THE VALIDATION OF AN ASSESSMENT BATTERY FOR SALES REPRESENTATIVES IN A TELECOMMUNICATION COMPANY

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COMMENTS

The reader is reminded of the following:

- The references as well as the editorial style as prescribed by the *Publication Manual (fifth edition)* of the American Psychological Association (APA) were followed in this dissertation. This practice is in line with the policy of the Programme in Industrial Psychology of the North-West University to use APA style in all scientific documents as from January 1999.

- The mini-dissertation is submitted in the form of a research article.

"...and in the tracks of our footsteps will be the milestones of a new dawn..." - Mongane Wally Serote

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Opinions expressed and the conclusions arrived at are those of the author and not necessarily to be attributed to the North-West University.

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ABSTRACT

Subject: The validation of an assessment battery for sales representatives in a telecommunication company

Key terms: Telecommunication company, sales, marketing, assessment battery, selection, validation, globalisation, organisational competitiveness, job requirements, competency profiling, personality.

Globalisation yields numerous challenges and continuous changes in the economic environment, rapid technological advancements, and an increased emphasis on organisational competitiveness. The existing practice in the Telecommunications company relied on conventional recruitment-on-vacancy and training. In 1997, a customer contact research programme was launched to review the specific competencies underlying the full range of customer contact roles, in order to understand the constructs which would underlie effective assessment of people for the role of sales and marketing.

The aim of this research was to evaluate the effectiveness of an assessment battery in a telecommunications company. The assessment battery measures the participants' essential skills, behaviour and performance to bring about critical development action.The Work Profiling System (WPS) and Subject Matter Experts in the Sales Division identified the fifteen competencies. The assessment battery consisted of Ability Tests: Verbal Evaluation (VCC3) and Numerical Evaluation (NCC4), and a personality questionnaire: Customer Contact Styles Questionnaire (CCSQ7.2). The Customer Contact Competency Inventory (CCCI) was electronically administered to the sales representatives' respective managers in 2006, to give objective 360° feedback. The study population (n=97) consisted of sales representatives working in a Telecommunication company.

The objectives for this research were to validate the chosen selection battery for the sales representatives, and determine its relation to manager-rated performance. Descriptive and inferential statistics were used to analyse the data. Stepwise multiple regression analyses were carried out to determine whether the independent variables (CCSQ7.2 and Ability Tests) hold any predictive value regarding the dependent variable (CCCI).

The results of the regression analyses showed that Verbal Evaluation (VCC3) was a significant predictor of: Convincing, Communicating Orally, Results Driven, Problem Solving and Organisation. Modest (R4) was a significant predictor of Convincing. Participative (R5) was a significant predictor of Problem Solving and Organisation.

Overall, it can be stated that there is a significant relationship between the test battery and job performance. The results in this study reflect that correlations between personality, ability and performance were small to moderate. This is lower than expected and what is found in similar international research. This is probably due to the flawed criterion. The results should be used with caution to prevent making a Type II error.

Recommendations for future research are made.

OPSOMMING

Onderwerp: Die validasie van 'n keuringsbattery vir verkoopsverteenwoordigers in 'n telekommunikasie maatskappy.

Sleutelterme: Telekommunikasie maatskappy, verkope, bemarking, keuringsbattery, keuring, validering, globalisering, organisatoriese kompetisie, werkvereistes, vaardigheids profilering, persoonlikheid.

Globalisering binne die Telekommunikasie bedryf in Suid-Afrika lewer enorme uitdagings en voortdurende veranderinge in die ekonomiese omgewing, en toenemende klem op hoedanig 'n organisasie kompeterend is. Die bestaande werksmag berus op die konvensionele werwing vir 'n vakature beginsel en opleiding. Die oorspronklike doel met die daarstelling van die kliënte kontak navorsings program in 1997, was ten doel die hersiening van spesifieke vaardighede onderliggend aan die volle reeks van kliënt kontak rolle en die verstaan van die konstrukte wat onderliggend is om die effektiewe assessering van hierdie mense in hul rol as verkoopsverteenwoordigers.

Die doel van hierdie navorsing was om die evaluering van 'n assesserings battery te beskrywe deur 'n reeks van kliënte kontak vaardigheids intervensies en 360° instrument saamgestel deur SHL vir verkoopsverteenwoordigers. Die assesserings battery meet die deelnemers vir die nodige kennis rakende vaardighede, gedrag en insig hoedanig prestasie kan verbeter met die daarstelling van kritiese ontwikkelings aksies. 'n Groep van sewe en negentig (n=97) verkoopsverteenwoordigers werksaam in 'n Telekommunikasie maatskappy is geassesseer. 'n Metings battery wat die Verbal evaluation (VCC3), Numerical evaluation (NCC4) en 'n persoonlikheidsvraelys wat die Customer Contact Styles Questionnaire (CCSQ7.2) was, is opgestel en geadministreer. Die bestuurders van hierdie toetslinge was versoek om 'n 360 grade terugvoering te voltooi wat gebaseer is op vaardighede geïdentifiseer deur die Work Profiling System (WPS).

Die doel van hierdie navorsing is dus die validasie van die gekose seleksie battery vir verkoopverteenwoordigers in verhouding tot toesighouers se berekende prestasie. Beskrywende en inferensiële statistiek is gebruik om die data te ontleed. Regressie-analise was uitgevoer om te bevestig of die onafhanklike veranderlike (CCSQ en Vaardigheidstoetse) enige beduidende waarde hou met die afhanklike veranderlike (CCCI).

Die resultate van die regressie-analise het daarop gedui dat die Verbal Evaluation (VCC3) met die volgende bevoegdhede positief verband hou, naamlik: Convincing, Communicating Orally, Results Driven, Problem Solving en Organisation. Modest (R4) het met Convincing verband gehou. Participative (R5) het met Problem Solving en Organisation verband gehou.

Dit kan aangedui word dat daar 'n beduidende verhouding tussen die toestsbattery en werksukses bestaan. Die resultate in hierdie studie wys dat korrelasies tussen persoonlikheid, vermoëns en werksprestasie klein tot medium was. Dit is laer as wat verwag was en daar is gevind dat dit soortgelyk is in internasionale studies. Dit kan te wyte wees aan die foutiewe kriterium maatstaf. Die resultate moet met sorg gebruik word om te voorkom dat 'n Tipe II fout gemaak word.

Aanbevelings vir toekomstige navorsing word aan die hand gedoen.

CHAPTER 1

INTRODUCTION

This mini-dissertation focuses on the validation of an assessment battery for sales representatives in a telecommunication company in South Africa. This chapter contains the problem statement and a discussion of the research objectives, in which the general objective and specific objectives are set out. The research method is explained and an overview of chapters is given.

1.1. PROBLEM STATEMENT

The contemporary workplace has become a volatile, demanding and often hostile environment from both an economic as well as a psychological perspective (Maslach & Leiter, 1997). The evolutionary process of globalisation may be seen as contributing towards the creation of such contemporary workplaces. Globalisation, as expounded upon by Gordon (1999), involves the evolution of a global marketplace wherein business organisations are able to conduct their activities within and across national boundaries. The process of globalisation within South African business organisations, although often expansionary in nature, has also yielded numerous challenges. Continuous changes in the global economic environment, rapid technological advancements, and an increased emphasis on organisational competitiveness, are only some of the challenges presented by globalisation trends (Prahalad & Hamel, 1998).

The Telecommunication Company that forms the subject of this study is one of the largest companies registered in the Republic of South Africa, and is the largest service provider on the African continent based on operating revenue and assets. The company offers fixed- voice and data, and mobile communications services. Their roots are deeply embedded in South Africa, and it is no coincidence that the evolution of the Telecommunications Company mirrors the evolution of the country. Proudly South African, they've evolved from state control to public ownership, from monopoly outlook to competitive mindset, from providing plain old telephone services to delivering integrated communications solutions.

The consequent organisational restructuring and re-engineering, employed as an attempt to deal with the challenges presented by globalisation, has served to contribute to South African employees' job related anxiety and insecurity (Probst & Brubaker, 2001). Hence, from the work of Probst and Brubaker (2001), it becomes evident that the contemporary workplace may often be challenging and anxiety provoking to employees. Rothmann (2003) expounds on the challenges faced by employees by indicating that they have to cope with many additional demands, often with limited resources, and a lack of control.

The Telecommunications Company develops telecommunications solutions that are tailored to the specific needs of their corporate customers. The Company has been established with a focus on delivering outstanding customer service, developing the right infrastructure to support future advanced products and services, and to increase its' market share. The company has committed itself to develop a Sales Division that will be a key instrument with which they can position themselves to be a world-class leader in the industry. This division needs to add value to all its' service and product offerings by satisfying their customers' demand for face-to-face contact.

The mission and vision statement of business sales has as its primary objective to be the preferred retail channel for communication products in South Africa and Africa. The multi-disciplinary nature of the business sales functions and the complexity of business, and the staff employed in the business sales environment, must be well trained and skilled in the products and services offered, as well as the processes governing the various aspects of these products and services. Management recognises that employee satisfaction, commitment and training, and development of the business sales employees, are critical in their journey towards world-class status.

In a pioneering venture for the organisation, a drive is being initiated to build capacity within the existing workforce, ahead of need, and instead of relying on the conventional recruitment-on-vacancy practice, generally followed by training. The initial purpose in launching a customer-focused research programme in 1997 was to review the specific competencies underlying the full range of customer contact roles, in order to understand the constructs which would underlie effective assessment of people for these roles. The development of a

new range of instruments to meet the needs of the employers was an outcome of this first stage. A number of authors have proposed that a "service orientation" construct underpins both sales and customer service roles. Hogan, Hogan, and Busch (1984, p. 170) define service orientation as "...a set of attitudes and behaviours that affects the quality of interaction between the staff of any organisation and its customers". They go on to suggest that customer focused behaviour is based on a cluster of more fundamental competencies which can be separately defined and measured. Parasuraman, Berry, and Zeithaml (1991) also recognises the multi-faceted nature of service orientation, distinguishing degree of client participation, service delivery and long-term outcomes.

Thus, whilst it may be possible to identify one or more aspects of behaviour which underlie particular types of performance, it is likely that different dimensions of underlying style will relate to different aspects of performance. Dimensions similar to those from the domain of personality research may be related to different dimensions of performance. 'conscientiousness' may be strongly related to reliability of performance, 'extroversion' to being an interactive socialiser, and 'emotional stability' to resilience and optimism. A detailed profile of a person's style, or personality, as well as their abilities, should provide information on how they would approach a selling role and how well they match different selling or service types. In particular, it should provide information on what aspects of a selling or customer service role they would perform well, and where there might be room for improvement.

The Telecommunication Company previously used to advertise internal and external vacant positions via an internal Vacancy Bulletin, and Recruitment Agencies. Human Resources only required the submission of Curriculum Vitae, and then short-listed candidates according to the job description. Human Resources and Management then conducted a Competency Based Interview (CBI). The interview conducted was based on competencies identified from a job description and not by means of an in-depth job analysis profile. The successful candidate was selected on recommendation from the Human Resources Department, based on the outcome of the competency based interview results, and was then employed and placed in the organisation. A selection decision was based on the outcome of the CBI results, and was the only criteria to predict job success.

The company currently conducts psychological assessments to build individual and organisational competence as an effective alternative to enhance the sales representative selection process. The formal psychological assessment process has been identified as an ideal vehicle to be utilised to nurture and grow potential individuals into the sales function, thus ensuring a contingency for the churn currently experienced in sales.

According to Lawler (1992), money spent on employee selection is usually money well spent, because it can produce big savings if it reduces turnover and leads to a workforce that can operate in a highly involved manner. The sales representatives within the Telecommunication Company work in a highly competitive environment, where customers are expecting more value from their service providers. In addition to competition, regulation and value differentiation are placing high demands on the sales force. The prevailing trend of staff turnover within the current business market segment has been identified as a potentially significant threat to the business. Staff churn is being experienced in both the medium and large account segments, and Human Resources are challenged to find suitable replacements within the highly competitive and demanding sales context. Alternative means to ensure the availability of suitably skilled personnel need to be created and pursued to fast track placements within the company's sales channels, as the need arises.

According to Owen and Taljaard (1996), it appears that psychological tests can contribute to the efficiency of selection and placement in industry, if used carefully and responsibly. Friedenberg (1995) refers to research which compared different selection procedures (application forms, letters of reference, interviews and testing) and confirmed that although each technique has its own merits, standardized tests are the most psychologically sound. The importance of the validation of any instrument to be used for assessment purposes is highlighted by recent and ongoing development in the South African labour legislation, and especially the implications of the Employment Equity Act (Eckstein, 1998). These issues also accentuate once again the need for responsible use of tests and other psychological assessment procedures.

An impressive body of work, particularly in organisational and Industrial Psychology, has been labeled the Person-Environment Fit (P-E fit) approach (Pervin, 1968) to job placement.

At its simplest, this approach has assumed that the better the environment, the better the psychological outcome (i.e. satisfaction, lack of strain, better performance) for employees. In some cases any deviation from good, or perfect fit, were taken to lead to lower satisfaction and poorer performance. In other work (Harrison, 1976), the nature of the misfit were taken into account. For example, a person in a job which requires a greater level of ability than he or she possesses may be assumed to perform inadequately, and thus to be dissatisfied. A person who has more ability than the job demands may perform very well, but still be dissatisfied because their abilities are under-utilized. Offering employees more opportunities for personal development may be a better way of reducing staff turnover than raising salaries (Griffiths, 2005).

