THE DEVELOPMENT AND EMPIRICAL EVALUATION OF AN AFFIRMATIVE DEVELOPMENT COACHING COMPETENCY QUESTIONNAIRE

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DECLARATION

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V Chikampa **Date:** December 2013

ABSTRACT

This study aimed at developing and empirically evaluating an affirmative development coach competency questionnaire. The development and empirical evaluation of the affirmative development coach competency questionnaire forms the first phase of a larger project of developing and testing a comprehensive affirmative development coach competency model. A coaching@work competency model would help in clarifying and defining the characteristics that affirmative development coaches need to possess and what affirmative development coaches need to do and need to achieve to be successful on the job. Inequalities brought about by exclusionary policies in terms of education as well as employment that characterised South Africa before the advent of democracy meant that many members of the previously disadvantaged groups lack the necessary skills to succeed at work, especially the ability to occupy higher level positions. Theirs was the world of unskilled work. In order to rectify the injustices experienced by members of the designated groups the new post-apartheid government enacted policies and laws based on the principle of affirmative action. However the preferential hiring in favour of Blacks required by the affirmative action measures disadvantages organisations and the economy because most members of the previously disadvantage groups lack the necessary job competence potential to succeed at work. Affirmative development has to play an important role in rectifying the injustices of the past. Coaching in addition has to play an important role in honing the newly developed abilities and skills. The study aimed at identifying the various coach competencies that behaviourally constitute coach success. Competencies were derived from examining the outputs that need to be achieved through the competencies. Understanding the relationships between the affirmative development coaching competencies (behaviours) and the outcomes the affirmative development coach attempts to achieve was important because the relevance of the hypothesised competencies need to be validated (logically and empirically) against the structural network of outcomes. The study identified nine outcome variables namely *employee personal learning*, *role clarity*, *job satisfaction*, *organisational commitment*, *employee self-efficacy*, *work engagement*, *contextual performance*, *task performance* and *intention to quit.*

Seventeen coach competencies were examined in this study. The proposed partial coach competency model shows various structural paths between the coach competencies and the coach outcome variables the coach is held accountable for. The objective of the research was to develop the Chikampa Coach Competency Questionnaire (CCCQ) aimed at measuring the seventeen coach competencies and to empirically evaluate the psychometric properties of the CCCQ.

The hypothesis of exact measurement model fit was rejected but the hypothesis of close fit could not be rejected ($p>.05$). The position that the CCCQ measurement model fits the data closely in the parameter was found to be a tenable position. The fit indices reflected good model fit in the sample. The measurement model parameter estimates indicated that the indicator variables represented the latent coaching competencies satisfactorily. Discriminant validity was problematic. The seventeen latent coaching competencies as measured by the CCCQ are not clearly separate but tend to flow into each other.

OPSOMMING

Hierdie studie was gerig op die ontwikkeling and empiriese evaluering van ‘n regstellende ontwikkingafrigter[1]bevoegdheidsvraelys. Die ontwikkeling and empiriese evaluering van ‘n regstellende ontwikkingafrigterbevoegdheidsvraelys verteenwoordig die eerste fase in ‘n groter projek om ‘n omvattende regstellende ontwikkingafrigterbevoegdheidsmodel te ontwikkel. ‘n Afrigter@werk bevoegheidsmodel sou meewerk om die persoonseienskappe waaroor regstellende ontwikkelingsafrigters moet beskik te identifiseer en te definieer en om helderheid te kry ten opsigte van die handelinge wat regstellende ontwikkelingsafrigters moet verrig en die uitkomste wat hul daardeur moet bereik om as suksesvol geag te word. Ongelykhede wat te weeg gebring is deur die uitsluitingspolitiek in terme van opvoeding en werksgeleenthede wat Suid Afrika gekenmerk het voor die aanbreek van demokrasie het meegebring dat baie lede van die voorheenbenadeelde groepe die nodige vaardighede ontbreek wat vereis word om in die wereld van werk sukses te behaal, spesifiek die vermoë om hoër-vlak posisies te bekleë. Hulle was gedoem tot ‘n wereld van ongeskoolde werk. Ten einde die ongeregtighede wat lede van die aangewese groepe ervaar het reg te stel het die nuwe post-apartheid regering beleide en wetgewing verorden gebaseer op die beginsel van regstellende aksie. Die voorkeur-indiensneming van Swartes wat deur regstellnde aksiemaatreëls vereis word benadeel egter organisasies en die ekonomie omdat die werksbevoegdheidspotensiaal wat vereis word om in die wereld van werk te slaag by die meerderheid lede van die voorheenbenadeelde groepe ontbreek. Regstellende ontwikkeling moet ‘n belangrike rol speel in die regstelling van die ongeregtighede van die verlede. Afrigting moet daarbenewens ‘n belangrike rol speel om die nuutontwikkelde vermoëns en vaardighede te slyp. Die doel van hierdie studie was om die afrigerbevoegdhede wat vanuit ‘n gedragsperspektief afrigtersukses beliggaam te identifiseer. Bevoegdhede is geïdentifiseer deur die uitkomste te bestudeer wat via die bevoegdhede bereik moet word. ‘n Begrip van die verwantskappe tussen die regstellende ontwikkelingafrigterbevoegdhede (gedrag) en die uitkomste wat die regstellende ontwikkelingafrigter probeer bereik was

[1] ‘n ten volle bevredigende Afrikaanse term wat die konnotasies geassosieer met die Engelse term *coach* in hierdie konteks suksesvol vasvat kon nie gevind word nie. Alternatiewe wat oorweeg is was *opleier* en *breier*.

belangrik omrede die relevansie van die voorgestelde bevoegdhede teen die strukturele network van uitkomste (logies en empiries) gevalideer moet word. Hierdie studie het nege uitkomsveranderlikes geïdentifiseer, naamlik *persoonlike leer*, *rolduidelikheid werkstevredenheid*, *organisasieverbondenheid*, *selfvertroue*, werks*verbondenheid*, *kontekstuele prestasie, taakprestasie* en *bedankingsvoorneme.*

Sewentien afrigterbevoegdhede is bestudeer in hierdie studie. Die voorgestelde gedeeltelike afrigterbevoegdheidsmodel dui verskeie strukturele bane aan tussen die afrigterbevoegdhede en die afrigteruitkomste waarvoor die afrigter verantwoordelik gehou word. Die doel van die navorser was om die Chikampa Coach Competency Questionnaire (CCCQ) gerig op die meting van die sewentien arigterbevoegdhede te ontwikkel en om die psigometriese eienskappe van die CCCQ te evalueer.

