness	0	0	0	5	1	6
Judgment	0	0	1	3	2	6
Resoluteness	0	0	0	5	1	6
Conflict handling	0	0	1	4	1	6
Flexibility	0	0	2	3	1	6
Player control	0	0	2	3	1	6
Respect	0	0	2	1	3	6
Athleticism	0	0	3	2	1	6
Authority	0	0	3	2	1	6
Problem analysis	0	0	1	2	3	6
Technical skills- law application	0	0	0	1	5	6
Communication on field - oral	0	0	2	1	3	6
Ambition	0	0	2	2	2	6
Stress tolerance	0	0	1	3	2	6
Eyesight	0	0	2	2	2	6
Preparation	0	0	2	1	3	6
Technical skills - general	0	0	0	2	4	6
Leadership	0	1	3	1	1	6
Initiative	0	0	3	1	2	6
Persuasiveness	0	1	2	2	1	6
Frustration tolerance	0	0	1	2	3	6
Rapport with players	0	2	1	2	1	6
Dynamism	1	2	2	1	0	6
Competitiveness	0	2	2	1	1	6
Creativity/inovation	0	0	3	1	2	6
Mental toughness	0	0	3	1	2	6
Influence on players	0	0	0	1	5	6
TOTALS	1	8	48	71	88	

According to the matrix of the Natal Sharks players the following competencies are the most important for a referee to possess.

- Objectivity / Impartiality
- Honesty / Integrity
- Consistency
- Technical skills – law application
- Influence on players

It is interesting to note that three of the six Natal Sharks players represented South Africa as Springboks.

APPENDIX 8

DESCRIPTIVE DATA OF THE ANOVA FOR FOUR GROUPS

Competency	Respondents	N	Mean	Std. Deviation	Std. Error
Trustworthiness	WP refs	50	4.62	.667	.094
	Lions refs	69	4.49	.779	.094
	Bulls refs	32	4.28	.813	.144
	Bulls players	35	4.14	1.033	.175
	Total	186	4.42	.823	.060
Concentration/Focus	WP refs	50	4.74	.487	.069
	Lions refs	69	4.45	.676	.081
	Bulls refs	32	4.06	1.014	.179
	Bulls players	35	4.40	.775	.131
	Total	186	4.45	.750	.055
Objectivity/Impartiality	WP refs	50	4.72	.497	.070
	Lions refs	69	4.74	.474	.057
	Bulls refs	32	4.53	.567	.100
	Bulls players	35	4.49	.853	.144
	Total	186	4.65	.589	.043
Honesty/Integrity	WP refs	50	4.68	.551	.078
	Lions refs	69	4.68	.581	.070
	Bulls refs	32	4.34	.787	.139
	Bulls players	35	4.00	1.057	.179
	Total	186	4.49	.766	.056
Self-confidence	WP refs	50	4.44	.675	.095
	Lions refs	69	4.39	.647	.078
	Bulls refs	32	4.06	.759	.134
	Bulls players	35	4.03	.923	.156
	Total	186	4.28	.748	.055
Commitment	WP refs	50	4.70	.505	.071
	Lions refs	69	4.51	.585	.070
	Bulls refs	32	4.19	.931	.165
	Bulls players	35	4.43	.850	.144
	Total	186	4.49	.707	.052
Composure	WP refs	50	4.46	.646	.091
	Lions refs	69	4.32	.653	.079
	Bulls refs	32	4.00	.984	.174
	Bulls players	35	4.17	.747	.126
	Total	186	4.27	.746	.055
Consistency	WP refs	50	4.70	.505	.071
	Lions refs	69	4.59	.649	.078
	Bulls refs	32	4.41	.712	.126
	Bulls players	35	4.54	.741	.125
	Total	186	4.58	.646	.047