Some theorists have suggested that a moderate degree of misfit between person and environment may lead to a level of stress/challenge which encourages learning and development (Payne, 1981), creativity (Goodhart & Zantra, 1984) and a sense of increased independence (Kulka, 1979). Brousseau (1983, p. 33) focused particularly on job-person fit and called for the application of a dynamic model, which recognised that "efforts to create work systems capable of sustaining good job-person matching over long periods of time inevitably must grapple with developmental issues". Pargament (1986, p. 677), writing from the perspective of community psychology, extended the following challenge: "Like psychotherapy and social support, some kinds of fit may be good for some people, in some places, some of the time and in some ways. The challenge for researchers in this area is the development of models and methods which capture more fully the richness of the transaction between person and environment".

The benefit of a validated assessment battery for the Telecommunications Company will include opportunities for developing new and multi-skills in the sales field where there is a demand for both internal and external competencies in the business sales environment. Psychological tests are commonly employed as aids in occupational decisions, including the selection and classification of Human Resources. There is scarcely a type of job, from the assembly-operator or filing clerk, to top management, for which some kind of psychological test has not proved helpful in such matters as hiring, job assignment, transfer, promotion or termination (Anastasi & Urbina, 1997).

Use of competency models makes activities like succession planning, deployment of the organisation's human resources, individual training and development plans, and performance management programmes easier to design and implement. The use of standard language or terminology to describe worker competencies is especially important in comparing the human requirements of different jobs. Competency models tend not to be as detailed as attribute models, and they generally include specific job knowledge or skill requirements not included in attribute models. Using this facility, jobs can be compared against one another, not in terms of the tasks performed, but rather in terms of the competencies required to undertake the tasks.

The Telecommunication Company, with the assistance of SHL, conducted the Work Profiling System (WPS, SHL, 1998) on the Sales Division in 2005 in order to determine the competencies essential to success in the job. A measuring battery consisting of an Ability assessment, which is the Verbal Evaluation (VCC3; Baron, Hill, Janman, & Schmidt, 1997c), and the Numerical Evaluation (NCC4; Baron, Hill, Janman, & Schmidt, 1997b), and a personality questionnaire, which is the Customer Contact Styles Questionnaire (CCSQ7.2, Baron, Hill, Janman, & Schmidt, 1997a), were administered by the researcher in April 2005. The Customer Contact Competency Inventory (CCCI, Baron, Hill, Janman, & Schmidt, 1997d) was electronically administered to the Sales Representatives' respective managers in August 2006, to give objective 360° feedback on the sales representatives. The CCCI development profiles were specifically designed to help structure a development discussion with the individual.

The objective of this research is thus to validate the chosen selection battery for the sales representatives, and determine its relation to manager-rated performance. The Work Profiling System (WPS, SHL, 1998) was a technique used to identify the competencies for successful performance for a sales representative. Subject matter experts were identified and they formed part of the job analysis session and have identified 15 competencies.The focus however cascade on five 'extremely important' competencies, which have been identified by the subject matter experts as those essential to the sales function. These five competencies are i) Convincing, ii) Problem Solving, iii) Organisation, iv) Communicating

Orally, and v) Results Driven. Convincing is defined as the key point of persuasive argumentation, negotiating and convincing others, changing people's views and influencing others. Problem solving is defined as the ability to identify potential difficulties and their causes, generating workable solutions and making rational judgements. The competency of Organisation is defined as the ability to organise own time effectively and create own work schedules, prioritising and preparing in advance, and setting realistic time frames. Communicating orally is defined as speaking with confidence, fluently, and at a suitable pace and level, and holding others' attention when speaking. Being Results driven implies that the individual achieves results and willingly tackles demanding tasks. This person sets and exceeds challenging personal targets.

Validation is described as the process by means of which the validity of the selection instrument is determined. A valid assessment battery should result in fair selection. This entails the compiling of the criteria for work success, the choice of predictors, and the choice of a test sample and the determination of validity.

The following research questions emerge from the above-mentioned problem statement:

- What is the construct validity and reliability of the measuring instruments in a sample of Sales Representatives?
- What is the relation between the different factors (verbal ability, numerical ability, personality and manager-rated performance)?
- Can manager-rated performance be predicted by making use of individual-level variables (verbal ability, numerical ability, personality)?
- What recommendations can be made regarding the use of the assessment battery for selection and development of Sales Representatives?

1.2 RESEARCH OBJECTIVES

The research objectives can be divided into a general objective and specific objectives.

1.2.1 General objective

The general objective of this study is to provide a scientific assessment battery, which can be utilised, for both selection and development purposes.

1.2.2 Specific objectives

The specific objectives of the research are the following:

- To determine the validity and reliability of the measuring instruments in a sample of sales representatives.
- To investigate the relation between the different factors (verbal ability, numerical ability, personality and manager-rated performance)?
- To investigate whether manager-rated performance can be predicted by making use of individual-level variables (verbal ability, numerical ability, personality).
- To make recommendations regarding the use of the assessment battery for selection and development of Sales Representatives.

1.3 RESEARCH METHOD

The research method consists of a literature review and empirical study. The results obtained were presented in the form of a research article. The reader should note that a brief literature review is compiled for the purpose of the article.

1.3.1 Literature review

During the first phase, a comprehensive literature review of psychological constructs – with a focus on performance, selection and development will be entered into. The following literature sources will be consulted:

- Library catalogues;
- Psychology journals;
- Industrial Psychology journals;
- Business periodicals index;
- Internet search engines;
- Electronic text and journals;
- Nexus;
- Relevant books and journals.

1.3.2 Empirical study

Phase two consists of the empirical study and includes the research design, the participants and procedure, measuring instruments, statistical analysis and the central research hypothesis.

1.3.2.1 Research design

A non-experimental research design will be used to achieve the research objectives. According to Welman and Kruger (1999), such a research design is optimal where neither a random sample nor a planned intervention is required. Moreover, a non-experimental research design will allow for the possibility that one or more variables, apart from the independent variable, could be responsible for the occurrence or presence of the dependent variable. This design can also be used to assess interrelationships among variables within a population, without establishing a causal relationship between the variables.

1.3.2.2 Participants and procedure

A non-random sample was taken from the Telecommunications company (n=97). The sales representatives, on C band of the Paterson system, were targeted for participation in the study. The Work Profiling System (WPS, SHL, 2004) was a technique used to identify the competencies for successful performance for a sales representative. Subject matter experts were identified and they formed part of that job analysis session. After permission was obtained from the Telecommunication Company, the first phase of the assessments started. First, the Verbal Evaluation (VCC3, Baron et al., 1997c), Numerical Evaluation (NCC4, Baron et al., 1997b) and Customer Contact Styles Questionnaire (CCSQ7.2, Baron et al., 1997a) were administered by the researcher in the sales division in South Africa, over a two-week period in April 2005. A letter was sent to all participants to inform them about the study and to explain the goal and importance thereof. The participants were also assured of the anonymity and confidentiality with which the information would be handled. After the assessments were analysed, the CCCI questionnaire, were electronically mailed to the managers in June/July 2006. The raters were given two weeks and some had less time to complete the CCCI questionnaire. Participants were thanked for their valuable input and time.

1.3.2.3 Measuring Instruments

An assessment battery for Ability tests included the Verbal Evaluation (VCC3, Baron et al., 1997c) and the Numerical Evaluation (NCC4, Baron et al., 1997b) and a Customer Contact Styles Questionnaire (CCSQ7.2, Baron et al., 1997a) was used in this study. The Customer Contact Competency Inventory (CCCI, Baron, et al., 1997d), which is a 360° measuring instrument, was completed by the managers of the sales representatives.

The **Ability tests: Verbal evaluation** (VCC3, Baron et al., 1997c) and **Numerical evaluation** (NCC4, Baron et al., 1997b). **Verbal evaluation** (VCC3, Baron et al., 1997c) measures the ability to understand and evaluate the logic of various written passages. **Numerical evaluation** (NCC4, Baron et al., 1997b) measures the ability to make correct decisions or inferences from numerical data. Candidates were allowed to use a calculator to analyse the statistical information presented. The test is appropriate for any job involving

analysis or decision making based on numerical facts, but the nature of the data presented makes the test particularly relevant for sales and customer service work. These instruments were validated in a sample consisting of a composite group of 2966 applicants for various customer service and sales positions at a large South African financial institution. The sample includes 1998 (67,36%) females and 968 (32,64%) males. The ethnic composition of the sample included 972 (32,77%) Africans, 284 (9,58%) Asians, 379 (12,78%) Coloureds and 837 (28,22%) Whites. There were 494 (16,66%) individuals that did not indicate their ethnicity or indicated another ethnicity. Table 1 reflects the descriptive statistics and reliability (Cronbach's Alpha) of the instruments as obtained in the validation study.

Table 1

Means, Standard Deviations and Cronbach's Alpha Coefficients

	VCC3	NCC4
Mean	27,58	14,29
Standard Deviation	9,72	6,54
Minimum	0,00	0,00
Maximum	59,00	34,00
Coefficient alpha	0,90	0,89

The alpha coefficients obtained in the validation study was high. Reliability coefficients of 0,70 for ability tests were generally considered a minimum for use in selection contexts, but values above 0,80 were preferred to ensure greater accuracy in decision-making.

The **Ability tests: Verbal evaluation** (VCC3) and **Numerical evaluation** (NCC4) following the view which emphasises "differential aptitudes" rather than "general reasoning ability" (Snow & Lohman, 1989), examples of the types of written and numerical information used in various jobs were examined, together with the job analysis and existing validation. Based on real material provided by various organisations, passages and data tables were developed across the range of difficulty.

Items were then developed to test understanding, analysis and evaluation skills at the appropriate levels. Each test was trialled with a sample drawn from various organisations,

applicant groups and final year school and further education students; a sample intended to be as representative as possible of those on whom the final versions of the tests might eventually be used. The final forms of each test were then re-trialed using different sample groups. This confirmed that the tests performed psychometrically as anticipated and provided the necessary standardisation (norm) data. According to the validation studies www.research.shl.co.za, these instruments have been used in South Africa and the United Kingdom in these posts, and findings are that these instruments are valid. The Alpha values for these two scales were: Verbal Evaluation (α=0,90) and Numerical Evaluation (α=0,89).

Like all SHL personality tests, the **Customer Contact Styles Questionnaire** (CCSQ7.2, Baron et al., 1997a) has gone through a lengthy development process. The model for the Customer Contact Styles Questionnaire was based on the Occupational Personality Questionnaire (OPQ) model of personality (SHL, 1993). The Customer Contact Styles Questionnaire (CCSQ7.2) is based on multiple-choice items for the abilities, and combined ipsative (forced) and normative rating scales for the CCSQ7.2. It provides information on those aspects of personality which is important for sales or customer services roles. It can be used for training, development and placement decisions, as well as for the selection of staff. The CCSQ7.2 requires that the respondents choose between options and therefore it is particularly useful for the selection and placement of staff. The validation sample consisted of 737 employees from various job levels at a large South African financial institution. There were 584 (79,35%) females and 152 (20,65%) males. The ages of the respondents ranged between 19 and 62 with a mean age of 32,56 years (*SD*=8,35). In terms of ethnic distribution, the sample consisted of 399 (54,21%) Blacks and 337 (45,79%) Whites. Table 2 gives the descriptive statistics and reliability (Cronbach's Alpha Coefficients) of the instrument as obtained in the validation study.

Table 2

Means, Standard Deviations and Cronbach's Alpha Coefficients of CCSQ-Subscales

CCSQ Scales	Mean	SD	Alpha Coefficient
Persuasive (R1)	29,37	7,81	0,83
Self Control (R2)	46,20	7,79	0,85
Emphatic (R3)	51,48	5,77	0,77
Modest (R4)	39,25	8,49	0,82
Participative (R5)	51,54	9,26	0,90
Sociable (R6)	38,65	8,50	0,86
Analytical (T1)	40,98	6,10	0,79
Innovative (T2)	40,00	9,10	0,88
Flexible (T3)	37,54	5,51	0,83
Structured (T4)	40,32	6,89	0,84
Detail Conscious (T5)	38,64	5,43	0,81
Conscientious (T6)	40,16	5,04	0,83
Resilience (E1)	36,13	7,41	0,75
Competitive (E2)	28,23	8,48	0,84
Results Orientated (E3)	37,26	5,76	0,82
Energetic (E4)	34,04	6,46	0,87

The mean scores and alpha coefficients obtained in the validation study compare well with those yielded by international research (CCSQ manual, Reliabilities, p. 9 Baron et al., 1997a). The mean scores on the sixteen scales in the South African study differed from those obtained in international studies by less than one standard deviation. The alpha coefficients in the South African study were high, and ranged from 0,75 to 0,90.

The **Customer Contact Competency Inventory** (CCCI, Baron et al., 1997d), was completed by the managers of the sales representatives. It is a measuring instrument which allows the rater to measure and manage observable behaviours and provides an insight as to how performance can be improved by introducing some key development actions. The CCCI questionnaire is an electronic version which permits the manager to assess their sales representatives' job performance objectively against 15 competencies. This allows for profiling with appraisal, training and development contexts. The optional CCCI Development

Profile can be used in conjunction with the computer-generated profiles to help the individual and their manager to understand the results, prioritise development needs and plan development activities.