Die hipotese van presiese metingsmodel passing is verwerp maar die hipotese van benaderde passing kon nie verwerp word nie ($p>.05$). Die standpunt dat die CCCQ metingsmodel die data in die parameter by benadering pas is dus ‘n houdbare standpunt. Die pasgehalte-maatstawwe het goeie modelpassing in die steekproef aangedui. Die metingsmodelparameterskattings het aangtoon dat die waargenome veranderlikes die latent afrigterbevoegdhede suksesvol verteenwoordig. Diskriminantgeldigheid was egter problematies. Die sewentien latent afrigterbevoegdhede soos gemeet deur die CCCQ word nie duidelik van mekaar onderskei nie maar neig om in mekaar te vloei.

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IN LOVING MEMORY OF ROSA CHIKAMPA (1952 - 1995).

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CHAPTER ONE

OVERVIEW OF THE STUDY AND RESEARCH OBJECTIVE

1.1 INTRODUCTION

Organisations do not constitute natural phenomena but are rather man-made and therefore, in as far as human behaviour is motivated behaviour, exist for a specific reason. Organisations exist to combine and transform scarce factors of production into products and services with economic utility (De Goede & Theron, 2010). Organisations therefore exist to serve society with need satisfying products and services. To ensure that organisations serve society in a rational manner organisations in capitalistic systems have to comply with the economical principle which according to Myburgh (2013) demands that organisations should strive to attain the highest possible output with the lowest input of production factors.

More specifically in order to meet the aim of making profit as a primary goal an organisation has to produce goods and services to be consumed by the public in such a manner that the value attached to it by the market exceeds the investment required to produce it. Failure to make a profit would either imply that the organisation is combining scare resources into products/services that society does not value or that the organisation is using excessive resources (i.e., wasting resources) in creating products/services that society do value. For this aim to be achieved a business entity needs to coordinate a variety of business functions that need to be performed to combine and transform scarce factors of production into products and services and to get these to the market. The success with which organisations combine and transform scarce factors of production into products and services with maximum economic utility and the success with which organisations get these products to market with the appropriate price, packaging and promotion is significantly dependent on the work performance of its workforce which in turn

depends on the quality of the workforce and the way the workforce is utilised and managed (Theron, 2011).

Labour plays an integral part in organisations because every organisational activity is managed, operated and run by people. Labour therefore determines the efficiency and effectiveness with which organisational activities will be performed. Labour is the life-giving production factor through which the other factors of production are mobilised.

The human resource practitioner has the responsibility of altering and influencing the performance of working man because labour constitutes a pivotal production factor. There are two types of interventions that a human resource practitioner can use to affect the work performance of employees. The first one aims at affecting the quality of employees by controlling the flow of employees into, through and out of the organisation with interventions such as recruitment and selection, while the second one aims at affecting the nature of the workforce or characteristics of the existing workforce in their current positions through training programs as well as development activities such as mentoring and coaching. Both types of interventions attempt to affect those characteristics of employees that determine the level of work performance (defined in terms of the outcomes that the job exists for and behaviourally in terms of job competencies that are instrumental in achieving these outcomes).

One important human resource intervention that has the potential to improve employee performance is managerial as well as non-managerial coaching. The term "coach" has become almost synonymous with management and leadership (Peterson, 2002, as cited in Kuzmyez, 2011). Slater and Narver (1995) as cited in (Ellinger, 2003) suggest that facilitative leaders focus on developing their people by acting as a coach. Managers and supervisors are faced with the expectation to coach their employees and adopt more coach-like behaviours (Anderson, Frankovegelia & Hernez-Broome, 2009; as cited in Kuzmyez, 2011). Coaching occurs in workplaces so that on the job activities and experiences of employees can become the catalyst for learning and improving employee job performance (Ellinger, 2003; Hamlin, Ellinger & Beattie, 2006). Managers acting as coaches to improve

employee performance have become prominent in many organisations. Managers are increasingly adopting coaching roles in their organisations, in addition to their many other managerial responsibilities.

Several studies have shown the importance of coaching in organisations. A study by Ellinger, Ellinger and Keller (2005) has indicated that coaching as a leadership style is positively related to performance. Coaching makes employees feel valued and to be hard-working because they get more out of their jobs. The benefits of coaching at work ranges from improvement in performance (Hannah, 2004) to increases in customer satisfaction (Kiger, 2002).

Day (2001) defined coaching as a one-to-one approach to facilitate individual learning and behavioural change. Fournies (1987) defines it as a process for improving problem work performance while others like Orth, Benfari and Wilkinson (1987) define managerial coaching as a day-to-day hands-on process of helping employees recognise opportunities to improve their performance and capabilities. A comprehensive definition to be used in this study is one that regards coaching as a relationship between superiors like managers and their subordinates that inspires development. It will be seen as a process of empowering employees, giving them guidance and support so as to improve performance and also to help employees develop themselves (Evered & Selman, 1989; Peterson & Hicks, 1996; Redshaw, 2000). Managers coaching their subordinates should not confine coaching to correcting poor performance (Park, 2007). Coaching should be aimed at increasing employee work performance across all the competencies and outcomes constituting job success.

The need for improving employee job performance through fostering employee development brings out the need for the adoption and usage of coaching in South African organisations. The driving force behind engaging in affirmative development coaching in South African organisations is the deficiencies in skills among members of formerly designated groups. There is a need for skill development so as to have competitive advantage in the 21st century world of work characterised by global competition.