Competency	Respondents	N	Mean	Std. Deviation	Std. Error
Decisiveness	WP refs	50	4.56	.644	.091
	Lions refs	69	4.38	.730	.088
	Bulls refs	32	4.31	.644	.114
	Bulls players	35	4.00	.767	.130
	Total	186	4.34	.720	.053
Fitness	WP refs	50	4.64	.563	.080
	Lions refs	69	4.36	.641	.077
	Bulls refs	32	4.47	.567	.100
	Bulls players	35	4.11	.900	.152
	Total	186	4.41	.686	.050
Judgment	WP refs	50	4.62	.567	.080
	Lions refs	69	4.36	.618	.074
	Bulls refs	32	4.28	.772	.136
	Bulls players	35	4.40	.775	.131
	Total	186	4.42	.672	.049
Resoluteness	WP refs	50	4.40	.670	.095
	Lions refs	69	4.26	.779	.094
	Bulls refs	32	4.63	.492	.087
	Bulls players	35	3.94	.998	.169
	Total	186	4.30	.782	.057
Conflict handling	WP refs	50	4.56	.644	.091
	Lions refs	69	4.17	.747	.090
	Bulls refs	32	4.31	.780	.138
	Bulls players	35	4.06	.906	.153
	Total	186	4.28	.776	.057
Flexibility	WP refs	50	4.26	.751	.106
	Lions refs	69	4.16	.699	.084
	Bulls refs	32	4.00	.880	.156
	Bulls players	35	4.06	.765	.129
	Total	186	4.14	.758	.056
Player control	WP refs	50	4.44	.675	.095
	Lions refs	69	4.12	.738	.089
	Bulls refs	32	4.16	.723	.128
	Bulls players	35	4.14	.810	.137
	Total	186	4.22	.740	.054
Respect	WP refs	50	4.58	.642	.091
	Lions refs	69	4.28	.856	.103
	Bulls refs	32	4.09	.818	.145
	Bulls players	35	4.11	1.078	.182
	Total	186	4.30	.860	.063
Athleticism	WP refs	50	4.28	.640	.091
	Lions refs	69	3.91	.800	.096
	Bulls refs	32	3.53	.983	.174
	Bulls players	35	3.71	1.100	.186
	Total	186	3.91	.893	.065
Authority	WP refs	50	4.12	.824	.117
	Lions refs	69	3.87	.765	.092
	Bulls refs	32	3.91	.818	.145
	Bulls players	35	3.97	.857	.145
	Total	186	3.96	.808	.059

Competency	Respondents	N	Mean	Std. Deviation	Std. Error
Problem analysis	WP refs	50	4.36	.776	.110
	Lions refs	69	4.26	.678	.082
	Bulls refs	32	4.31	.644	.114
	Bulls players	35	4.14	.879	.149
	Total	186	4.27	.739	.054
Technical skills - law application	WP refs	50	4.30	.707	.100
	Lions refs	69	4.07	.734	.088
	Bulls refs	32	4.34	.602	.106
	Bulls players	35	4.20	.933	.158
	Total	186	4.20	.751	.055
Communication on field - oral	WP refs	50	4.46	.613	.087
	Lions refs	69	4.13	.765	.092
	Bulls refs	32	4.31	.780	.138
	Bulls players	35	4.51	.658	.111
	Total	186	4.32	.723	.053
Ambition	WP refs	50	5.38	7.197	1.018
	Lions refs	69	3.90	.987	.119
	Bulls refs	32	3.84	.954	.169
	Bulls players	35	4.09	1.121	.190
	Total	186	4.32	3.857	.283
Stress tolerance	WP refs	50	4.46	.706	.100
	Lions refs	69	3.97	.822	.099
	Bulls refs	32	3.72	.958	.169
	Bulls players	35	4.03	1.071	.181
	Total	186	4.07	.901	.066
Eyesight	WP refs	50	4.44	.733	.104
	Lions refs	69	4.10	.731	.088
	Bulls refs	32	4.25	.672	.119
	Bulls players	35	4.14	.845	.143
	Total	186	4.23	.752	.055
Preparation	WP refs	50	4.44	.675	.095
	Lions refs	69	4.03	.747	.090
	Bulls refs	32	3.84	.884	.156
	Bulls players	35	4.14	.912	.154
	Total	186	4.13	.808	.059
Technical skills - general	WP refs	50	4.38	.725	.103
	Lions refs	69	4.09	.800	.096
	Bulls refs	32	4.06	.716	.127
	Bulls players	35	4.29	.893	.151
	Total	186	4.20	.791	.058
Leadership	WP refs	50	4.14	.670	.095
	Lions refs	69	3.78	.855	.103
	Bulls refs	32	4.09	.777	.137
	Bulls players	35	3.89	1.105	.187
	Total	186	3.95	.859	.063