Nowack (1993) stated that 360° assessments are important since sometimes it takes two or more people to really know one. The business world is increasingly competitive. As a result, organisations are continually looking for ways to improve their business performance. This inevitably involves change. In order for organisations to evolve, the people working within them need to adapt – and for this to happen successfully, they first need to know what it is about the way they are currently performing that needs to change. This is where 360° feedback and development comes in. Moreover, limitations of the traditional "top-down" approach, whereby feedback was provided only by an individual's boss or manager, have been realised. According to Williams (1999), no one (rating) source can adequately assess a jobholder's performance, since no one source observes all of an individual's behaviour. Different feedback providers – managers, direct reports, peers, colleagues and customers – can each provide a different perspective on an individual's performance. The growing number of press and journal articles and amount of media coverage indicate the level of interest in 360° feedback. Indeed, a recent survey by SHL showed that 74% of organisations responding were interested in introducing 360° processes (SHL, 1997).

These types of instruments (360° instruments) are questionnaires that request feedback on a person from, typically, their peers, their reports and their manager. They can also extend outside of the organization to include feedback from suppliers and customers. Used typically in the development process, the results from 360° questionnaires help to show the individual how others see them and rate their performance and skills. The individual is also asked to complete the questionnaire, thereby providing a self-assessment also. The CCCI was validated in a sample of 172 broker consultants. The ages of the candidates ranged from twenty-three to sixty-two, with an average of 32,61 years. The majority of the sample was male (77,10%), with 22,90% females. The highest qualification of the candidates ranged from Grade 10 to a post-graduate qualification, with an average job experience of 50,78 months – roughly speaking just more than four years. The reliabilities for the total group were mostly within the 0,70 and 0,85 range, which indicates very good internal reliability for the instrument (SHL, 1997).

1.3.2.4 Statistical analysis

The statistical analysis will be carried out with the help of the Statistica (2001) program. Statistica is the statistics package used to assist in the calculations and statistics run on data. Descriptive stats (e.g. means, standard deviations, skewness and kurtosis) will be used to analyse the data. The independent variables were the Customer Contact Styles Questionnaire (CCSQ7.2) and Ability tests: Verbal evaluation (VCC3) and Numerical evaluation (NCC4). The dependent variable was the CCCI (360° feedback) completed and rated by the sales representatives' respective managers.

Cronbach alpha coefficients and inter-item correlations will be used to assess the internal consistency of the measuring instruments (Clark & Watson, 1995). Coefficient alpha conveys important information regarding the proportion of error variance contained in a scale. According to Clark and Watson (1995), the average inter-item correlation coefficient (which is a straightforward measure of internal consistency) is a useful index to supplement information supplied by coefficient alpha. However, unidimensionality of a scale cannot be ensured simply by focusing on the mean inter-item correlation – it is necessary to examine the range and distribution of these correlations as well.

Correlation coefficients are an index of the linear or straight- relationship between two variables which can be ordered. Correlations can be either positive or negative. A positive correlation indicates that high scores on one variable also imply a high score on the other variable. A negative correlation means that high scores on one variable also imply a low score on the other variable. The size of a correlation can vary from a minimum of -1,00, through 0, to a maximum of 1,00. The larger the correlation the stronger the linear relationship between the two variables, regardless of whether the correlation is positive or negative. There are various kinds of correlations. The most widely used is Pearson's product moment correlation coefficient. This name is usually shortened to Pearson's correlation and is symbolized as *r*. It can be calculated by multiplying the standardized scores of the two variables to obtain their 'product'. These products are then summed and divided by the number of cases minus one to give the mean population estimate of the products. A product moment is the expected or mean value of a product of two variables. A Pearson's correlation

is the same as a standardized regression coefficient. It is used to determine the linear relationship between two variables which are normally distributed. Pearson's (1972) correlation can be strongly affected by extreme scores or outliers. Consequently, if the scores are not normally distributed, the scores can be ranked and a Spearman's (1910) correlation carried out on these ranked scores.

A series of methods for selecting 'good', although not necessarily the best, subsets of explanatory variables exists when using regression analysis. The three most commonly used of these methods are forward selection, backward elimination, and a combination of both of these known as stepwise regression. The criterion used for assessing whether or not a variable should be added to an existing model in forward selection or removed from an existing model in backward elimination is, essentially, the change in the residual sum of squares produced by the inclusion or exclusion of the variable. A stepwise regression analyses will be used to see if manager ratings of performance can be predicted by individual competencies and characteristics.

1.3.2.5 Central research hypothesis

The most highly valued experimental design in the conduct of empirical research in psychology and related sciences is the hypothesis testing design. An exceptionally concise and accurate definition of a "hypothesis" states that "A hypothesis is a proposition about factual and conceptual elements and their relationships that projects beyond known facts and experiences for the purpose of furthering understanding. It is a conjecture or best guess which involves a condition that has not yet been demonstrated in fact, but that merits exploration" (Brown & Ghiselli, 1955, p. 153).

The hypothesis for the current study is given as: Performance of sales representatives, as rated by their managers, can be predicted by customer contact styles, and Ability indicators; or by any combination of these variables. The alternative hypothesis is that none of these variables or any combination thereof, play a role in predicting manager rated performance of Sales Representatives.

1.4. OVERVIEW OF CHAPTERS

Chapter 1: Introduction

Chapter 2: Research article

Chapter 3: Conclusions, limitations and recommendations

1.5 CHAPTER SUMMARY

This chapter discussed the problem statement and research objectives. The measuring instruments and the research method used in this study were explained, followed by a brief overview of the chapters that follow.

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CHAPTER 2

RESEARCH ARTICLE

THE VALIDATION OF AN ASSESSMENT BATTERY FOR SALES REPRESENTATIVES IN A TELECOMMUNICATION COMPANY

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ABSTRACT

Money spent on employee selection is usually money well spent, because it can produce big savings if it reduces turnover and leads to a workforce that can operate in a highly involved manner. The objectives of this study were to investigate the validity of an assessment battery for Sales Representatives in a Telecommunication company in the prediction of manager rated performance. A non-experimental research design was used. The study population (n=97) consisted of Sales Representatives on the C band of the Paterson system. The Verbal Evaluation (VCC3), Numerical Evaluation (NCC4), Customer Contact Styles Questionnaire (CCSQ7.2) and Customer Contact Competency Inventory (CCCI) were used as measuring instruments. The results of the regression analyses showed that Verbal Evaluation and Modest were significant predictors of the Convincing competency. Verbal Evaluation was also a significant predictor of Communicating Orally and being Results Driven. Verbal Evaluation and Participative were significant predictors of Problem Solving and Organisation.

OPSOMMING

Geld wat aan werknemer keuring bestee word is normaalweg geld wat goed spandeer word, aangesien dit kan lei tot groot besparings, indien dit bydrae tot verlaagde arbeidsomset en lei tot 'n werksmag wat op deelnemende wyse kan bydrae tot die organisasie. Die doel van hierdie studie was om die geldigheid van 'n assesseringsbattery vir verkoopsverteenwoordigers in die voorspelling van bestuursbeoordeelde prestasie in 'n Telekommunikasie maatskappy te ondersoek. 'n Nie-ekspirementele ontwerp is gebruik. Die studie populasie (n=97) het bestaan uit verkoopsverteenwoordigers op Patersonposvlak C. 'n Metingsbattery wat die Verbal Evaluation (VCC3), Numerical Evaluation (NCC4), die Customer Contact Styles Questionnaire (CSSQ7.2) en Customer Contact Competency Inventory (CCCI) ingesluit het, was geadministreer. Die resultate van die regressie-analise het aangedui dat Verbal Evaluation en Modest wel met

Convincing verband hou. Verbal Evaluation het met beide Communicating Orally en Results Driven verband gehou. Verbal Evaluation en Participative het met Problem Solving en Organisation verband gehou.

Globalisation, as expounded upon by Gordon (1999), enables business Organisations to conduct their activities within and across national boundaries. During the 20th century, humanity has witnessed the most dramatic changes, which have an impact on all contexts in which we function (Siegal et al., 1996; Williams, Crafford, & Fourie, 2003). South Africa, since 1994, has witnessed a large amount of transformation in political, economic, social and technological environments (Bainbridge, 1996; Brill & Worth, 1997). According to Maslach and Leiter (1997), the contemporary workplace has become a volatile, demanding and often hostile environment from both an economic, as well as a psychological perspective. The consequent organisational restructuring and re-engineering contribute to South African employees' job related anxiety and insecurity (Probst & Brubaker, 2001). According to several authors (Burke & Nelson, 1998; Cameron, Freeman, & Mishra, 1991; Cascio, 1998; Howard, 1995; Kozlowski, Chao, Smith, & Hedlund, 1993), most organisations opt for restructuring, lay-offs and mergers to cut costs, in an attempt to thereby increase their global competitiveness.

Arnolds and Boshoff (2004) state that mergers and take-overs often result in lay-offs taking place. Against this background, previous research has shown that downsizing, restructuring, retrenchments and mergers are happening with increasing frequency, and have a detrimental influence on individuals and organisations (Ashford, Lee, & Bobko, 1989; Clark & Koonee, 1995; Jick, 1985; Robbins, 1998; Romzek, 1985; Schweiger & Ivancevich, 1985; Van Zyl, 2002). Those employees who survive corporate retrenchments often experience low morale, a decrease in productivity and loose organisational trust (Cameron, 1994). "Survivor syndrome" is often the result of retrenchments, and refers to a set of shared reactions and behaviours of people who have survived an adverse event (Brockner, 1986). Brockner (1988) highlighted retrenchments as a direct cause of job insecurity among employees surviving staff cuts.

South African business is confronted with the challenge of becoming globally competitive. Companies are still suffering from problems of low productivity and profitability, as well as low levels of trust and motivation within their workforces (Thomas & Ely, 1996; Thomas & Robertshaw, 1999). Current labour legislation in South Africa and specifically the introduced Employment Equity Act (South Africa, 1998) will require greater democracy in the workplace and higher levels of participation between management and the general workforce.

At the same time, employment equity initiatives, as required by the Act, will increasingly introduce, particularly at senior levels, employees into the workforce who have in many cases thus far been excluded from such positions.

Mbigi (1995) believes that the concept of "ubuntu" is fundamental to the transformation of management in South Africa, in order to develop productive, competitive enterprises. Mthembu (1996) argues that many problems faced by businesses in South Africa are due to the fact that they fail to take cognisance of African values in their corporate business. Values, according to Trompenaars (1993) and Hofstede (1997), are intrinsic to differences in cultures and determine the ways in which people from different cultures will react to situations. Thomas and Ely (1996) also note that diversity encourages different and creative insight and styles in approaching the design of business processes and tasks in the achievement of goals, in the creation of effective teams and in the communication of ideas, amongst others.

Rothmann (2003) expounds on the challenges faced by South African employees by indicating that they have to cope with many additional demands, often with limited resources, and a lack of control. Pienaar (1998) adds that South Africa's unique situation results in added pressure on employees. The changes described above brought about a fundamental need to reduce labour costs or increase productivity, in order to improve competitiveness (Howard, 1995). Organisations facing fast changing internal and external environments may suffer from heightened levels of work stress that can cause personal and job strain (Cartwright & Cooper, 1996; Terry & Callan, 1997), have adverse outcomes on the well-being of individual employees (Bradley & Sutherland, 1994), and often spill over to family life (Kruger, 1988).

According to the Anonymous (2006), the Sales environment is also changing. Key factors driving this change include the speed of innovation, sales effectiveness, new technology, shifts from commoditised selling to value-based selling and dramatically changing markets (globalization, regulation, and changing buyer demographics). Only recently have the 'old school' sales foundations come under scrutiny. 'Selling is dead', a recent breakthrough book by Marc Miller and Jason Sinkovitz (2005, p. 2), challenges some fundamental principles about sales roles. They argue that "selling teams and growth-motivated organisations must change to remain competitive". They premise that sales as a profession is undergoing a

period of radical and permanent change, that will have a significant impact on organizations' success or failure.

Dubinsky and Mattson (1979) argue that sales people have traditionally been seen to play a minor role in the success of retail organisations. Dubinsky and Levy (1989) and Peppers and Rogers (1999) believe that since sales person performance is multifaceted, multiple measures including objective, subjective and behavioural measures should be used in the assessment of retail sales person performance. Performance measurements stress objective or productivity-related measures such as sales volumes (Kotler & Armstrong, 2001), and as such focus on outcomes rather than behaviours.

Research related to personality has also recently clarified the utility of using personality variables for predicting job performance. This research (Barrick & Mount, 1991; Hough, 1992; Salgado, 1997; Tett, Jackson, & Rothstein, 1991) has demonstrated that personality constructs are indeed associated with work performance, with some traits such as Conscientiousness predicting success across jobs. In fact, Locke and Latham (1990, p. 10) stated that "although cognition and motivation can be separated by abstraction for the purpose of scientific study, in reality they are virtually never separate". The centrality of cognition is also captured by Mitchell's (1997, p. 60) definition of motivation as "those psychological processes involved with the arousal, direction, intensity, and persistence of voluntary actions that are goal directed". Motivational constructs can thus be measured by first identifying basic goals that regulate personal behaviour and then determining the arousal, intensity, and persistence associated with those goals. Borman, White, Pulakos, and Oppler (1991), similar to other researchers (Hunter, 1983; Schmidt, Hunter, & Outerbridge, 1986), have found verbal ability to be associated with manager ratings of performance, primarily through the mediating effect of job knowledge, rather than motivational variables.