1.1.1 NEED FOR AFFIRMATIVE ACTION (DEVELOPMENT) ORIENTED COACHING

Colonial and Apartheid policies have had a devastating impact on the development of Black human capital (Groenewald and Schurink, 2007). Inequality beliefs in the Apartheid era in South Africa expressed themselves in forms of laws that significantly disadvantaged members of the designated groups in terms of education and employment. Inequalities prior to democracy in terms of education were advanced by laws such as the Bantu Education Act 47 of 1953 and the Extension of University Education Act 45 of 1959 (Kruger, 2008). For the first three quarters of the century, social spending on education, pensions and other social benefits for the disadvantaged group was *per capita* more or less ten to eight times smaller than on Whites (Burger, 2012). In 1970, the *per capita* spending on White education was twenty times higher than the *per capita* spending on the previously disadvantaged group (Verwoerd, 1999). This invariably resulted in the provision of poor quality education to Blacks. Blacks is a generic term used to refer to Africans, Coloureds, Indians and others like the Chinese who were South African citizens prior to the advent of democracy to which we are now referring to as the previously disadvantaged group (Burger, 2012). Feuerstein (as cited in Burger, 2012) and Taylor (as cited in Burger, 2012) defined disadvantaged broadly as including poverty, k of access to enriching activities, inadequate parental attention and care and poor quality of education.

These inequalities in terms of education lead to a shortage of skilled Black workers (Blacks, Coloureds and Indians) in the South African economy because the system denied them the opportunity to acquire the much needed knowledge,skill,abilities and other person characteristics(i.e. competency potential[2] latent variables) needed to succeed in the world of work. In South Africa one would expect criterion distributions[3] of advantaged and disadvantaged groups not to coincide because members of the disadvantaged group have been denied (relative to the advantaged

[2] Competency potential refers to the person characteristics that directly and/or indirectly affect the performance of employees defined behaviourally and in terms of results they achieve through the behaviours.

[3] The criterion in this context refers to job performance.

group) the opportunity to develop the competency potential to become competent on the competencies behaviourally defining work performance (Theron, 2011). Statistics South Africa (2012) reports that significant differences in educational attainments still exist for the various racial groups in South Africa. Twelve point five percent (12.5%) of the Black African population in the labour force did not complete primary school education compared to their Coloured (8.3%), Indian/Asian (2.4%) and White (0.1%) counterparts. Statistics South Africa (2012) further says that 45.3% of the White labour force had tertiary education qualifications either a degree or a certificate/diploma of at least six months' duration with matric compared with 27.9% of the Indian/Asian labour force, 12.0% of the Black African labour force and 12.2% of the Coloured labour force.

Secondly discrimination also extended to labour issues. Job discrimination in South Africa was institutionalised by law which included job reservation clauses in the Industrial Conciliation Act of 1956 (Horwitz, Falconer & Searll, 1996). Before the 1979 amendments to the Industrial Conciliation Act, recruitment, employment levels and access to skilled work was controlled by established White trade unions (Horwitz et al., 1996). Furthermore employees from designated groups were denied apprenticeship training. Coupled by the fact that they were denied access to good education, such a scenario invariably meant that Blacks had little opportunity for advancement to managerial and skilled jobs.

The situation created by Apartheid policies, practices and legislation is still in recent times reflected in the Commission for Employment Equity Annual Report (2009) where it is reported that White males still dominate the higher positions in the private sector organisations with 61.1% of top management positions held by White males while African, Coloured and Indian males occupy only 9.8%, 3.5% and 4.8% respectively of management positions. The same trend is similar when it comes to females. White females dominate at 11.7%, followed by African females at 3.8%, Coloured females at 1.2% and Indian females at 1.1% (Commission for Employment Equity Annual Report, 2009). It will take time to offset this imbalance. The effects of past discriminatory laws on occupation level distribution by race are shown in Table 1.1. The table shows that Whites still occupy the majority of top management and

professional positions, still dominate the skilled and supervisory positions, and also occupy the majority of apprentice and trainee technician's positions.

Table 1.1

Occupation Level distribution by race

	White	African	Coloured	Asian
Management and professional	92.7	3	2	2.3
Skilled and supervisory	77.64	10.74	6.94	4.68
Apprentices and trainee technicians	60.94	30.91	5.82	2.33

(Horwitz et al., 1996, p. 135)

In order to address these issues inherited from the past, the new post-Apartheid government enacted new laws such as the Employment Equity Act 55 of 1998, the Broad-Based Black Economic empowerment Act of 2003 and the associated Codes of Good Practice on B-BBEE to protect people from designated groups against unfair labour practices and to counteract the legacy of past unfair discrimination.

The new laws and policies are based on the principle of affirmative action that aims to tilt the playing field towards a preference for Blacks (Keswell, Lee, as cited in Myres, 2011). Organisations are required by law to take affirmative action measures as a way of addressing inequalities caused by the Apartheid system. According to the Employment Equity Act 55 of 1998 affirmative action measures are measures designed to ensure that suitably qualified people from designated groups have equal employment opportunity and are equitably represented in all occupation categories and levels in the workforce of a designated group. Secondly it states that affirmative action measures must include measures to identify and eliminate employment barriers, including unfair discrimination, which adversely affect people from designated groups. It should in addition include measures designed to further diversity in the workplace and also make reasonable accommodation for people from designated groups in order to ensure that they enjoy equal opportunities and are equitably represented in the workforce of a designated employer. Most South African organisations strive to obtain and maintain their BEE rating based on a score

card comprising of seven key areas namely *ownership*, *management control*, *employment equity*, *preferential procurement*, *skills development*, *enterprise development* and *socio-economic development* (Myres, 2011).

In order to succeed in transforming the factors of production organisations need to have access to competent high performing employees (Oehley & Theron, 2010). The scenario dictated by affirmative action which demands that among other things organisations should display a preference for Blacks in terms of employment have created a dilemma for organisations. Organisations have to remain productive and competitive in the interest of owners, employees, shareholders and society in general. At the same time they have to transform their workforce so that it reflects the demographics of the labour market. Organisations, however, find it difficult to simultaneously meet these two responsibilities. Strict top-down selection based purely on merit under the labour market conditions created by the Apartheid system creates adverse impact (Theron, 2009). Members of former designated groups lack the competency potential required to succeed in the world of work because a socio-political system denied them the opportunity to develop it and as such their chances of succeeding at work are significantly less because of this deficiency. An interpretation of affirmative action that does not formally and explicitly acknowledge the consequences of the Apartheid system (i.e. skills deficiencies) will invariably result in the ability of organisations to remain productive and competitive being eroded (Oehley & Theron, 2010).