Competency	Respondents	N	Mean	Std. Deviation	Std. Error
Initiative	WP refs	50	4.14	.833	.118
	Lions refs	69	3.91	.887	.107
	Bulls refs	32	4.13	.707	.125
	Bulls players	35	3.94	.938	.158
	Total	186	4.02	.854	.063
Persuasiveness	WP refs	50	3.80	1.010	.143
	Lions refs	69	3.84	.868	.105
	Bulls refs	32	3.63	1.157	.205
	Bulls players	35	3.69	.963	.163
	Total	186	3.76	.974	.071
Frustration tolerance	WP refs	50	4.28	.784	.111
	Lions refs	69	4.01	.831	.100
	Bulls refs	32	3.88	.793	.140
	Bulls players	35	4.11	.900	.152
	Total	186	4.08	.831	.061
Rapport with players	WP refs	50	3.46	1.216	.172
	Lions refs	69	3.36	1.150	.138
	Bulls refs	32	3.22	1.099	.194
	Bulls players	35	3.51	1.147	.194
	Total	186	3.39	1.154	.085
Dynamism	WP refs	50	3.32	1.236	.175
	Lions refs	69	3.25	1.193	.144
	Bulls refs	32	3.25	1.107	.196
	Bulls players	35	3.20	1.256	.212
	Total	186	3.26	1.194	.088
Competitiveness	WP refs	50	3.74	1.291	.183
	Lions refs	69	3.64	.907	.109
	Bulls refs	32	3.50	1.107	.196
	Bulls players	35	4.20	.933	.158
	Total	186	3.75	1.078	.079
Creativity/Innovation	WP refs	50	3.74	.899	.127
	Lions refs	69	3.64	.857	.103
	Bulls refs	32	3.44	1.045	.185
	Bulls players	35	3.89	1.078	.182
	Total	186	3.68	.949	.070
Mental toughness	WP refs	50	4.26	.777	.110
	Lions refs	69	4.10	.877	.106
	Bulls refs	32	3.94	1.045	.185
	Bulls players	35	4.03	.985	.166
	Total	186	4.10	.904	.066
Influence on players	WP refs	50	4.28	.757	.107
	Lions refs	69	3.91	.951	.114
	Bulls refs	32	3.75	1.218	.215
	Bulls players	35	3.83	1.071	.181
	Total	**186**	**3.97**	**.991**	**.073**

APPENDIX 9

DESCRIPTIVE DATA OF THE ANOVA ANALYSIS FOR THREE GROUPS

		N	Mean	Std. Deviation	Minimum	Maximum
Competency						
Trustworthiness	WP refs	50	4.62	.667	2	5
	Lions refs	69	4.49	.779	2	5
	Bulls refs	32	4.28	.813	3	5
	Total	151	4.49	.756	2	5
Concentration/Focus	WP refs	50	4.74	.487	3	5
	Lions refs	69	4.45	.676	2	5
	Bulls refs	32	4.06	1.014	2	5
	Total	151	4.46	.746	2	5
Objectivity/Impartiality	WP refs	50	4.72	.497	3	5
	Lions refs	69	4.74	.474	3	5
	Bulls refs	32	4.53	.567	3	5
	Total	151	4.69	.506	3	5
Honesty/Integrity	WP refs	50	4.68	.551	3	5
	Lions refs	69	4.68	.581	3	5
	Bulls refs	32	4.34	.787	3	5
	Total	151	4.61	.632	3	5
Self-confidence	WP refs	50	4.44	.675	3	5
	Lions refs	69	4.39	.647	2	5
	Bulls refs	32	4.06	.759	2	5
	Total	151	4.34	.692	2	5
Commitment	WP refs	50	4.70	.505	3	5
	Lions refs	69	4.51	.585	3	5
	Bulls refs	32	4.19	.931	2	5
	Total	151	4.50	.672	2	5
Composure	WP refs	50	4.46	.646	3	5
	Lions refs	69	4.32	.653	3	5
	Bulls refs	32	4.00	.984	1	5
	Total	151	4.30	.747	1	5
Consistency	WP refs	50	4.70	.505	3	5
	Lions refs	69	4.59	.649	2	5
	Bulls refs	32	4.41	.712	2	5
	Total	151	4.59	.625	2	5
Decisiveness	WP refs	50	4.56	.644	2	5
	Lions refs	69	4.38	.730	2	5
	Bulls refs	32	4.31	.644	3	5
	Total	151	4.42	.687	2	5
Fitness	WP refs	50	4.64	.563	3	5
	Lions refs	69	4.36	.641	3	5
	Bulls refs	32	4.47	.567	3	5
	Total	151	4.48	.609	3	5