The modern concept of competencies traces back to the work of psychologist David McClelland (1973). McClelland was increasingly concerned about the widespread use of intelligence and related aptitude tests, which he viewed as too far removed from practical outcomes. He suggested that competencies – outcomes-relevant measures of knowledge, skill, abilities, and traits and/or motives – should be adopted as a more useful approach to aptitude measurement. Although competencies have been in use ever since, their popularity gained considerable momentum in the United States in the early 1990's, partly in response to the accelerated pace of change that many organisations were facing.

The word "competency" is widely used in both HR and business management contexts, yet there is still disagreement as to what it actually means. The popularity of competencies is linked to the work done by Boyatzis (1982) in the area of management effectiveness. He drew a distinction between the tasks and outcomes required for a job, and the behaviours an individual would need to perform them. Training is provided to help employees obtain the knowledge, skills and attitudes that are necessary for being competent in their jobs, or for performing their jobs to a specific level of competence or proficiency.

Leonard-Barton (1990, pp. 1-19) describes core capabilities as "unique," 'distinctive," "difficult to imitate," and "superior to competition". A core competence is very appropriately also referred to as "resource deployment" or "skills". Kim (1993) further stratified linkage of core competence into different levels. Markides and Williamson (1994) define core competencies as a pool of experience, knowledge, and systems that can act together as catalysts to create and accumulate new strategic assets. Teece, Pisano, and Shuen (1997) conclude that core competencies must be derived from examining the range of a firm's (and its competitors') products and services. Lahti (1999) illustrated that core competencies are rooted at the individual level, but also well connected to organisational competitiveness. The resource-based theory provides a more solid explanation on the linkage between competency and competitiveness from individual as well as organisational level (King, 2001; Wright, Dunford, & Snell, 2001). The value of core competencies can be enhanced by combining them with the appropriate complementary assets. Hafeez, Zang, and Malak (2002) define core competencies as resources of the business consisting of physical, intellectual, and cultural assets.

Three characteristics of core competence can be identified in a company. Firstly, a core competence provides potential access to a wide variety of markets. Secondly, a core competence should make a significant contribution to the perceived customer benefits of the end product. Thirdly, a core competence should be difficult for competitors to imitate (Hamel & Prahalad, 1990). A core competence is very appropriately referred to as "resource deployment" or "skills".

Changes in sales and service roles over the last decade reflect the impact of growing competition as well as legislative changes and rapid technological progress. The widespread introduction of Total Quality Management and 'company re-engineering' has also served to underline the importance of customer focus. Sales people can no longer just push the product – they also need to provide effective service. Only through selecting the right sort of people and developing the necessary skills and behaviours can an organisation maintain its competitive lead. In order to find top performers, a new tool must be found that accurately identifies the new complexities in the sales approach.

In a pioneering venture, the Telecommunication Company that forms the subject of this research initiated a drive to build capacity within the existing workforce, ahead of need, and instead of relying on the conventional recruitment-on-vacancy practice, generally followed by training. The initial purpose was to review the specific competencies underlying the full range of customer contact roles, in order to understand the constructs which would underlie effective assessment of people for these roles.

Due to the multi-disciplinary nature of the Business Sales functions and the complexity of the Telecommunication Company, the employees in the Business Sales environment must be very well trained and skilled in the company's products and services. They also need a thorough understanding of the processes governing the various aspects of these products and services, in order to deliver high quality, value-adding service to customers, through which the employees can also reach their full potential. Management recognises that employee satisfaction, commitment, training and development are critical in their journey towards world-class status.

Management therefore decided to conduct a competency audit for Sales representatives within the company. The purpose of the competency audit was twofold, namely to i) determine the areas of strength and development gaps of all Sales representatives as benchmarked against job competencies contained in the job description, and ii) develop and enhance the skills of all Sales representatives based on the findings of the competency audit.

Job analysis has played an important role in the personnel selection process ever since it was found to be useful for designing selection tests (Flanagan, 1947). Job analysis methods may be task (or job) orientated, behaviour (or worker) oriented, or attribute (or trait) oriented (e.g. Ash, 1980; Cornelius, 1997; Lopez & Kesselman, 1981; McCormick, 1976). In fact, not only did ability tests used for pre-employment screening have higher validities when based upon job analysis information (Lopez & Kesselman, 1981), but employment interviews based upon job-relevant criteria were also found to be more valid (Harris, 1989).

The Work Profiling System (WPS, SHL, 1998) is a true multi-method approach. Its intent is to focus on both the work performed and worker attributes or competencies (the knowledge, skills, abilities and personality characteristics) that lead to effective work behaviours. Job analysis information is very useful for a range of HR management activities. For instance, performance management systems rely upon the appraisal of job-relevant objectives and work behaviours. Succession planning and manpower planning activities need current and detailed information about jobs prior to making decisions about the deployment of human resources. Even re-engineering projects need up-to-date job analysis information before jobs can be redesigned or work-flow processes changed."

The process that followed in regard with the competency audit was to conduct 2½ hour assessments with all Sales representatives during April 2005. The assessments were arranged and conducted by the researcher, in all the respective provinces of South Africa. The WPS results were then analysed and interpreted, followed by feedback given to the Executive. Feedback was also given on an individual basis to each employee.

Sales Competencies

SHL is one of the largest international developers and distributors of testing materials, also as related to the sales function in present-day organisations. Changes in sales and service roles over the last decade reflect the impact of growing competition as well as legislative changes and rapid technological progress. The widespread introduction of Total Quality Management and "company re-engineering" has also served to underline the importance of customer focus.

Sales people can no longer just push the product – they also need to provide effective service. This has substantial human resource implications for all jobs which involve significant contact with customers. Only through selecting the right sort of people and developing the necessary skills and behaviours can an organisation maintain its competitive lead.

This process has motivated the search for the "perfect" customer service and sales profile. Some authors have argued that it is possible to identify a single underlying personality characteristic which could predict sales success across different sectors, products and types of customer, for example, "resilience" and "optimism", "conscientiousness" and various forms of "achievement orientation". Others have proposed that for sales people to get results they need to have both enough empathy to be able to understand the customer's position (without being overly sympathetic), as well as having sufficient ego drive (a strong need to persuade and convince) (SHL, 1998a).

A popular approach to the question is to define different personality types epitomising different approaches to the seller-buyer relationship. Schoonmaker (1978) sees the sales process as requiring an adaptive, problem solving approach. He has identified three key types of sales person: 1) Dependent – gregarious with a strong need to be liked; genuine concern for others; 2) Detached – analytical and logical; prefer to handle facts and figures than to deal with people; and 3) Dominant – highly competitive and driven to succeed.

The Work Profiling System (WPS, SHL, 1998) was a technique used to identify the competencies for successful performance for a sales representative. Subject Matter Experts were identified and they formed part of that job analysis session.

The competencies that proved to be highly relevant to the sales function include: Relating to Customers, Convincing, Communicating Orally, Team Work, Fact Finding, Problem Solving, Business Awareness, Specialist Knowledge, Quality Orientation, Organisation, Reliability, Customer Focus, Resilient, Results Driven and Using Initiative. These competencies are grouped under four broader headings, namely having a focus on people, the handling of information, and acting in a dependable manner, and having the energy necessary to perform in a sales position. Table 1 gives a short definition of each competency:

Table 1

Definitions of Customer Contact Competency Inventory

People Focus	
Relating to Customers	Quickly builds rapport and easily establishes relationships with customers. Relates well to different types of customers; listens and get along well with them.
Convincing	Presents the key points of an argument persuasively. Negotiates and convinces others. Changes peoples' views and influence others.
Communicating Orally	Speaks confidently and fluently. Talks at a suitable pace and level. Hold others' attention when speaking.
Team Work	Fits in with the team. Develops effective and supportive relationships with colleagues. Is considerate towards them and creates a sense of team spirit.
Information Handling	
Fact Finding	Knows where to find relevant information. Checks facts and data. Retrieves and absorbs information quickly.
Problem Solving	Identifies potential difficulties and their causes. Generates workable solutions and makes rational judgements.
Business Awareness	Is aware of competitor activity and market trends. Is profit conscious and appreciates the business impact of own work on profits.
Specialist Knowledge	Have background knowledge and a thorough grasp of products and services. Has expertise in own area.
Dependability	
Quality Orientation	Provides a quality service. Maintains high professional standards and gets work right the first time.
Organisation	Organises own time effectively and creates own work schedules. Prioritises and prepares in advance. Sets realistic time frames.
Reliability	Is reliable. Follows directions from managers and respects policies and procedures. Shows commitment to the organisation and task completion.
Energy	
Customer Focus	Puts customers first and is eager to please them. Works hard to meet customers' needs and looks after their interests.
Resilient	Remains calm and self-controlled under pressure. Reacts well to change and remains positive despite setbacks. Keeps difficulties in perspective.
Results Driven	Gets results and willingly tackles demanding tasks. Sets and exceeds challenging personal targets.
Using Initiative	Takes responsibility for own actions and makes decisions without referring to others. Acts on own initiative.

Of the 15 competencies outlined above, WPS (SHL, 1998) and subject matter experts have identified five competencies viewed as essential to the sales environment.

These five competencies are i) Convincing, ii) Problem Solving, iii) Organisation, iv) Communicating Orally; and v) Results Driven. *Convincing* is defined as the key point of persuasive argumentation, negotiating and Convincing others, changing people's views and influencing others. *Problem Solving* is defined as the ability to identify potential difficulties and their causes, generating workable solutions and making rational judgements. The competency of *Organisation* is defined as the ability to organise own time effectively and create own work schedules, prioritising and preparing in advance, and setting realistic time frames. *Communicating Orally* is defined as speaking with confidence, fluently, and at a suitable pace and level, and holding others' attention when speaking. Being *Results Driven* implies that the individual achieves results and willingly tackles demanding tasks. This person sets and exceeds challenging personal targets. These competencies match scores against overall job performance ratings. Workers who achieve high scores are more likely, on the average, to thus receive higher overall job performance ratings.

The objective of this research was thus to validate an assessment battery for sales representatives in a telecommunication company in South Africa. The assessments include manager ratings of Sales representatives on the five core competencies believed essential to the sales environment. The personality dimensions and ability indicators deemed relevant in this role act as independent variables.

METHOD

Research design

A non-experimental research design was used to achieve the research objectives. According to Welman and Kruger (1999), such a research design is optimal where neither a random sample nor a planned intervention is required. Moreover, a non-experimental research design allows for the possibility that one or more variables, apart from the independent variable, could be responsible for the occurrence or presence of the dependent variable. This design can also be used to assess interrelationships among variables within a population, without establishing a causal relationship between the variables. The design is however strengthened by the avoidance of use of single-source data.

Participants

A sample of (n=97) sales representatives was taken from the total population of one hundred and forty sales representatives in the Telecommunications company in South Africa (i.e. 69,29% of the total population was sampled). The characteristics of the participants are shown in Table 2.

Table 2

Characteristics of the Participants (n=97)

Item	Category	Percentage
Race	White	40,21%
	Coloured	10,31%
	African	35,05%
	Indian	14,43%
Gender	Female	40,21%
	Male	59,79%
Education	Grade 12	58,76%
	Certificate	12,37%
	Diploma	20,62%
	B-Degree	7,22%
	Honours	1,03%

According to Table 2, the sample consisted mostly of White (40,21%) and African (35,05%) sales representatives. The sample of 97 employees consisted of 39 females (40,21%) and 58 males (59,79%), and were in possession of Grade 12 qualifications (58,76%), certificates (12,37%), diplomas (20,62%), B-degree (7,22%) and honours degrees (1,03%). The majority of 57 employees were in possession of a Grade 12 while only 1 employee had a post-graduate qualification. Employees' age ranged from 28 to 58 years with a mean age of 37,66 years. The average length of service ranged from 4 to 38 years, with a mean length of service of 12,42 years.

The twenty-six managers on D band of the Paterson system of the sales representatives also acted as participants, in that they rated the 360° assessments of sales representatives' performance against the five core competencies. The twenty-six managers participated in these ratings, indicating that on average, each manager completed between 3 and 4 evaluations of subordinates.

Measuring Instruments

An assessment battery consisting of the Ability test: *Verbal Evaluation* (VCC3, Baron, Hill, Janman, & Schmidt, 1997c), *Numerical Evaluation* (NCC4, Baron, Hill, Janman, & Schmidt, 1997b) and *Customer Contact Styles Questionnaire* (CCSQ7.2, Baron, Hill, Janman, & Schmidt, 1997a) was used in this study. The *Customer Contact Competency Inventory* (CCCI, Baron, Hill, Janman, & Schmidt, 1997d), which is a 360° measuring instrument, was rated by the managers of the sales representatives.