Affirmative action is traditionally interpreted as an approach to selection and promotion where preference is given to applicants from previously disadvantaged groups without any active attempt to modify the quality of applicants prior to selection. Selection occurs under the labour market conditions created by the Apartheid system. The traditional interpretation of affirmative action therefore does not formally and explicitly acknowledge the consequences of the Apartheid system. The traditional interpretation of the affirmative is fundamentally flawed because it only benefits an already privileged few but ultimately hurts society due to the impact of a lack of motivated and competent personnel on organisation performance. There is consequently a need to revisit the interpretation of affirmative action.

This is not to say that affirmative action is not necessary. Affirmative action is necessary. It is necessary because it is the morally right thing to do. Even if no advantages would accrue to organisations participating in affirmative action, attempts should still have to be made to correct the wrongs of the past and its consequences. There are, however, a number of problem conditions that urgently require attention in South Africa that affirmative action can significantly help to alleviate provided that affirmative action is interpreted in a manner that formally and explicitly acknowledge the consequences of the Apartheid system.

The distribution of wealth in South Africa is extremely positively skewed with a large percentage of the population earning a very small income and a small percentage of the population earning a very large income (Theron, 2011). As measured by the Gini coefficient (www.wikipedia.org/wiki/Gini_coefficient), South Africa is at the number one position overtaking Brazil (Pressly, 2009; as cited in De Goede & Theron, 2010) in terms of countries with wealth imbalances due to the socio-economic policies pursued during the Apartheid era. The skewed distribution of wealth significantly increases the potential for social and political unrest. Recent service delivery protests and strikes seem to attest to this. Downward pressure can be exerted on the Gini coefficient from its current value of .666 (De Goede & Theron, 2010) only by allowing more South Africans sustainable active involvement in the economy beyond that of unskilled labour. A necessary but insufficient condition to achieve this is to increase the intellectual capital with which members of previously disadvantaged groups trade in the labour market. The issue of wealth imbalance can therefore in part be addressed through affirmative action like the broad based economic empowerment and other developmentally focussed affirmative action measures.

If it is assumed that fundamental talent is uncorrelated with race and gender but that Apartheid policies and practices denied Black South African citizens the opportunity to develop the competency potential required to become competent on the competencies behaviorally defining work performance. The existence of vast untapped reservoirs of Black job potential is thereby implied. Consequently when affirmative action is appropriately interpreted it will help reduce adverse impact on racial and gender lines. This would in the end benefit organisations in that they

would be optimally utilising the workforce making the organisation to have a competitive advantage over competitors. A reduction in adverse impact also decreases the risk of social unrest in that unemployment among people from disadvantaged groups is minimised reducing feelings of discontent or unfair treatment which is on its own a breeding ground of unrest in the country. Thirdly affirmative action is necessary because it is in accordance with the law.

The answer to the challenge brought about by the contextual requirements and the legal demand for companies to have a representative workforce from all segments of the national population but with the majority lacking the necessary skills (competencies) due to preferential education in the Apartheid regime can be solved through the development of the job competency potential required to succeed in the world of work. To successfully do this De Goede and Theron (2010) advocated for the measuring of the learning potential of previously disadvantaged members of the designated groups. They advocated for a procedure that could detect or identify underdeveloped potential. However it should be noted that an investigation into the learning potential for people from designated groups on its own is not enough. Knowing the learning potential of applicants should not be an end in itself. Learning potential will not spontaneously elicit itself. De Goede and Theron (2010) advocated a two-stage selection procedure in terms of which applicants for a job that currently lack the job competency potential but that do display high levels of learning potential are first selected into an off-the-job affirmative development opportunity aimed at addressing the deficiencies in the malleable job competency potential latent variables. Subsequent to the completion of the affirmative development programme De Goede and Theron (2010) suggest that the impact of the programme on the job competency potential should be assessed via competency based measures and these measures along with a battery of predictors should then be used to select in a strict top-down fashion the best applicants for the job. Once affirmative applicants are recruited and selected there is, however, a need for a coherent, integrated system of further affirmative action-related human resource management interventions aimed at ensuring the successful integration of the affirmative applicants into the organisation.

Human (1996) seems to support this line of reasoning. Affirmative action according to Human (1996) is the process of creating equal employment opportunity (employment equity). Human (1996) further says that affirmative action is not merely a process of recruiting greater numbers of historically disadvantaged employees but that it is part and parcel of a holistic system of human resource management and development and impacts on all the policies and procedures relating to the selection, recruitment, induction, development, promotion and severance of people.

This interpretation of affirmative action means that for affirmative action programme to be meaningful and effective there is firstly a need to strongly emphasise the identification of learning potential and its realisation through off-the-job affirmative development. Once appointed the development process should, however, continue. In this case line managers should play a key role in on-the-job coaching and the development of staff (Human, 1996). On-the-job coaching is a potentially effective means of people development (Humans, 1996).

By way of analogy. When seedlings in a nursery are transplanted from the tray in which they germinated to the flowerbed but they are left unattended with no proper protection and care they have a slim chance of surviving because at this time they are tender and fragile and they need to be protected from the harsh elements such as strong winds, birds, the sun and even animals. According to Tucker (2007) the drivers of affirmative action in this case employment equity and Broad Based Black Economic Empowerment has often led to previously disadvantaged individuals being thrown into the deep end where they are expected to sink or swim. More often than not they fail. Derailment is too often expected because individuals from previously disadvantaged groups are promoted too fast and too far out of their depth (Strauss, 2010). The chances of success on the job for people from designated groups will be slim if left to fend for themselves. They need guidance hence coaching is primarily required once the “young seedlings are planted out” (Theron, 2012).