		N	Mean	Std. Deviation	Minimum	Maximum
Competency						
Judgment	WP refs	50	4.62	.567	3	5
	Lions refs	69	4.36	.618	3	5
	Bulls refs	32	4.28	.772	2	5
	Total	151	4.43	.648	2	5
Resoluteness	WP refs	50	4.40	.670	3	5
	Lions refs	69	4.26	.779	1	5
	Bulls refs	32	4.63	.492	4	5
	Total	151	4.38	.701	1	5
Conflict handling	WP refs	50	4.56	.644	3	5
	Lions refs	69	4.17	.747	2	5
	Bulls refs	32	4.31	.780	3	5
	Total	151	4.33	.737	2	5
Flexibility	WP refs	50	4.26	.751	3	5
	Lions refs	69	4.16	.699	3	5
	Bulls refs	32	4.00	.880	2	5
	Total	151	4.16	.758	2	5
Player control	WP refs	50	4.44	.675	3	5
	Lions refs	69	4.12	.738	2	5
	Bulls refs	32	4.16	.723	3	5
	Total	151	4.23	.725	2	5
Respect	WP refs	50	4.58	.642	3	5
	Lions refs	69	4.28	.856	2	5
	Bulls refs	32	4.09	.818	2	5
	Total	151	4.34	.799	2	5
Athleticism	WP refs	50	4.28	.640	3	5
	Lions refs	69	3.91	.800	2	5
	Bulls refs	32	3.53	.983	1	5
	Total	151	3.95	.835	1	5
Authority	WP refs	50	4.12	.824	2	5
	Lions refs	69	3.87	.765	3	5
	Bulls refs	32	3.91	.818	2	5
	Total	151	3.96	.799	2	5
Problem analysis	WP refs	50	4.36	.776	2	5
	Lions refs	69	4.26	.678	3	5
	Bulls refs	32	4.31	.644	3	5
	Total	151	4.30	.702	2	5
Technical skills - law application	WP refs	50	4.30	.707	3	5
	Lions refs	69	4.07	.734	3	5
	Bulls refs	32	4.34	.602	3	5
	Total	151	4.21	.705	3	5
Communication on field - oral	WP refs	50	4.46	.613	3	5
	Lions refs	69	4.13	.765	2	5
	Bulls refs	32	4.31	.780	2	5
	Total	151	4.28	.732	2	5
Ambition	WP refs	50	5.38	7.197	2	55
	Lions refs	69	3.90	.987	1	5
	Bulls refs	32	3.84	.954	2	5
	Total	151	4.38	4.249	1	55