The Ability tests: *Verbal Evaluation* (VCC3, Baron et al., 1997c) and *Numerical Evaluation* (NCC4, Baron et al., 1997b) scales. *Verbal Evaluation* (VCC3) measures the ability to understand and evaluate the logic of various written passages. It includes a variety of topics relevant to positions within sales and customer service. The VCC3 consists of sixty questions and takes around thirty minutes to complete. Previous South African research www.shl.co.za indicate a Cronbach alpha coefficient for this scale of 0,90. The *Numerical Evaluation* (NCC4) scale measures the ability to make correct decisions or inferences from numerical data. Candidates are allowed to use a calculator to analyse the statistical information presented. The test is appropriate for any job involving analysis or decision-making based on numerical facts, but the nature of the data presented makes the test particularly relevant for sales and customer service work. The NCC4 consists of forty questions and takes around thirty minutes to complete. Previous South African research www.shl.co.za indicate a Cronbach alpha coefficient for this scale of 0,89. Reliability coefficients of 0,70 for ability tests are generally considered a minimum for use in selection contexts, but values above 0,80 are preferred to ensure greater accuracy in decision making.

The *Customer Contact Styles Questionnaire* (CCSQ7.2, Baron et al., 1997a) is used for training, development and placement decisions, as well as the selection of staff. This questionnaire provides information on those aspects of personality which is important for sales or customer service roles. The CCSQ7.2 questionnaire consists of thirty-two (32) blocks of four (4) statements (A, B, C & D) where respondents have to carry out two tasks. The first task is to work one block at a time, rating themselves on each of the statements on a scale from 1 (strongly disagree) to 5 (strongly agree). The second task is to consider the four statements again, but this time to choose the one which they think is least true and one they

think is most true of themselves in everyday behaviour. Respondents then indicate their choice by filling in the two appropriate circles (marked L for Least and M for Most) on the answer sheet.

The South African validation study www.shl.co.za comprised a composite group of 737 employees from a large South African financial institution. The British sample www.shl.co.za included predominantly white telesales and customer service staff in various industry sectors.

Table 3

CCSQ 7.2 Means, standard deviations and cronbach's alpha coefficients

CCSQ Scales	SA Sample (n=737)			UK Sample (n=617)		
	Mean	*SD*	A	Mean	*SD*	α
Persuasive (R1)	29,37	7,81	0.83	34,86	6,54	0.79
Self-Control (R2)	46,20	7,79	0,85	42,86	8,76	0,87
Empathic (R3)	51,48	5,77	0,81	47,07	7.09	0,84
Modest (R4)	39,25	8,49	0.82	37,72	9,21	0,87
Participative (R5)	51.54	9,26	0,90	45.15	10,09	0,90
Sociable (R6)	38,65	8.50	0,86	39,56	7..54	0,79
Analytical (T1)	40,98	6.10	0,79	39,88	6..6	0,79
Innovative (T2)	40,00	9,10	0.88	39,29	9,49	0,90
Flexible (T3)	37,54	5,51	0,83	35,74	5,62	0,80
Structured (T4)	40,32	6,89	0,84	37,98	7,79	0,85
Detail Conscious (T5)	38,64	5,43	0,81	34,11	7,27	0,84
Conscientious (T6)	40.16	5,04	0,83	37,29	6,38	0,86
Resilience (E1)	36,13	7,41	0,75	36,90	8,33	0.81
Competitive (E2)	28,23	8,48	0,84	28,74	8,00	0,82
Results orientated (E3)	37,26	5,76	0,82	36,42	6,30	0,79
Energetic (E4)	34,04	6,46	0,87	33,43	7,01	0,87

Table 3 indicates that the mean scores and alpha coefficients obtained in the original validation study compare well with those yielded by internal research www.shl.co.za. The mean scores on the sixteen scales in the present study differed from those obtained in international studies by less than one standard deviation. The alpha coefficients in the present study are high and range from 0,75 to 0,90.

The Customer Contact Competency Inventory (CCCI, Baron et al., 1997d) was completed by the managers of the participants. This measuring instrument allows the manager to measure and manage observable behaviours and provides an insight as to how performance can be improved by introducing some key development actions. The CCCI development profile is specifically designed to help structure a development discussion with the individual. The CCCI is a questionnaire which permits the managers to give objective 360° feedback on performance against 15 competencies. The CCCI can be used with non-managerial sales and customer service staff for applications including: Development, appraisal, performance management, team building, succession planning, skills audits and development needs analysis. The CCCI uses a normative 5 point scale; namely 1 (strongly disagree) and 5 (strongly agree). There is no time limit on this assessment.

Statistical analysis

The statistical analysis was carried out with the help of the Statistica (2001) program. Descriptive stats (e.g. means, standard deviations, skewness and kurtosis) were used to analyse the data. The independent variables used were the ability assessments (VCC3 and NCC4) and the CCSQ7.2. The dependent variable is the criteria (CCCI) rated by the Sales representatives' respective managers. Cronbach alpha coefficients were used to assess the internal consistency of the measuring instruments (Clark & Watson, 1995).

In interpreting the correlations, the guidelines suggested by Cohen (1988) were followed. Correlations of r=0,10 show a small effect size. Correlations of r=0,30 show a medium effect size whilst those of r=0,50 indicate a large effect size. These guidelines assist in quantifying and reporting on the effect sizes of the findings. The coding of the biographical information was as follows: White=1 and Black=0; Male=1 and Female=2; Grade 12=1, Certificate=2, Diploma/B-Degree=3 and Post graduate=4. Years Service and Age were not coded because the data is continuous and not categorical.

Stepwise multiple regression analyses were carried out to determine whether the independent variables (CCSQ7.2 and Ability tests, namely VCC3 and NCC4) hold any predictive value regarding the dependent variable CCCI (Manager rated performance, as given by 360° feedback). There were five competencies which were deemed "extremely important" on the

CCCI scale for the sales function, namely: Convincing, Communicating Orally, Problem Solving, Organisation and Results-driven. The Subject Matter Experts input in the WPS showed that these tasks are the most important for this job in meeting nearly all job objectives.

RESULTS

Descriptive statistics were calculated for the Customer Contact Styles Questionnaire (CCSQ7.2) and the Ability tests: Verbal Evaluation (VCC3) and Numerical Evaluation (NCC4).

Table 4 illustrates the descriptive statistics in the form of means, standard deviations, minimums, maximums and reliabilities for the CCSQ7.2 and ability scales.

Table 4

CCSQ7.2 and Ability Means, Standard Deviations, Minimums, Maximums and Cronbach's Alpha Coefficients

	Mean	*SD*	Minimum	Maximum	α
CCSQ Scales					
Consistency (CCO)	56,73	5,57	46	70	0,77
Resilience (CE1)	35,44	7,41	17	55	0,77
Competitive (CE2)	34,10	6,84	14	46	0,84
Results Orientated (CE3)	37,86	4,78	26	48	0,73
Energetic (CE4)	33,18	6,61	18	47	0,88
Persuasive (CR1)	38,30	5,42	16	47	0,83
Self-Control (CR2)	41,69	7,92	17	60	0,83
Emphatic (CR3)	47,46	5,90	32	61	0,79
Modest (CR4)	37,55	8,48	20	54	0,82
Participative (CR5)	48,27	9,43	20	69	0,91
Sociable (CR6)	41,49	6,65	23	55	0,80
Analytical (CT1)	40,36	5,49	27	52	0,75
Innovative (CT2)	41,95	8,36	23	60	0,89
Flexible (CT3)	36,99	5,81	16	49	0,85
Structured (CT4)	40,26	7,42	20	53	0,88
Detail Conscious (CT5)	36,95	5,00	21	48	0,79
Conscientious (CT6)	38,27	5,10	21	47	0,83
Ability Tests					
Numerical Evaluation (NCC4)	12,37	5,88	2	32	0,89
Verbal Evaluation (VCC3)	29,58	9,43	11	60	0,90

Alpha coefficients that are too low insinuate that the scale includes some ambiguity with its items whilst coefficients that are too high lack bandwidth and suggest a factor that is potentially too narrow and merely duplicates a central idea. The alpha coefficients of all the measuring instruments were considered acceptable compared to the guideline of $\alpha \geq 0,70$ (Nunnally & Bernstein, 1994). The CCSQ coefficients alpha in this study ranged from 0,73 to 0,91 and is therefore in line with acceptable reliabilities for abilities, and relevant to abilities within a selection context. The Ability coefficients alpha in this study is very high and range from 0,89 to 0,90. Reliability coefficients of 0,70 for ability tests are generally considered a minimum for use in selection contexts. These high values reflect a good level of internal consistency together with a very broad range of ability in the sample.

Table 5 reflects the descriptive statistics for the criteria in the form of the CCCI competencies, as rated by sales representatives' respective managers.

Table 5

CCCI Means, Standard Deviations, Minimum, Maximum and Cronbach's Alpha Coefficients

	Mean	*SD*	Minimum	Maximum	*A*
CCCI Competency					
Relating to Customers (P1)**	3,95	0,65	2	5	0,93
Convincing (P2)*	3,74	0,74	2	5	0,96
Communicating Orally (P3)*	3,84	0,65	2	5	0,93
Team Working (P5)	3,94	0,71	2	5	0,96
Fact Finding (I1)**	3,78	0,69	2	5	0,95
Problem Solving (I2)*	3,64	0,70	2	5	0,96
Business Awareness (I3)**	3,70	0,64	2	5	0,93
Specialist Knowledge (I4)	3,84	0,67	2	5	0,95
Quality Orientation (D1)**	3,79	0,76	2	5	0,96
Organisation (D2)*	3,69	0,77	2	5	0,96
Reliability (D3)**	3,93	0,62	2	5	0,88
Customer Focus (E1)**	3,95	0,73	2	5	0,96
Resilient (E2)	3,61	0,69	2	5	0,92
Results Driven (E3)*	3,79	0,72	2	5	0,93
Using Initiative (E4)**	3,74	0,71	2	5	0,94

* *Extremely important* competencies
** *Highly important* competencies

Table 5 indicates that the cronbach's alpha coefficients for the CCCI scales are very high and range from 0,88 to 0,96 with a median value of 0,95. This is higher than expected as the reliabilities for the manager ratings in the SHL manual (CCCI, 2000) range from 0,76 to 0,92 with a median value of 0,83.

The data presented was completed by managers who completed the CCCI on their direct report. Those competencies identified as extremely important to the sales function showed good reliabilities: Convincing (α=0,96), Communicating Orally (α=0,93), Problem Solving (α=0,96), Organisation (α=0,96) and Results Driven (α=0,93).

Intercorrelations

Correlations assist in determining the relationship between variables. A number of correlations were calculated in line with the objectives of the research. Table 6 reflects the intercorrelations for the Customer Contact Styles Questionnaire (CCSQ7.2). In support of the objective of analysis and interpretation, p-values of $p \leq 0,01$ and $p \leq 0,05$ were considered as significant levels, as suggested by Cohen (1988).

Table 6

CCSQ7.2 and Abilities Intercorrelations (n=97)

	CCO	CE1	CE2	CE3	CE4	CR1	CR2	CR3	CR4	CR5	CR6	CT1	CT2	CT3	CT4	CT5	CT6	NCC4	VCC3
CCO	1,00																		
CE1	-0,12	1 00																	
CE2	0,08	-0,14	1,00																
CE3	0,18	0,17	0,22*	1,00															
CE4	-0,01	0,39**	0,11	0,41**	1,00														
CR1	0,09	0,14	0,32**	0,27**	0,26**	1,00													
CR2	-0,23*	0,38**	-0,21*	-0,08	0,04	-0,13	1,00												
CR3	-0,04	0,17	-0,29**	-0,09	0,02	-0,05	0,53**	1,00											
CR4	-0,17	0,01	-0,27**	-0,16	-0,34**	-0,23*	0,25**	0,26**	1,00										
CR5	-0,12	0,24*	-0,03	-0,08	-0,16	-0,10	0,28**	0,42**	0,11	1,00									
CR6	0,27**	0,22*	0,19	0,27**	0,30**	0,36**	-0,05	0,15	-0,28**	0,17	1,00								
CT1	0,28**	-0,02	-0,05	0,30**	0,08	0,28**	-0,13	-0,07	0,06	-0,07	-0,03	1,00							
CT2	0,30**	0,16	-0,03	0,40**	0,23*	0,32**	-0,03	0,11	-0,28**	-0,07	0,19	0,42**	1,00						
CT3	0,13	0,34**	0,16	0,42**	0,28**	0,35**	-0,12	-0,08	-0,15	0,16	0,29**	0,23*	0,31**	1,00					
CT4	0,11	-0,05	-0,05	0,13	0,15	0,04	0,02	0,04	-0,00	-0,17	0,00	0,44**	0,33**	-0,07	1,00				
CT5	0,20*	-0,18	0,01	0,09	0,03	-0,08	-0,08	-0,03	0,18	-0,12	-0,07	0,51**	0,09	-0,09	0,58**	1,00			
CT6	0,20*	-0,03	-0,01	0,22*	0,10	0,01	0,01	0,01	-0,09	-0,02	0,09	0,26**	0,24**	0,00	0,51**	0,36**	1,00		
ABILITIES																			
NCC4																		1,00	
VCC3																		0,67**	1,00

CCO=Consistency; CE1=Resilience; CE2=Competitive; CE3=Results Oriented; CE4=Energetic; CR1=Persuasive; CR2=Self-Control; CR3=Empathic; CR4=Modest; CR5=Participative; CR6=Sociable; CT1=Analytical; CT2=Innovative; CT3=Flexible; CT4=Structured; CT5=Detail Conscious; CT6=Conscientious; NCC4=Numerical Evaluation; VCC3=Verbal Evaluation.