If affirmative development coaching is a necessary human resource intervention to make organisational transformation through affirmative development succeed, the performance of affirmative development coaches should be purposefully managed. This means that the affirmative development coaching performance of managers

acting as affirmative development coaches should be measured and purposefully managed through an array of proactive and reactive human resource interventions (Human, 1996). This implies that the identity of the coaching competencies and coaching outcome variables comprising coaching performance should be known as well as the manner in which these latent variables structurally combine. This, moreover, implies the need for measuring instruments to measure managers' level of competence on the affirmative development coaching competencies and to measure the level of success that mangers achieve on the outcome variables they are meant to affect as affirmative development coaches. Managers need to understand their roles as coaches, the process of coaching as well as display the desired competencies to be effective. The need to affect affirmative coach performance, however, also implies the need to understand the identity of the affirmative development coach competency potential latent variables and situational characteristics that affect the level of competence that coaches achieve on the coaching competencies and through that on the outcome variables as well as the manner these variables structurally combine. To purposefully manage the performance of affirmative development coaches requires the development and empirical testing of a comprehensive affirmative development coach competency model.

1.1.2 AFFIRMATIVE COACHING@WORK COMPETENCY MODEL

The process of identifying and defining the competency potential latent variables that drive the competencies necessary to achieve the outcomes for which a specific position exists and to map the structural linkages that exist within and between these three domains is called competency modelling (Rothwell & Lindholm, 1998).

A competency model in essence is a structural model (Diamantopoulos & Siguaw, 2000) that depicts the manner in which competency potential latent variables, competencies and outcome latent variables are structurally linked. A competency model in essence is a three-domain structural model that maps a network of causally inter-related person characteristics onto a network of causally inter-related key performance areas and that maps the latter onto a network of causally inter-related outcome variables (Myburgh, 2013). The coaching@work competency model as

shown in Figure 1.1 has three primary domains namely a domain of competency potential latent variables, a domain of competency latent variables and a domain of outcome latent variables. The first domain is composed of coach competency potential. According to Van der Bank (2007) competency potential refers to the psychological attributes of, in this case, the coach such as aptitudes, abilities, interests, values, motives and personality that determine job performance. This domain is linked to the coach competencies domain. Competencies are the abstract representations of bundles of related observable behavior, driven by a nomological network of (unknown) constructs (competency potential), which, when exhibited on a job, would constitute high job performance and would (probably, depending on situational constraints/opportunities) lead to job success defined in terms of output/the objectives for which the job exists (Theron, 2011). The second domain is structurally linked to the third domain of coach outcomes which at the same time are the coachee competency potential latent variables. The third domain is linked to a coachee job competencies domain which is also in turn linked to coachee job outcomes. Theron (2011) defined the concept outcome as job success defined in terms of outputs or objectives for which the job exists. The job outcome domain is derived from the objective of the job. Literature generally tends to interpret competency modelling and competency model more narrowly than this study. In most cases a competency model either refers to a list of behavioural competencies that constitute success in a specific position or it is used to refer to a set of personal attributes required to succeed in a specific position. The former interpretation seems to be more prevalent in the United Kingdom (Theron, 2011) whereas the latter seems to be more popular in the United States of America (Theron, 2011).

The basic structure of the three-domain affirmative development coaching@work competency model and the manner in which it links up with a similar three-domain employee@work competency model is shown in Figure 1.1. Again it needs to be emphasised that each domain or circle represents a structural model that maps the structural relations between the latent variables comprising the particular domain. The development and empirical testing of such sequentially linked structural models would help clarify and define which characteristics affirmative development coaches need to have to enable them to do that which impacts on malleable characteristics of the employees that they coach, which in turn affect the employees' ability to be

successful on the job. Such a model will be very useful to guide and integrate human resource interventions aimed at increasing affirmative development coach performance.

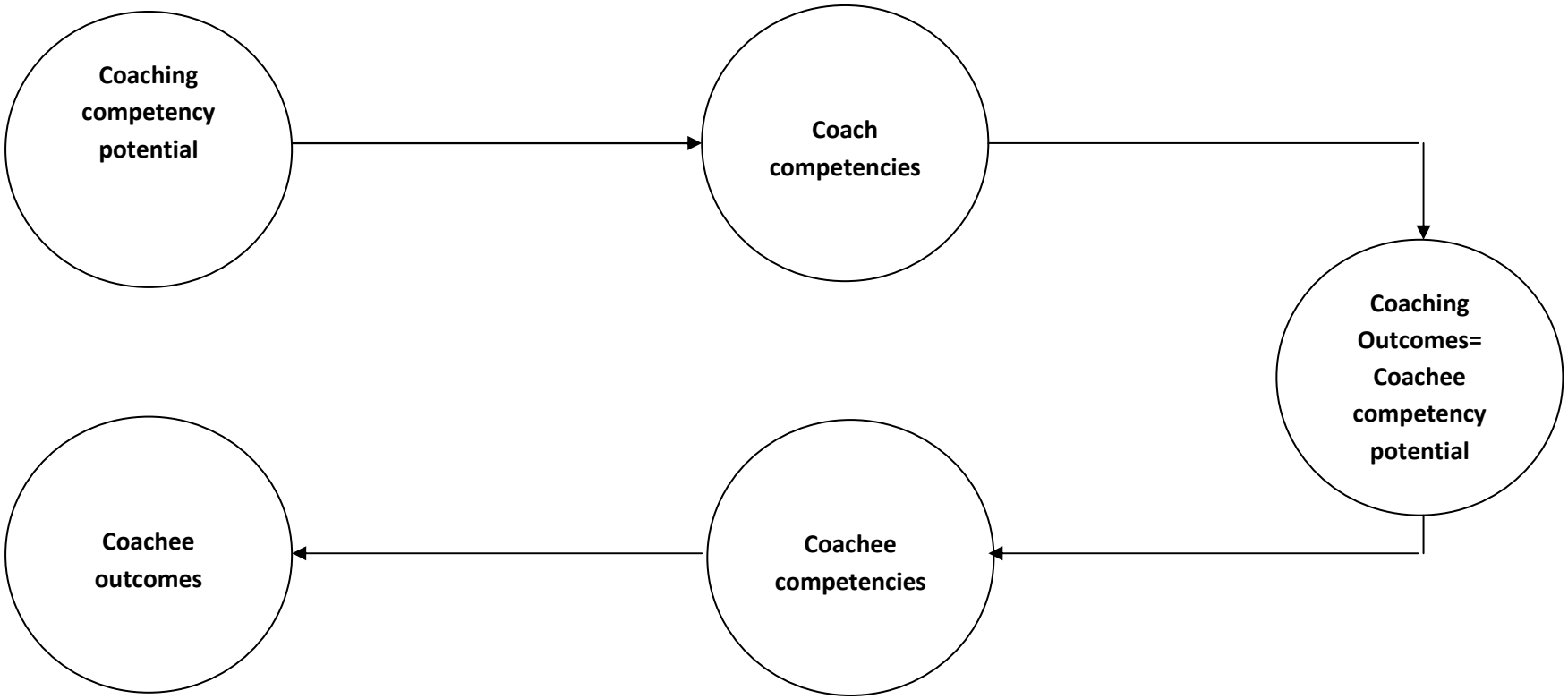

Figure1.1 Affirmative development coaching@work competency model

Purposeful human resource interventions are possible because, according to Theron (2011), the level of performance achieved by any job holder is not a random event but rather an expression of lawful working of a complex nomological network of latent variables.