		N	Mean	Std. Deviation	Minimum	Maximum
Competency						
Stress tolerance	WP refs	50	4.46	.706	2	5
	Lions refs	69	3.97	.822	2	5
	Bulls refs	32	3.72	.958	2	5
	Total	151	4.08	.860	2	5
Eyesight	WP refs	50	4.44	.733	2	5
	Lions refs	69	4.10	.731	3	5
	Bulls refs	32	4.25	.672	3	5
	Total	151	4.25	.730	2	5
Preparation	WP refs	50	4.44	.675	3	5
	Lions refs	69	4.03	.747	2	5
	Bulls refs	32	3.84	.884	2	5
	Total	151	4.13	.786	2	5
Technical skills - general	WP refs	50	4.38	.725	2	5
	Lions refs	69	4.09	.800	2	5
	Bulls refs	32	4.06	.716	3	5
	Total	151	4.18	.767	2	5
Leadership	WP refs	50	4.14	.670	3	5
	Lions refs	69	3.78	.855	2	5
	Bulls refs	32	4.09	.777	3	5
	Total	151	3.97	.795	2	5
Initiative	WP refs	50	4.14	.833	2	5
	Lions refs	69	3.91	.887	2	5
	Bulls refs	32	4.13	.707	3	5
	Total	151	4.03	.836	2	5
Persuasiveness	WP refs	50	3.80	1.010	1	5
	Lions refs	69	3.84	.868	2	5
	Bulls refs	32	3.63	1.157	1	5
	Total	151	3.78	.979	1	5
Frustration tolerance	WP refs	50	4.28	.784	2	5
	Lions refs	69	4.01	.831	2	5
	Bulls refs	32	3.88	.793	2	5
	Total	151	4.07	.817	2	5
Rapport with players	WP refs	50	3.46	1.216	1	5
	Lions refs	69	3.36	1.150	1	5
	Bulls refs	32	3.22	1.099	2	5
	Total	151	3.36	1.157	1	5
Dynamism	WP refs	50	3.32	1.236	1	5
	Lions refs	69	3.25	1.193	1	5
	Bulls refs	32	3.25	1.107	1	5
	Total	151	3.27	1.183	1	5
Competitiveness	WP refs	50	3.74	1.291	1	5
	Lions refs	69	3.64	.907	1	5
	Bulls refs	32	3.50	1.107	2	5
	Total	151	3.64	1.085	1	5
Creativity/Innovation	WP refs	50	3.74	.899	2	5
	Lions refs	69	3.64	.857	2	5
	Bulls refs	32	3.44	1.045	2	5
	Total	151	3.63	.914	2	5
Mental toughness	WP refs	50	4.26	.777	2	5
	Lions refs	69	4.10	.877	2	5
	Bulls refs	32	3.94	1.045	2	5

		N	Mean	Std. Deviation	Minimum	Maximum
Competency						
	Total	151	4.12	.886	2	5
Influence on players	WP refs	50	4.28	.757	3	5
	Lions refs	69	3.91	.951	1	5
	Bulls refs	32	3.75	1.218	1	5
	Total	151	4.00	.973	1	5

APPENDIX 10

COMPARISON BETWEEN THE MEAN SCORES FOR THE TOTAL NUMBER OF REFEREES (N=181) AND THE TOTAL NUMBER OF PLAYERS (N=42)

	REFEREES		PLAYERS		TOTAL	
	Mean	**N**	**Mean**	**N**	**Mean**	**N**
Trustworthiness	4.51	181	4.21	42	4.45	223
Concentration / Focus	4.50	181	4.45	42	4.49	223
Objectivity / Impartiality	4.70	181	4.57	42	4.68	223
Honesty / Integrity	4.59	181	4.14	42	4.51	223
Self-confidence	4.36	181	4.05	42	4.30	223
Commitment	4.49	181	4.43	42	4.48	223
Composure	4.33	181	4.24	42	4.31	223
Consistency	4.57	181	4.60	42	4.58	223
Decisiveness	4.44	181	4.07	42	4.37	223
Fitness	4.48	181	4.14	42	4.42	223
Judgment	4.43	181	4.38	42	4.42	223
Resoluteness	4.36	181	3.86	42	4.26	223
Conflict handling	4.34	181	4.07	42	4.29	223
Flexibility	4.18	181	4.05	42	4.15	223
Player control	4.23	181	4.12	42	4.21	223
Respect	4.34	181	4.14	42	4.30	223
Athleticism	3.96	181	3.71	42	3.91	223
Authority	4.02	181	3.90	42	4.00	223
Problem analysis	4.30	181	4.19	42	4.28	223
Technical skills – law application	4.22	181	4.29	42	4.23	223