* *Indicates correlation coefficients with $p \leq 0,05$*

** Indicates correlation coefficients with $p \leq 0,01$

Table 6 shows that Consistency correlates statistically significant with Self-Control (small effect), Sociable (small effect size), Analytical (small effect size), Innovative (medium effect size), Detail Conscious (small effect size) and Conscientious (small effect size).

Resilience correlates statistically significant with Energetic (medium effect), Self-Control (medium effect), Participative (small effect), Sociable (small effect), and Flexible (medium effect).

Competitive correlates statistically significant with Results-oriented (small effect), Persuasive (medium effect), Self-Control (small effect), Empathic (small effect) and Modest (small effect).

Results oriented correlates statistically significant with Energetic (medium effect), Persuasive (small effect), Sociable (small effect), Analytical (medium effect), Innovative (medium effect), Flexible (medium effect) and Conscientious (small effect).

Energetic correlates statistically significant with Persuasive (small effect), Modest (medium effect), Sociable (medium effect), Innovative (small effect) and Flexible (small effect).

Persuasive correlates statistically significant with Modest (small effect), Sociable (medium effect), Analytical (small effect), Innovative (medium effect) and Flexible (medium effect).

Self-Control correlates statistically significant with Empathic (large effect), Modest (small effect) and Participative (small effect).

Empathic correlates statistically significant with Modest (small effect) and Participative (medium effect).

Modest correlates statistically significant with Sociable (small effect) and Innovative (small effect).

Sociable correlates statistically significant with Flexible (small effect).

Analytical correlates statistically significant with Innovative (medium effect), Flexible (small effect), Structured (medium effect), Detail Conscious (large effect) and Conscientious (small effect).

Innovative correlates statistically significant with Flexible (medium effect), Structured (medium effect) and Conscientious (small effect).

Structured correlates statistically significant with Detail Conscious (large effect) and Conscientious (large effect).

Detail Conscious correlates statistically significant with Conscientious (medium effect).

Numerical Evaluation correlates statistically significant with Verbal Evaluation (large effect).

Table 7 gives the intercorrelations for the CCCI dimensions, as rated by sales representatives' managers.

Table 7

CCCI Intercorrelations (n=97)

	P1	P2	P3	P5	I1	I2	I3	I4	D1	D2	D3	E1	E2	E3
Relating to Customers (P1)														
Convincing (P2)	0,80**													
Communicating Orally (P3)	0,77**	0,83**												
Team Working (P5)	0,82**	0,77**	0,72**											
Fact Finding (I1)	0,82**	0,87**	0,84**	0,76**										
Problem Solving (I2)	0,83**	0,89**	0,81**	0,78**	0,94**									
Business Awareness (I3)	0,72**	0,78**	0,75**	0,74**	0,86**	0,86**								
Specialist Knowledge (I4)	0,74**	0,81**	0,77**	0,72**	0,84**	0,82**	0,84**							
Quality Orientation (D1)	0,82**	0,79**	0,79**	0,71**	0,90**	0,88**	0,78**	0,80**						
Organisation (D2)	0,81**	0,83**	0,79**	0,71**	0,88**	0,88**	0,76**	0,76**	0,89**					
Reliability (D3)	0,83**	0,67**	0,70**	0,77**	0,77**	0,78**	0,74**	0,67**	0,80**	0,81**				
Customer Focus (E1)	0,90**	0,80**	0,75**	0,82**	0,84**	0,84**	0,77**	0,78**	0,88**	0,79**	0,83**			
Resilient (E2)	0,68**	0,76**	0,62**	0,74**	0,75**	0,79**	0,70**	0,58**	0,60**	0,70**	0,63**	0,63**		
Results Driven (E3)	0,85**	0,90**	0,76**	0,80**	0,88**	0,89**	0,80**	0,79**	0,84**	0,83**	0,78**	0,88**	0,75**	
Using Initiative (E4)	0,82**	0,83**	0,74**	0,75**	0,88**	0,89**	0,79**	0,77**	0,86**	0,88**	0,80**	0,82**	0,78**	0,87**

* $p \leq 0,05$
** $p \leq 0,01$

Table 7 show that the intercorrelations of the Customer Contact Competency Inventory (CCCI) scales are all high and they show a large effect size with correlations coefficients of $p \leq 0{,}01$. The manual for this instrument (SHL, 2000) shows that the highest correlations are in the 0,6 to 0,7 range but most of the correlations are much lower, in the 0,2 to 0,3 range showing good separation of constructs and control of halo effects. The large effect-size of the correlations could be due to time-constraints, as the managers only had two weeks and some less, to complete the CCCI due to the company restructuring. Some of the managers were also new in this section and perhaps didn't know their subordinates well enough to rate them objectively. Another reason could also be due to the halo-effect which may be a result of the fact that the managers were not trained in completing the CCCI as well as recognising the pitfalls in completing a criterion questionnaire.

Table 8 displays the correlations between the Customer Contact Competency Inventory (CCCI) behavioural criteria and independent predictors (CCSQ and Abilities). The calculation was completed to check the overlap between the instruments.

Table 8

CCCI, CCSQ and Abilities Correlation (n=97)

	CCO	CE1	CE2	CE3	CE4	CR1	CR2	CR3	CR4	CR5	CR6	CT1	CT2	CT3	CT4	CT5	CT6	NCC4	VCC3
Relating to Customers (P1)	0,32**	-0,06	-0,05	-0,02	-0,06	-0,04	-0,06	0,04	-0,10	-0,17	-0,00	0,06	0,04	-0,09	0,20*	0,15	0,22*	0,28**	0,34**
Convincing (P2)	0,33**	0,11	0,05	0,11	0,12	0,12	-0,19	0,02	-0,18	-0,20*	-0,10	0,13	0,15	0,16	0,09	0,07	0,13	0,28**	0,36**
Communicating Orally (P3)	0,38**	0,03	-0,04	0,03	0,02	0,02	-0,19	0,08	-0,08	-0,08	0,06	0,08	0,08	0,04	0,09	0,10	0,17	0,28**	0,39**
Team Working (P5)	0,28**	0,06	-0,04	0,04	0,03	0,06	-0,07	0,05	-0,16	-0,15	0,04	0,04	0,12	0,06	0,19	0,04	0,14	0,29**	0,34**
Fact Finding (I1)	0,38**	0,00	-0,01	-0,01	0,03	-0,02	-0,16	-0,02	-0,10	-0,28**	-0,08	0,15	0,05	-0,01	0,15	0,17	0,17	0,33**	0,40**
Problem Solving (I2)	0,34**	-0,03	-0,01	0,08	0,07	0,01	-0,14	0,01	-0,14	-0,26**	-0,07	0,16	0,10	0,03	0,17	0,13	0,16	0,30**	0,36**
Business Awareness (I3)	0,35**	0,03	-0,10	0,03	0,05	-0,00	-0,05	0,12	-0,14	-0,17	-0,01	0,09	0,15	0,01	0,11	0,06	0,05	0,18	0,28**
Specialist Knowledge (I4)	0,36**	0,12	-0,06	-0,03	0,07	0,08	-0,05	0,12	-0,09	-0,15	0,04	0,05	0,08	0,05	0,07	0,04	0,07	0,36**	0,42**
Quality Orientation (D1)	0,38**	-0,11	-0,03	-0,04	-0,01	-0,11	-0,15	0,04	-0,05	-0,23*	-0,02	0,11	0,01	-0,06	0,24*	0,25**	-0,21*	0,35**	0,36**
Organisation (D2)	0,27**	-0,04	0,02	0,06	0,07	-0,08	-0,15	-0,03	-0,08	-0,25*	-0,07	0,08	0,01	-0,10	0,22*	0,15	0,20*	0,24*	0,28**
Reliability (D3)	0,22*	-0,10	-0,11	-0,12	-0,08	-0,14	-0,00	0,09	0,01	-0,15	-0,17	-0,06	0,01	-0,22*	0,24*	0,09	0,12	0,25*	0,22*
Customer Focus (E1)	0,36**	-0,04	-0,06	-0,03	-0,05	-0,09	-0,03	0,08	-0,08	-0,15	-0,00	0,08	0,07	-0,08	0,22*	0,15	0,23*	0,34**	0,38**
Resilient (E2)	0,06	0,18	-0,09	0,10	0,15	0,04	-0,08	-0,01	-0,14	-0,23*	-0,12	0,12	0,10	0,17	0,14	0,05	0,06	0,08	0,23*
Results Driven (E3)	0,32**	0,07	-0,01	0,08	0,08	-0,00	-0,04	0,02	-0,12	-0,21*	-0,04	0,12	0,11	0,06	0,18	0,11	0,12	0,28**	0,29**
Using Initiative (E4)	0,26**	-0,01	-0,06	-0,03	0,04	-0,09	-0,11	0,04	-0,10	-0,27**	-0,12	0,05	0,04	-0,05	0,21*	0,12	0,15	0,29**	0,33**

CCO=Consistency; CE1=Resilience; CE2=Competitive; CE3=Results Oriented; CE4=Energetic; CR1=Persuasive; CR2=Self-Control; CR3=Empathic; CR4=Modest; CR5=Participative; CR6=Sociable; CT1=Analytical; CT2=Innovative; CT3=Flexible; CT4=Structured; CT5=Detail Conscious; CT6=Conscientious; NCC4=Numerical Evaluation; VCC3=Verbal Evaluation.

* $p \leq 0,05$
** $p \leq 0,01$

The CCCI, CCSQ and Abilities shows that Consistency correlates statistically significant with Relating to Customers (medium effect), Convincing (medium effect), Communicating Orally (medium effect), Team Working (small effect), Fact Finding (medium effect), Problem Solving (medium effect), Business Awareness (medium effect), Specialist Knowledge (medium effect), Quality Orientation (medium effect), Organisation (small effect), Reliability (small effect), Customer Focus (medium effect), Results Driven (medium effect) and Using Initiative (small effect).

Participative correlates statistically significant with Convincing (small effect), Fact Finding (small effect), Problem Solving (small effect), Quality Orientation (small effect), Organisation (small effect), Resilient (small effect), Results Driven (small effect) and Using Initiative (small effect).

Flexible correlates statistically significant with Reliability (small effect). Structured correlates statistically significant with Relating to Customers (small effect), Quality Orientation (small effect), Organisation (small effect), Reliability (small effect), Customer Focus (small effect) and Using Initiative (small effect). Detail Conscious correlates statistically significant with Quality Orientation (small effect). Conscientious correlates statistically significant with Relating to Customers (small effect), Quality Orientation (small effect), Organisation (small effect) and Customer Focus (small effect).

Numerical Evaluation correlates statistically significant with Relating to Customers (small effect), Convincing (small effect), Communicating Orally (small effect), Team Working (small effect), Fact Finding (medium effect), Problem Solving (medium effect), Specialist Knowledge (medium effect), Quality Orientation (medium effect), Organisation (small effect), Reliability (small effect), Customer Focus (medium effect), Results Driven (small effect) and Using Initiative (small effect).

Verbal Evaluation correlates statistically significant with Relating to Customers (medium effect), Convincing (medium effect), Communicating Orally (medium effect), Team Working (medium effect), Fact Finding (medium effect), Problem Solving (medium effect), Business Awareness (small effect), Specialist Knowledge (medium effect), Quality Orientation (medium effect), Organisation (small effect), Reliability (small effect), Customer Focus (medium effect), Resilient (small effect), Results Driven (small effect) and Using Initiative (medium effect).

Table 9 gives the correlations that were calculated between the biographical data (race, gender, years of service and age) and the criterion data (CCCI) to determine the effect of these moderator variables. The coding of the biographical data: Gender was coded: Male=1 and Female=2, Qualifications was coded: Grade 12=1, Certificate=2, Diploma/B-Degree=3 and Post graduate=4, Race was coded: Black=0 and White=1 (The definition of blacks in this report is consistent with the definition outlined in the Employment Equity Act No. 55 of 1998 and includes Coloureds, Indians and Africans). Years Service and Age were not coded because the data is continuous and not categorical.

Table 9

Correlations between the CCCI and Biographic data (n=97)

	Race	Gender	Years of service	Age	Qualification
Relating to Customers (P1)	0,20*	0,12	0,21*	0,03	0,09
Convincing (P2)	0,09	0,06	0,17	-0,08	0,10
Communicating Orally (P3)	0,12	0,15	0,05	-0,11	0,07
Team Working (P5)	0,09	0,06	0,18	-0,08	0,08
Fact Finding (I1)	0,21*	0,04	0,15	-0,07	0,18
Problem Solving (I2)	0,16	0,05	0,17	-0,06	0,18
Business Awareness (I3)	0,17	-0,03	0,20*	-0,06	0,14
Specialist Knowledge (I4)	0,33**	0,02	0,27**	-0,09	0,07
Quality Orientation (D1)	0,29**	0,20*	0,15	-0,10	0,14
Organisation (D2)	0,21*	0,17	0,19	-0,04	0,14
Reliability (D3)	0,22*	0,19	0,22*	0,02	0,04
Customer Focus (E1)	0,23*	0,13	0,22*	-0,01	0,07
Resilient (E2)	-0,11	-0,12	0,07	-0,04	0,23*
Results Driven (E3)	0,09	0,09	0,14	-0,10	0,12
Using Initiative (E4)	0,20*	0,09	0,19	-0,08	0,14

* $p \leq 0,05$
** $p \leq 0,01$

Table 9 shows that Race correlates statistically significant with Relating to Customers (small effect), Fact Finding (small effect), Specialist Knowledge (medium effect), Quality Orientation (small effect), Organisation (small effect), Reliability (small effect), Customer Focus (small effect) and Using Initiative (small effect).