There are several approaches to competency identification, modelling and assessment but the more fruitful way is the output-driven approach. Casio (as cited in Van Der Bank, 2007) says that it is important to view behaviour in relation to results in that it provides an indication of the relevant importance of specific individual competencies thereby enabling criterion developers to attach a weight to specific performance areas. In the output-driven approach the focal point is the output of the targeted job or occupation. Rothwell and Lindholm (1998) argue that outputs are what successful performers produce and as such competencies are derived from examining outputs. In this case understanding the relationship between competencies (behaviours) and outcomes is important because it validates the relevance of the competencies. Competencies can be considered relevant to the extent that they are instrumental in achieving the outcomes for which the job exists.

In the above sections it was shown that performance of workers is cardinal in making the organisation reach its goal. In this case the performance of managers acting as affirmative development coaches is vital. Coach performance can be conceptualised on two levels namely on the job result or outcome level as well as on the behavioural level (Van der Bank, 2007). Successful performance on the coach outcome level requires specific levels of performance on the behavioural competencies in that the latter determines the former (Theron, 2011). It is further argued that the level of performance achieved on the outcome level could also feed back onto the level of performance reached on the behavioural competencies. It can therefore be seen that there exist a complex network of causal linkages between coachee outcomes for which the job of the coach exists and coach behavioural variables. Since the level of performance achieved by the coach is not a random event but can be expressed as a lawful working of complex nomological network of latent variables (Theron, 2011) there is need for the development and empirical testing of a coaching competency model. The competency model acknowledges the complexity of the behaviour of working man.

Gaining an understanding of the way in which the latent job competency potential, job competency and job outcome variables in the coaching @work structural model (Figure 1.1) structurally combine would offer the possibility of purposefully and rationally (proactively) improving performance on the coach job competencies relevant to the job outcomes for which the job of affirmative development coach exists through a variety of human resource interventions (Van der Bank, 2007). Secondly, knowing the relationship between the three domains would offer the possibility of purposefully and rationally (reactively) salvaging currently unacceptable performance (Van der Bank, 2007). To sanction this formative role the accuracy of any hypothesised coaching@work structural model would, however, have to be demonstrated by operationalising the latent variables comprising the model and showing that the model fits empirical data.

Developing and empirically testing a comprehensive affirmative development coaching competency model as defined above represents a formidable challenge. Apart from the theoretical challenges of identifying the identity of the latent variables involved and the manner in which they structurally interact, empirically testing such a model would make very daunting demands on the data collection procedure. Ideally multiple ratings on the coach and his/her coachee would be required that then has to be aggregated over coaches.

The development and empirical testing of a comprehensive affirmative development coaching competency model will consequently be approached in stages. The first stage will involve the development and psychometric evaluation of an affirmative development coach competency questionnaire. To assist in identifying and theoretically validating the core affirmative development coaching competencies, a partial affirmative development coach coaching competency model will be developed (but not subjected to empirical test) that maps the coach competencies on the outcome variables that the coach is meant to affect.

1.2 PURPOSE OF THE STUDY

The purpose of the study is to promote affirmative coaching competence and through that ultimately the success achieved by affirmative development programmes. This study aims at developing a partial affirmative development coaching competency model with the goal of identifying competencies that managers acting as affirmative development coaches need to be competent in order to affect coachee's work performance. This study moreover aims to develop and validate a coach competency questionnaire based on the partial affirmative development coaching competency model. The purpose of the coach competency questionnaire is to monitor affirmative development coach's coaching competence and to identify development areas that need to be addressed in affirmative coaching development interventions.

1.3 RESEARCH INITIATING QUESTION

The research initiating question is why variance in coaching performance exists amongst affirmative development coaches. What competencies do they need to display, and what outcomes are to be achieved through these coaching competencies?

1.4 RESEARCH OBJECTIVE

The objective of the research study is to develop and psychometrically evaluate a coach competency questionnaire.

1.5 STRUCTURE OF THE THESIS

The development of the coaching@work competency model will be chronicled in Chapter 2. Chapter 3 describes the methodology used in the construction of the

Chikampa Coaching Competency Questionnaire (CCCQ] and will outline the research methodology used to empirically investigate the construct validity of the proposed instrument. Chapter 4 presents the results of psychometric evaluation of the CCCQ through confirmatory factor analysis utilising the statistical analysis procedure of structural equation modelling. This process will indicate how well the measurement model fits the data. Chapter 5 discusses the findings and proposes further fruitful areas of further research.

CHAPTER 2

DEVELOPMENT OF THE COACHING @ WORK COMPETENCY MODEL

2.1 INTRODUCTION

In order to achieve the objective outlined in Chapter 1, there is a need to build a coaching@work competency model that will help in identifying competencies that affirmative development coaches need to be competent in order to affect coachee work performance. The coaching competency model to be developed should map coach competencies on outcome variables that the coach is meant to affect.

Myburgh (2013) is of the view that jobs are created to achieve specific outcomes and as such, since competency requirements are derived from outcomes for which the job exists, specific structural relationships can be assumed between job competencies and outcomes. This suggests that the outcomes that the affirmative development coach is meant to achieve needs to be identified first. Once these have been identified, the affirmative development coaching competencies that are instrumental in achieving these outcomes can be inferred.