	REFEREES	**PLAYERS**	**TOTAL**	42	4.32	223
	Mean	**N**	**Mean**	**N**	**Mean**	**N**
Stress tolerance	4.09	181	4.05	42	4.09	223
Eyesight	4.25	181	4.12	42	4.23	223
Preparation	4.14	181	4.14	42	4.14	223
Technicall skills – general	4.20	181	4.36	42	4.23	223
Leadership	3.96	181	3.81	42	3.93	223
Initiative	4.02	181	3.93	42	4.00	223
Persuasiveness	3.80	181	3.69	42	3.78	223
Frustration tolerance	4.12	181	4.10	42	4.11	223
Rapport with players	3.38	181	3.50	42	3.40	223
Dynamism	3.33	181	3.07	42	3.28	223
Competitiveness	3.67	181	4.00	42	3.73	223
Creativity / Innovation	3.63	181	3.71	42	3.65	223
Mental toughness	4.17	181	4.00	42	4.14	223
Influence on players	4.03	181	3.81	42	3.99	223

APPENDIX 11

INDIVIDUAL WEIGHTED COMPETENCY INDEXES FOR THE LARGE RESPONSE GROUPS

Weighted Competency Index for the Blue Bull referees

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORES
1.	Technical skills - law application	1698.72
2.	Fitness	1695.84
3.	Resoluteness	1681.04
4.	Decisiveness	1665.84
5.	Problem analysis	1665.84
6.	Objectivity/Impartiality	1660.08
7.	Eyesight	1644.88
8.	Consistency	1633.31
9.	Self-confidence	1597.15
10.	Judgment	1591.39
11.	Communication on field - oral	1591.39
12.	Player control	1591.04
13.	Initiative	1591.04
14.	Technical skills - general	1582
15.	Composure	1541.77
16.	Respect	1540.43
17.	Conflict handling	1531.44
18.	Flexibility	1501.74
19.	Leadership	1492.4
20.	Frustration tolerance	1489.47
21.	Trustworthiness	1486.64
22.	Ambition	1445.32
23.	Authority	1444.67
24.	Mental toughness	1424.71
25.	Commitment	1403.15
26.	Concentration/focus	1391.53
27.	Honesty/integrity	1391.26
28.	Preparation	1366.99
29.	Persuasiveness	1313.64
30.	Stress tolerance	1298.65
31.	Influence on players	1294.53

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORES
32.	Athleticism	1287.72
33.	Competitiveness	1200.96
34.	Creativity/innovation	1131.97
35.	Dynamism	1008.94
36.	Rapport with players	1007.21

Weighted Competency Index for the Blue Bulls players

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORE
1.	Consistency	743.69
2.	Communication on field - oral	733.57
3.	Objectivity/Impartiality	728.26
4.	Commitment	715.34
5.	Concentration/focus	705.22
6.	Judgment	705.22
7.	Technical skills - general	694.7
8.	Technical skills - law application	670.98
9.	Competitiveness	670.9
10.	Composure	663.37
11.	Trustworthiness	657.3
12.	Problem analysis	656.23
13.	Respect	655.02
14.	Eyesight	654.4
15.	Player control	652.57
16.	Ambition	651.62
17.	Fitness	651.6
18.	Preparation	650.06
19.	Frustration tolerance	643.6
20.	Conflict handling	640.43
21.	Stress tolerance	636.87
22.	Self-confidence	635.88
23.	Flexibility	633.19
24.	Mental toughness	631.54
25.	Honesty/integrity	630.49
26.	Decisiveness	630.1
27.	Authority	621.13
28.	Initiative	612.16
29.	Resoluteness	607.82
30.	Creativity/innovation	602.06
31.	Leadership	596.05

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORE
32.	Influence on players	583.05
33.	Persuasiveness	566.75
34.	Athleticism	564.53
35.	Rapport with players	525.79
36.	Dynamism	445.76