Gender correlates statistically significant with Quality Orientation (small effect). Years of Service correlates statistically significant with Relating to Customers (small effect), Business Awareness (small effect), Specialist Knowledge (small effect), Reliability (small effect) and Customer Focus (small effect). Age did not correlate statistically significant with any of the variables. Qualification correlates statistically significant with Resilient (small effect).

The multiple regression analyses were based on the 5 "extremely important" CCCI competencies with Convincing, Communicating Orally, Problem Solving, Organisation and Results Driven as dependent variables and CCSQ, Abilities as well as Race and Gender as independent variables reported below.

Stepwise Multiple Regression Analysis

Stepwise multiple regression analyses were utilised to scrutinise the relationship between the dependent and independent variables.

Table 10 gives the results of the stepwise multiple regression analyses with Convincing as dependent variable.

Table 10

Stepwise Multiple Regression Analyses with Convincing as Dependent Variable

Model	Unstandardized Coefficients		Standardized Coefficients	*t*	*p*	*F*	*R*	R^2	ΔR^2
	B	SE	Beta						
(Constant)	2,84			2,,95					
Verbal Evaluation (VCC3)	0,02	0,01	0,28	2,92	0,00**	13,57	0,36	0,13	0,13
Modest (CR4)	-0,02	0,01	-0,20	-1,94	0,04*	4,15	0,40	0,16	0,04
Resilience (CE1)	0,03	0,01	0,34	2,90	0,20	1,63	0,42	0,18	0,01
Self-Control (CR2)	-0,03	0,01	-0,28	-2,32	0,10	2,73	0,45	0,20	0,02
Participative (CR5)	-0,02	0,01	-0,29	-2,57	0,17	1,96	0,47	0,22	0,02
Empathic (CR3)	0,04	0,02	0,29	2,33	0,06	3,62	0,50	0,25	0,03
Gender Coded	0,21	0,14	0,14	1,46	0,19	1,71	0,51	0,26	0,01
Energetic (CE4)	-0,02	0,01	-0,15	-1,34	0,24	1,38	0,52	0,28	0,01
Competitive (CE2)	0,01	0,01	0,12	1,17	0,24	1,38	0,54	0,29	0,01

* $p \leq 0,05$
** $p \leq 0,01$

Table 10 indicates that Verbal Evaluation (VCC3) and Modest (CR4) are statistically significant and predict the largest portion of the variance (16%) and had a multiple *R* of 0,40 (medium to large effect size) in the Convincing competency.

Table 11 gives the results of the stepwise multiple regression analyses with Communicating Orally as dependent variable.

Table 11

Stepwise Multiple Regression Analyses with Communicating Orally as Dependent Variable

Model	Unstandardized Coefficients		Standardized Coefficients	*t*	*p*	*F*	*R*	R^2	ΔR^2
	B	SE	Beta						
(Constant)	2,01			2,80					
Verbal Evaluation (VCC3)	0,02	0,01	0,32	3,37	0,00**	17,01	0,39	0,15	0,15
Gender Coded	0,15	0,13	0,15	1,55	0,13	2,35	0,42	0,17	0,02
Self-Control (CR2)	-0,02	0,01	-0,30	-2,48	0,14	2,22	0,44	0,19	0,02
Empathic (CR3)	0,02	0,01	0,18	1,61	0,14	2,27	0,46	0,21	0,02
Resilience (CE1)	0,01	0,01	0,14	1,39	0,17	1,87	0,48	0,23	0,02
Conscientious (CT6)	0,01	0,01	0,11	1,16	0,25	1,35	0,49	0,24	0,01

* $p \leq 0,05$
** $p \leq 0,01$

As reported in Table 11, Verbal Evaluation (VCC3) is a statistically significant predictor, with 15% of the variance explained (R = 0,39, medium effect size) of the Communicating Orally competency.

Table 12 gives the results of the stepwise multiple regression analyses with Problem Solving as dependent variable.

Table 12

Stepwise Multiple Regression Analyses with Problem Solving as Dependent Variable

Model	Unstandardized Coefficients		Standardized Coefficients	*t*	*p*	*F*	*R*	R^2	ΔR^2
	B	SE	Beta						
(Constant)	3,61			3,84					
Verbal Evaluation (VCC3)	0,03	0,01	0,34	3,46	0,00**	13,79	0,36	0,13	0,13
Participative (CR5)	-0,02	0,01	-0,24	-2,14	0,03*	4,62	0,41	0,17	0,04
Modest (CR4)	-0,02	0,01	-0,20	-1,99	0,18	1,84	0,43	0,19	0,02
Structured (CT4)	0,01	0,01	0,12	1,31	0,18	1,82	0,45	0,20	0,02
Analytical (CR1)	-0,02	0,01	-0,13	-1,23	0,22	1,55	0,46	0,22	0,01
Empathic (CR3)	0,02	0,01*	0,15	1,37	0,30	1,10	0,47	0,22	0,01
Flexible (CT3)	0,02	0,01	0,13	1,28	0,26	1,27	0,49	0,24	0,01
Sociable (CR6)	-0,01	0,01	-0,11	-1,04	0,30	1,09	0,50	0,25	0,01

* $p \leq 0,05$
** $p \leq 0,01$

As reported in Table 12, Verbal Evaluation (VCC3) and Participative (CR5) are statistically significant and predict the largest portion of the variance (17%) and had a multiple *R* of 0,41 (medium effect size) in the Problem Solving competency.

Table 13 gives the results of the stepwise multiple regression analyses with Organisation as dependent variable.

Table 13

Stepwise Multiple Regression Analyses with Organisation as Dependent Variable

Model	Unstandardized Coefficients		Standardized Coefficients	*t*	*p*	*F*	*R*	R^2	ΔR^2
	B	SE	Beta						
(Constant)	2,75			2,49					
Verbal Evaluation (VCC3)	0,02	0,01	0,24	2,37	0,01**	8,07	0,28	0,08	0,08
Participative (CR5)	-0,02	0,01	-0,29	-2,68	0,04*	4,41	0,35	0,12	0,04
Gender Coded	0,25	0,15	0,16	1,60	0,05*	3,94	0,40	0,16	0,04
Conscientious (CT6)	0,02	0,01	0,15	1,59	0,14	2,22	0,42	0,18	0,02
Persuasive (CR1)	-0,03	0,02	-0,23	-2,10	0,17	1,95	0,44	0,19	0,02
Competitive (CE2)	0,02	0,01	0,16	1,49	0,26	1,29	0,45	0,21	0,01
Resilience (CE1)	0,02	0,01	0,16	1,50	0,31	1,02	0,46	0,22	0,01
Self-Control (CR2)	-0,02	0,01	-0,19	-1,56	0,32	1,01	0,47	0,22	0,01
Empathic (CR3)	0,02	0,02	0,17	1,39	0,17	1,92	0,49	0,24	0,02

* $p \leq 0,05$
** $p \leq 0,01$

As reported in Table 13, Verbal Evaluation (VCC3) and Participative (CR5) are statistically significant in predicting that Organisation competency. These two variable predict the largest portion of the variance (12%) and had a multiple *R* of 0,35 (medium effect size). Although Gender reflects as statistically significant it is not when rounded off: The value was p=0,05 and is therefore not seen as statistical significant.

Table 14 gives the results of the stepwise multiple regression analyses with Results Driven as dependent variable.

Table 14

Stepwise Multiple Regression Analyses with Results Driven as Dependent Variable

Model	Unstandardized Coefficients		Standardized Coefficients	*t*	*p*	*F*	*R*	R^2	ΔR^2
	B	SE	Beta						
(Constant)	4,04			4,41					
Verbal Evaluation (VCC3)	0,01	0,01	0,19	1,43	0.00**	8,53	0,29	0,08	0,08
Structured (CT4)	0,02	0,01	0,17	1,77	0,08	3,17	0,34	0,11	0,03
Participative (CR5)	-0,02	0,01	-0.20	-1,86	0,16	2,00	0,36	0,13	0,02
Resilience (CE1)	0,01	0,01	0,15	1,47	0,23	1,46	0,38	0,15	0,01
Numerical Evaluation (NCC4)	0,03	0,02	0,21	1,48	0,26	1,31	0.40	0,16	0,01
Persuasive (CR1)	-0.02	0,01	-0,18	-1,71	0,22	1,51	0,42	0,17	0,01
Modest (CR4)	-0,01	0,01	-0,15	-1,43	0,22	1,54	0,43	0,19	0,01
Race Coded	-0,20	0,17	-0,14	-1,22	0,23	1,49	0,45	0.20	0,01

* $p \leq 0,05$
** $p \leq 0,01$

As reported in Table 14, Verbal Evaluation (VCC3) is a statistically significant predictor, with 8% of the variance explained (R = 0,29, small effect size) of the Results Driven competency.

DISCUSSION

The general objective of this study was to investigate the validation of an assessment battery for sales representatives. To attain the general objective, more specific objectives were developed, namely to determine the construct validity and reliability of the measuring instruments in a sample of sales representatives; to investigate the relation between the different factors (verbal ability, numerical ability, personality and manager-rated performance); to investigate whether manager-rated performance can be predicted by making use of individual-level variables (verbal ability, numerical ability, personality); and finally, to make recommendations regarding the use of the assessment battery for selection and development of Sales representatives.

The Customer Contact Styles Questionnaire (CCSQ) alpha coefficients in this study ranged from 0,73 to 0,91, and is therefore in line with acceptable reliabilities for abilities, and

relevant to abilities within a selection context. The Ability alpha coefficients were very high and ranged from 0,89 to 0,90. Reliability coefficients of 0,70 for ability tests are generally considered a minimum for use in selection contexts. These high values reflect a good level of internal consistency together with a very broad range of ability in the sample. Reliability of the Customer Contact Competency Inventory (CCCI) scales were all high and ranged from 0,58 to 0,94.

Race correlated with the competency of Relating to Customers, showing good fact finding skills, possessing specialist knowledge, being aware of quality, having the ability to organise well, being reliable, having a strong focus on the customer and using own initiative at work. It was shown that Whites have the stronger correlation with these characteristics. This may be interpreted in line with previous studies. Claassen (1995, p. 8) maintains that "testing and measurement have as objective to reflect some aspects of the world. It can then be expected that tests will reflect the nature of the society in which they are used". The sales representatives were previously predominantly white and had much more exposure in the past in terms of sales and formal training. Due to the Employment Equity Act, Blacks are now given an opportunity to be appointed, but may lack the theoretical and practical experience of their white colleagues.

Gender was related to having a strong focus on quality, and it is indicated that women tend to focus more on this aspect. This may be due to women being more consistent in maintaining high professional standards. Two reasons: Firstly, women in general are more particular about the end products' quality than men. Secondly, women may have a better chance for promotion due to equal employment opportunities.

The total years of service a sales representative possesses was related to having good relations with customers, being aware of the business, possessing specialist knowledge, being reliable and strongly focused on the customer. Those representatives who have more years of working experience may be more familiar or knowledgeable regarding their customers' needs and requirements. Also, they may be customer focused because they have already built up their own client base, established rapport with their clients and have to maintain good relationships with their clients.

Age did not correlate statistically significant with any of the variables. This indicates that age does not play a factor or hindering the performance of a sales representative. The sales representatives are a relatively young group of people (mean age = 37,66) and therefore it can be justified that age did not play a role in predicting sales representative performance. They have to be dynamic, mentally alert, recruit new clientele, bring money into the company, be assertive and have to be top performers.

Sales representatives' level of qualification was related to the competency of being resilient. Those representatives who have a higher level of post-graduate qualification are more resilient because they react well to change and remain positive despite setback. The sales representatives' qualification may be a sales post-graduate qualification which equipped them for the demands and perhaps more knowledge on high-tech products which they sell. Newcomers in sales may look out for the qualified sales representatives for guidance.

It was also of interest to see how manager-rated performance was related to individual competencies and characteristics. The results showed that Verbal Evaluation (VCC3) and Modest (R4) were significant predictors of Convincing. This indicates that sales representatives who have the ability to understand and evaluate the complex written arguments; evaluate and deduct from complex data, and speak up about their abilities are more likely to have good convincing skills when performing this competency as part of their work.

Being evaluative and the ability to work deductively with complex data were the only significant predictors of understanding and evaluating complex written arguments, and exceeding challenging personal targets. A sales representative that is well spoken and confident in "Verbal Evaluation" and have a sound relationship with people are the typical behaviour of "Participative" was a significant predictor of generating workable solutions and making rational judgements of "Problem Solving" by prioritising and preparing in advance by setting realistic time frames. in "Organisation".

The hypothesis for this research stated that the performance of sales representatives, as rated by their managers, could be predicted by the representatives' customer contact styles, and ability indicators; or by any combination of these variables. The results indicate that sales representatives have to make deals with corporate companies – have product knowledge, the

ability to market the product and perform calculations (costs of product) and have to clinch the deal. Personal skills are always important to help build a relationship with the customer. Secondly, the sales representatives have to be familiar with the company's procurement procedures and organisation policies and procedures. Sales representatives must market high-end technology to would be customers, and therefore must be verbally sharp, especially in relation to calculations and price, product knowledge and dealing with customers.