2.2 DEFINING THE COACHING CONSTRUCT

A broad understanding of the concept and essence of coaching is still required at the outset to guide the search for coaching outcomes. Business coaching is defined as a process of engaging in meaningful communication with individuals in business, organisations, institutions or goverments with the goal of promoting success at all levels of the organisation by affecting the actions of those individuals (World wide association of business coaches as cited in Kahn, 2011). This definition seems to take the stance that a coaching strategy in an organisation must be an integrated and planned effort aimed at building organisational competence through transfer of skills and also achieving a return on investment in a coaching programme.

According to Beck (2012) drivers of coaching programmes in organisations include the need to deal with poor performance, to develop and retain high performance employees, support transition, the development of new management capabilities and enhancing team and individual's confidence and engagements. Coaching relies on job-related tasks or skills and is accomplished through instructions, demonstrations and high impact feedback. Schreuder and Coetzee (2011) defines coaching as a career service focussed on assisting individuals who encounter problems in adjusting to occupational positions to learn better adaptive skills and to become more career resilient. The view expressed in the above definition is in line with Chipunza's (2012) stance that coaching helps in facilitating professional growth for both the coach and the coachee. Coaching is therefore an important tool not only for improving performance through transfer of skills in employee career development but can also be used for talent pool development, preserving organisational memory and also achieving diversity and high retention rate.

A comprehensive definition to be used in this study is one that regards affirmative development-based coaching as a relationship between superiors (i.e. managers) and their subordinates that inspires development. It will be seen as a process of empowering employees, giving them guidance and support so as to improve performance and also to help employees develop themselves.

In addition, the essential differences and similarities between coaching and mentoring need to be understood. Barnets (1994) as cited in Ward, Bossons and Gover (2004) is of the view that a mentor is that person who achieves a one to one developmental relationship with the learner. Mentoring refers to a nurturing process during which a more skilled or experienced person serving as a role model, teaches, sponsors, encourages, counsels and befriends a less skilled or less experienced person for the purpose of promoting the latter's professional and or personal development Anderson (as cited in Arnolds, 2004). Douglas (as cited in Thompson, 2000) defines mentoring as an intense relationship in which a senior person oversees the career development of a less experienced person. Mentors are expected to impart wisdom regarding values, morals and norms that are specific to the organisation.

Coaching is a form of mentoring but tends to be more focused and usually shorter in duration. Coaching relies on job-related tasks or skills and is accomplished through instructions, demonstrations and high impact feedback. Differences and similarities between mentoring and coaching can be noted. Mentoring is developmental in nature and can either be formal or informal and is mostly used to transfer knowledge within an organisation. Mentoring takes place mostly over a longer period of time, interaction between the two parties involved is less frequent, mentoring is holistic and its focus is on retention, alignment, organisation development and business performance (Ward et al., 2004).

On the other hand coaching tends to take place over a shorter period of time. Coaching is skills related and interactions between the parties involved occur more frequently. Coaching aims to achieve a specifiec goal and works on improving what already exists (Ward et al., 2004).

Although differences can be noted, this study would use the term coaching to also refer to aspects covered by the term mentoring in order to broadly cover development issues between the coach and the coachee since the clear conceptual separation of the two terms as seen above seems rather difficult to achieve.

2.3 OUTCOMES OF AFFIRMATIVE DEVELOPMENT BASED COACHING.

Outcomes in this case represent the output/objective that the coach should achieve. The outcomes that the coach should achieve are defined in terms of specific malleable characteristics of the coachee.

In the context of affirmative development coaching, the coachee has been admitted onto an affirmative development programme aimed at developing malleable job competency potential latent variables that the candidate has been prevented from developing earlier because of Apartheid's discriminatory practices. As Figure 1.1 indicated these job competency potential latent variables targeted by the affirmative

development programme are believed to structurally impact on the competencies comprising the coachee's job performance, that in turn, are believed to impact on the outcomes for which the coachee's job exist. Becoming competent on these competencies and achieving these outcomes are important because the job performance for the coachee is judged in terms of competence on these competencies and how well he/she is able to meet or achieve these outcomes. Affirmative development programmes attempt to increase the job performance of individuals with learning potential that were previously denied the opportunity to develop that potential. The fundamental argument in favour of affirmative development coaching is that affirmative development on its own reduces the likelihood of affirmative development programmes succeeding in this objective or that it will take substantially longer to achieve this objective without post-development on-the-job coaching. Achieving competence on the relevant job competencies and the outcomes for which the job exists are much more likely with the assistance of a competent affirmative development coach.

This line of reasoning begs the question which coachee competency potential latent variables (not explicitly targeted by the affirmative development programme) are required to achieve successful job performance as defined by the job competencies and job outcome latent variables, and which coachee competency potential latent variables are required to successfully translate/transfer the newly developed job competency potential latent variables into increased performance on the job competencies?

Several studies have identified outcomes of developmental coaching. Ellinger (2003) identified *employee learning* as one outcome of coaching behaviour. Lankau and Scandura (2002) talked of personal learning that comes as a result of coaching. Ellinger, Ellinger and Keller's (2003) examination of supervisory coaching behaviour found that *job satisfaction* and *employee performance* were positively related to supervisory coaching. Garavan and Morley (1997) also found that managerial coaching was positively related to performance. A study done by Onyemah (2009) on the effects of coaching on sales people attitudes and behaviours found that coaching at work was negatively associated with *role ambiguity*. *Role clarity* comes about because coaching helps to clarify the coachee's performance expectations.

Coaching is a useful technique for facilitating *job satisfaction*, *organisational commitment* and lower turnover (Yukl, 2010). According to Park (2007) other outcomes identified in literature include job commitment, decreased turnover, personal capability and motivation. Wageman (2001) argues that managerial coaching behaviour can directly affect coachee *engagement* with work. A study done by Xanthopoulou, Bakker, Demerouti and Schaufeli (2009) investigating how daily fluctuations in job resources were related to employees' levels of personal resources found that job resources, particularly coaching, had a direct positive relationship with *work engagement* as well as *self-efficacy*.