Weighted Competency Index for the Gauteng Lions referees

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORE
1.	Objectivity/Impartiality	5453.33
2.	Commitment	5411.51
3.	Self-confidence	5356.27
4.	Judgment	5349.95
5.	Honesty/integrity	5324.8
6.	Consistency	5310.21
7.	Fitness	5302.72
8.	Concentration/focus	5295.88
9.	Composure	5265.36
10.	Problem analysis	5184.06
11.	Decisiveness	5170.64
12.	Resoluteness	5140.27
13.	Trustworthiness	5109.99
14.	Flexibility	5065.4
15.	Conflict handling	5021.61
16.	Player control	4987.54
17.	Communication on field - oral	4943.19
18.	Eyesight	4936.87
19.	Technical skills- law application	4896.22
20.	Respect	4875.96
21.	Preparation	4871.76
22.	Technical skills - general	4811.37
23.	Mental toughness	4739.42
24.	Frustration tolerance	4699.03
25.	Stress tolerance	4661.67
26.	Influence on players	4575.28
27.	Initiative	4571.84
28.	Athleticism	4567.47
29.	Authority	4517.21
30.	Ambition	4376.75
31.	Persuasiveness	4373.57
32.	Leadership	4292.27
33.	Competitiveness	4178.39

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORE
34.	Creativity/innovation	4127.72
35.	Rapport with players	3526.64
36.	Dynamism	3119.36

Weighted Competency Index for the Western Province referees

NUMBER DESCENDING	COMPETENCIES	WEIGHTED SCORE
1.	Concentration/focus	2469.14
2.	Objectivity/Impartiality	2451.87
3.	Commitment	2434.6
4.	Consistency	2434.6
5.	Honesty/integrity	2409.98
6.	Fitness	2375.44
7.	Judgment	2358.17
8.	Trustworthiness	2358.02
9.	Decisiveness	2313.56
10.	Respect	2308.93
11.	Conflict handling	2291.66
12.	Communication on field - oral	2212.66
13.	Stress tolerance	2212.51
14.	Composure	2205.31
15.	Eyesight	2187.89
16.	Player control	2180.69
17.	Preparation	2180.69
18.	Self-confidence	2180.69
19.	Resoluteness	2146.15
20.	Technical skills - general	2136.08
21.	Problem analysis	2104.11
22.	Ambition	2083.06
23.	Technical skills - law application	2045.1
24.	Athleticism	2042.53
25.	Frustration tolerance	2027.68
26.	Influence on players	2013.13
27.	Mental toughness	2010.41
28.	Flexibility	1995.86
29.	Leadership	1899.59
30.	Authority	1882.02
31.	Initiative	1877.39
32.	Competitiveness	1624.88
33.	Persuasiveness	1601.07

NUMBER DESCENDING	COMPETENCIES	WEIGHTED SCORE
34.	Creativity/innovation	1488.61
35.	Rapport with players	1340.66
36.	Dynamism	1219.32

Weighted Competency Index for the Free State referees

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORE
1.	Problem analysis	505.6
2.	Decisiveness	492.14
3.	Influence on players	478.68
4.	Judgment	471.54
5.	Technical skills - general	471.54
5.	Frustration tolerance	471.54
5.	Trustworthiness	464.4
6.	Concentration/focus	464.4
6.	Honesty/integrity	464.4
6.	Leadership	464.4
7.	Fitness	458.08
7.	Flexibility	458.08
7.	Eyesight	458.08
8.	Commitment	437.48
8.	Resoluteness	437.48
8.	Player control	437.48
8.	Respect	437.48
8.	Authority	437.48
8.	Communication on field - oral	437.48
9.	Composure	430.34
9.	Athleticism	430.34
9.	Ambition	430.34
10.	Conflict handling	424.02
10.	Initiative	424.02
11.	Objectivity/Impartiality	423.2
12.	Consistency	416.88
12.	Technical skills - law application	416.88
13.	Mental toughness	403.42
14.	Self-confidence	396.28
15.	Persuasiveness	357.49

NUMBER DESCENDING	COMPETENCY	WEIGHTED SCORE
16.	Competitiveness	337.4
17.	Stress tolerance	329.75
18.	Preparation	321.84
19.	Creativity/innovation	309.97
20.	Dynamism	263.73
21.	Rapport with players	250.27