Validity of a hiring method is directly determined by its practical value, but this is not the only determinant. Another direct determinant is the variability of job performance. At one extreme, if variability were zero, then all applicants would have exactly the same level of later job performance, if hired. In this case, the practical value of utility of all selection procedures would be zero. In such a hypothetical case, it does not matter who is hired, because all of the workers are the same. At the other extreme, if performance variability is very large, it then becomes important to hire the best performing applicants and the practical utility of valid selection is very large. As it happens, this "extreme" case appears to be the reality for most jobs.

Research over the last 15 years has shown that the variability of performance and output among (incumbent) workers is very large and that it would be even larger if all job applicants were hired or if job applicants were selected randomly from among those that apply (cf. Hunter & Schmidt, 1990; Schmidt & Hunter, 1983; Schmidt, Caplan, Bemis, Decuit, Dinn, & Atone, 1979). This latter variability is called the applicant pool variability, and in hiring this is the variability that operates to determine practical value. This is because one is selecting new employees from the applicant pool, not from among those already on the job is question.

RECOMMENDATIONS

The managers should be trained in completing the CCCI as well as recognising the pitfalls completing a criterion questionnaire. Manager ratings, the most frequently employed criteria (Lent, Aurbach, & Levin, 1971), are susceptible to all the sources of bias in objective indices, as well as to others that are peculiar to subjective judgements. According to Foxcroft and Roodt (2001) it should always be remembered that test results represent only one source of information and should be utilised carefully and professionally for future research.

The sample size should be larger and according to Kerlinger and Lee (2000) the general rule in research is that the sample should be large. They further state that the smaller the sample, the larger the error in statistics being calculated from that sample.

The candidates were pre-selected by the internal recruitment screening process of the company when they were first employed in their positions. This results in restriction of range. The current study cannot solely be used to validate the test battery as a result of above-mentioned limitations.

Overall, it can be stated that there is a significant relationship between the test battery and job performance. The results in this study reflect that correlations between personality and ability and performance were small to moderate. This is most probably due to the flawed criterion. The results should be used with caution to prevent making a Type II error.

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CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

This chapter encompasses conclusions regarding the literature review and the empirical study. The limitations of this research are highlighted and recommendations are made for future research.

3.1 CONCLUSIONS

In this section, conclusions are drawn in terms of specific theoretical objectives and the results of the empirical study.

3.1.1 Conclusions in terms of general objective

The objective of this research was to validate the chosen selection battery for a sample of Sales representatives in a Telecommunication company, and determine its relation to manager-rated performance. Subsequently, the following conclusions are drawn in terms of the literature review.

A "competency" is defined as "clusters of skills and behaviours key to successful performance. In general terms, competencies are the abilities, motivation, behaviour and knowledge which you bring to your job. Where no direct measure of a person's competence is available, information about personality and abilities can be used to build a picture of potential" (SHL, 2000, www.shl.co.za).

In general, several competencies that proved to be highly relevant to the sales function are: Relating to customers, Convincing, Communicating Orally, Team Work, Fact Finding, Problem Solving, Business Awareness, Specialist Knowledge, Quality Orientation, Organisation, Reliability, Customer Focus, Resilient, Results Driven and Using Initiative. The focus however was placed on five 'extremely important' competencies, which have been identified as those essential to the sales function of the sales representatives in the

telecommunications company. These five competencies are i) Convincing, ii) Problem Solving, iii) Organisation, iv) Communicating Orally; and v) Results Driven. Convincing is defined as the key point of persuasive argumentation, negotiating and convincing others, changing people's views and influencing others. Problem Solving is defined as the ability to identify potential difficulties and their causes, generating workable solutions and making rational judgements. The competency of Organisation is defined as the ability to organise own time effectively and create own work schedules, prioritising and preparing in advance, and setting realistic time frames. Communicating Orally is defined as speaking with confidence, fluently, and at a suitable pace and level, and holding others' attention when speaking. Being Results Driven implies that the individual achieves results and willingly tackles demanding tasks. This person sets and exceeds challenging personal targets.

One of the critical elements in ensuring outstanding organisational performance is the selection and development of excellent staff (Van der Merwe, 2002). On some selection procedures (in particular ability measures) subgroup difference on means are typically observed (Schmidt & Hunter, 1998). International as well as local research has demonstrated the role that psychometric assessment can play in significantly improving the selection process for both new entrants and internal promotions. Effective psychometric assessment can also play a key role in staff development processes – an important challenge presently facing South Africa.

Psychometric tests are commonly employed as aids in occupational decisions, including the selection and classification of human resources. Schmidt and Hunter (1998) state that the most important property of the personnel assessment method is predictive validity: the ability to predict future job performance, job-related learning (such as amount of learning in training and development programs), and other criteria.

Presently it is very important that tests be validated for the different organisations in which they are used. This also implies that in each organisation, for each specific job, the validity of the test battery being used must be ensured. This is something which could possibly be enhanced by also making use of competency-based assessment, which is directly linked to job content and inherent job requirements.

3.1.2 Conclusions in terms of specific objectives

The first objective was to determine the validity and reliability of the measuring instruments in a sample of Sales Representatives. The measuring instruments in this study showed alpha coefficients ranging from 0,73 to 0,91 for the CCSQ, 0,89 and 0,90 for the respective Ability measures, and 0,88 to 0,96 for the CCCI scales which were completed by participants' respective managers. The alpha coefficients indicate the reliability of these measures in capturing Sales representatives' competencies, abilities and performance, as rated by direct managers.

The second objective was to investigate the relation between the different factors (verbal ability, numerical ability, personality and manager-rated performance. The intercorrelations between the CCSQ7.2 scales are acceptable and in line with similar international studies on the CCSQ7.2 (Baron, Hill, Janman & Schmidt, 1997). The intercorrelations between the ability tests are also in line to what was found in other similar studies. The intercorrelations of the Customer Contact Competency Inventory (CCCI) scales are all high and they show a large effect size with correlations coefficients of $p \leq 0,01$. This is contrary to what was found in similar studies (Baron et al, 1997) where most of the correlations are in the 0,20 to 0,30 range showing good separation of constructs and control of halo effects. The large effect-size of the correlations could possibly be ascribed to time-constraints, as the managers only had two weeks and some less, to complete the CCCI. Some of the managers were also new in this section and perhaps didn't know their subordinates well enough to rate them objectively.

The third objective was whether the manager-rated performance can be predicted by making use of individual-level variables (verbal ability, numerical ability, personality) was investigated. The results of the regression analyses showed that Verbal Evaluation (VCC3) and Modest (CR4) were significant predictors of the Convincing competency.

Verbal Evaluation (VCC3) was also a significant predictor of Communicating Orally and being Results Driven. Verbal Evaluation (VCC3) and Participative (CR5) were significant predictors of Problem Solving and Organisation. In general thus, Verbal Evaluation (VCC3) was the most significant predictor of sales representative performance, as judged by managers.

Overall, it can be stated that there is a significant relationship between the test battery and job performance. The results of the research reflect that correlations between personality and ability and performance were small to moderate. Overall, it can be stated that there is a significant relationship between the test battery and job performance. The results in this study reflect that correlations between personality and ability and performance were small to moderate. This is lower than expected and what is found in similar international research. This is most probably due to the flawed criterion. The results should be used with caution to prevent making a Type II error. It should be noted however that manager ratings, the most frequently employed criteria (Lent, Aurbach, & Levin, 1971), are susceptible to all the sources of bias in objective indices, as well as to others that are peculiar to subjective judgements. According to Foxcroft and Roodt (2001), it should always be remembered that test results represent only one source of information and should be utilised carefully and professionally. Ideally, the managers should be better trained in completing the CCCI as well as recognising the pitfalls in completing a criterion questionnaire.

3.2 LIMITATIONS

The first major limitation of this study is the small sample size of 97 sales representatives. According to Kerlinger and Lee (2000), the universal decree in research is that the sample should be large. They further state that the smaller the sample, the larger the error in statistics being calculated from that sample. Cohen (1988, p. 7) states that "increases in sample size increases statistical power, the likelihood of detecting the occurrence under test". The Society for Industrial and Organisational Psychology of South Africa (SIOPSA) (2005, p. 12) also states in their "Guidelines for the Validation and Use of Assessment Procedures for the Workplace" that validity studies should have sufficient statistical power or the matter of

validity may be left unreciprocated. The threat of making a Type II error (errors being the failure to detect validity where with greater power in the analysis, correlations would be as significant) is great.

A second limitation is embedded in the criterion. One reason for the large effect-size of the correlations could be due to time-constraints due to organisational restructuring and appointment of new managers in sales and marketing. A second reason for the large size effect could also be due to the halo-effect, which may be a result of the fact that the managers were not properly trained in completing the Customer Contact Competency Inventory (CCCI). Some of the managers were also new in this section and perhaps didn't know their subordinates well enough to rate them objectively. The CCCI questionnaire completion timelines had to be re-negotiated with the organisation at a time when major organisational restructuring was taking place. The researcher followed up, corresponded directly with the managers, and highlighted the benefits of the research to aid in commitment and completion. Yet, the final number of responses was disappointing.

A third limitation is the fact that the candidates were pre-selected by the internal recruitment screening process of the company when they were first employed in their positions. This results in restriction of range. The size of a correlation coefficient is reliant upon the variability of the variables in the sample. Guilford (1965) states that the greater the variability, the higher the correlation. If a correlation is computed when only a partial range of possible values on one variable is included in the group studied – "the variable might be less common among people in general" (Aron & Aron, 1994).

3.3 RECOMMENDATIONS

Recommendations for the organisation and for future research are made in this section.

3.3.1 Recommendations for the organisation

Managers must obtain the necessary training on how to complete the CCCI questionnaire. Bias in ratings may be due to spotty or inadequate observation by the rater, unequal opportunity on the part of subordinates to demonstrate proficiency, personal biases or prejudices, or an inability to distinguish and reliably rate different dimensions of job

performance. Manager ratings, the most frequently employed criteria (Lent et al., 1971), are susceptible to all the sources of bias in objective indices, as well as to others that are peculiar to subjective judgements.

A useful assessment could entail an "online assessment tool" which is gaining popularity amongst South African organisations and these tests are highly convenient and user-friendly. The range of online recruitment, screening and selection tools can add versatility to an organisation's selection and recruitment processes. Different tools are available that can be used to screen applicants out of the process or to select candidates in at various stages of the recruitment cycle (SHL Newsline, 2006, www.shl.co.za).

The competencies that the organisation should look at for recruiting, given the findings of this research, are the 5 extremely important CCCI competencies with Convincing, Communicating Orally, Problem Solving, Organisation and Results Driven. The ability test Verbal Evaluation (VCC3), predicted the most variance in all these competencies. This is in line with the findings of Schmidt and Hunter (1998) where it was found that General Mental Ability explains the most variance in predicting work performance.

Schmidt and Hunter (1998) states that the most important property of the personnel assessment method is predictive validity: the ability to predict future job performance, job-related learning (such as amount of learning in training and development programs), and other criteria. According to Lawler (1992), money spent on employee selection is usually money well spent, because it can produce big savings if it reduces turnover and leads to a workforce that can operate in a highly involved manner. Selection is a comprehensive, integrated process of gathering information about the applicants in an attempt to predict performance. The research has shown that the test battery (Customer Contact Styles Questionnaire Version 7.2, Verbal and Numerical Evaluation) has a role to play as one piece of the sales representatives' selection decision-making puzzle.

Recommendations for future research

Based on the results obtained in this study, the following recommendations are made with regard to future research.

More research is needed regarding the validation of selection batteries. Where the study involves selection, the managers should be trained in completing the CCCI as well as recognising the pitfalls completing a criterion questionnaire. Manager ratings, the most frequently employed criteria (Lent et al., 1971), are susceptible to all the sources of bias in objective indices, as well as to others that are peculiar to subjective judgements. According to Foxcroft and Roodt (2001), it should always be remembered that test results represent only one source of information and should be utilised carefully and professionally.

The sample size should be larger and according to Kerlinger and Lee (2000) the general rule in research is that the sample should be large. They further state that the smaller the sample, the larger the error in statistics being calculated from that sample.

The candidates were pre-selected by the internal recruitment screening process of the company when they were first employed in their positions. This results in restriction of range. The current study cannot solely be used to validate the test battery as a result of above-mentioned limitations. The predictor scores for all applicants should be obtained, rather than just data for those who are selected. This is important for estimating and possibly correcting for range restriction effects. Restriction of range – in the predictor, criterion or both – may distort the observed validity or estimate of the validity obtained from a particular sample.

The research was conducted on Sales Representatives in a Telecommunication Company. Sales Representatives are playing an important role in today's society. It would be of interest and value to conduct similar research within the sales domain of other organisations. It may be that in other sales environments, the focus falls stronger on specific facets of the sales function (for example selling versus marketing products).

South African test users and developers must be mindful of past injustices in our society and guard against falling into the trap of allowing current affirmative action policies to impact on the ethical use of tests (Foxcroft, 1997).

Regarding future research, the present research might be replicated in a larger sample with more attention to obtaining objective criteria where the managers were trained to complete the Customer Contact Competency Inventory questionnaire.

According to Foxcroft and Roodt (2001), it should always be remembered that test results represent only one source of information and should be utilised carefully and professionally. It would therefore be of value to conduct further, more comprehensive validation studies including other aspects of the selection battery in an effort to improve the process.

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