2.4 COACHING OUTCOMES TO BE USED IN THIS STUDY

This study will examine the following selected coaching outcomes; *employee learning* (personal learning), *role clarity* (reduced role ambiguity), *job satisfaction*, *organisational commitment*, *work engagement*, *self-efficacy*, *intention to leave* and *job performance.* A distinction is made between two forms of *job performance* namely, task and contextual performance. Each outcome will be examined in terms of its constitutive definition, its antecedents, its consequences, how it is related to developmental coaching as well as possible relationships with other outcomes.

2.4.1 EMPLOYEE PERSONAL LEARNING

One of the primary purposes of coaching is to facilitate learning of relevant skills and job related knowledge (Yukl, 2010). According to Park (2007) employees grow by learning skills and knowledge to perform their jobs better. Individuals learn a great deal through their interactions with others especially those with different backgrounds, expertise and seniority in their organisations (Hayes & Allison as cited in Lankau & Scandura, 2002). One Important work relationship that can serve as a platform for personal learning is coaching (Kram in Lankau & Scandura, 2002). Vocational support by coaches provides opportunities for protégés to acquire new skills through direct coaching and challenging project assignments (Lankau & Scandura, 2002). The coach provides advice on how to deal with specific challenges and also provides the coachee with the opportunity to discuss important

job-related issues and ideas with someone who is experienced and can provide objective feedback and suggestions.

Employee personal learning is an important outcome of coaching**.** Employee personal learning which evolves into organisational learning plays a critical role in the survival of the organisation. These turbulent times characterised by technological change, innovation, competition and downsizing means that organisations need to adapt to the new environments if they are to survive. Learning therefore is the key because it allows for continuous improvements.

Learning starts with individuals and as such learning organisations are founded on the learning process of individuals in the organisation (Wang & Ahmed, 2003). According to Honey and Mumford (as cited in Wang & Ahmed, 2003) a learning organisation evolves as a result of the learning and behaviour of its people. The application of learning at the organisational level is primarily conditioned as a collectivity of individual learning, training and development (Wang & Ahmed, 2003).

According to Park (2007) individual learning and development brings benefits to organisations at the personal level which includes enhanced attraction of good employees, reduced undesirable turnover and enhanced performance through better job matching.

2.4.1.1 Definition of Personal Learning

Kram (as cited in Lankaua & Scandura, 2002) defines *employee personal learning* as knowledge acquisition, skills or competencies contributing to individual development. Park (2007) defined *personal learning* as an employee's perceptions of how much they have learned and developed themselves since they started working with their managers as coaches. In this study employee *personal learning* will be defined as the acquiring of job related knowledge and competencies through

coaching and other socialisation processes that should lead to permanency in behaviour change. According to Morrison (1993) socialisation by definition involves the process of learning and adjustment both of which require information. Employees especially newcomers have to learn the behaviours and attitudes necessary for assuming roles in an organisation. Socialisation is viewed as the acquisition of knowledge about performance standards, organisational goals and values (Lankau & Scandura, 2002). Although employees are also interested in acquiring other kinds of information on the job the primary concern is technical information. The 21st century world of work characterised by job insecurity and massive job loss due to global economic challenges, technological changes and advancement means that both individual employees and organisations at large will have to engage more into continuous learning and development to survive in this competitive era.

Two approaches *to personal learning* are identified by Kram (as cited in Park, 2007) as well as by Lankau and Scandura (2002). The latter proposed that relational job learning involves learning about the context of work by seeing the self in relation to others. Lankau and Scandura (2002) defined relational job learning as increased understanding about the interdependence or connectedness of one's job to those of others. The second aspect of *personal learning* they called personal skill development. They defined it as the acquisition of new skills and abilities that enable better working relationships. Kram (as cited in Park, 2007) took a relational approach to career development focusing on relational activities at work that can support learning (acquiring new skills and competencies) and development (advancing one's career and /or developing self- esteem or a new sense of identity. In this study employee *personal learning* is interpreted to encompass both dimensions outlined above.

2.4.1.2 Employee Personal Learning in the Context of Affirmative Development

Affirmative development is aimed at the development of malleable job competency potential latent variables that Black South Africans were denied the opportunity to develop due to discriminatory Apartheid policies and practices. Learning comprises two core learning competencies, namely *transfer* and *automisation* (Burger, 2012; Taylor, 1994). *Transfer* is the adaptation and application of that which an individual already knows through prior learning to novel learning problems (De Goede & Theron, 2010). *Transfer* is the process of creating meaningful structure in initially largely meaningless novel learning material (Burger, 2012; Taylor, 1994). *Automisation* is the process of writing the cognitive insight (i.e., the meaningful structure) gained through *transfer* to memory in a manner where it can be retrieved (De Goede & Theron, 2010).

The cognitive insights gained through *transfer* in the classroom that are written to memory form the basis along with earlier insights for solving subsequent learning problems through *transfer*. A job continuously presents the incumbent with novel problems for which no readily available solution exists. A solution needs to be obtained by transferring crystalised abilities developed through prior learning onto the novel job problem. No sharp division exists between classroom learning and subsequent on-the-job personal learning.

This is fundamentally why many previously disadvantaged Black South Africans were set up for failure under a traditional, quota interpretation of affirmative action. Lack of opportunity prevented them from developing the necessary crystalised abilities required to successfully cope with the novel problems their jobs present them with. For many of them the problem is not the lack of fundamental *abstract reasoning capacity* (De Goede & Theron, 2010) but rather the distance over which the *abstract reasoning capacity* has to attempt to *transfer* the available but underdeveloped crystalised abilities.

Transferring the automated cognitive insights gained through *transfer* in the classroom is the primary challenge facing the coachee. The introductory argument stressed the point that the newly gained insights are probably still rather fragile both

in terms of in depth understanding and in terms of the ability to recall the insight and to use it in subsequent problem solving. The coach therefore needs to increase the probability that the cognitive insights gained through *transfer* in the classroom will eventually naturally be used by the coachee in job-related problem solving by deepening the initial insights and by modelling and practicing the use of the derived insights in solving job-related problem.

2.4.1.3 Antecedents of Employee Personal Learning

Lankau and Scandura (2002) found that the presence of a coach and coaching functions were found to be antecedents of *personal learning*. The hierarchical regression analysis in the same study found that vocational support from a coach is positively related to protégés relational job learning. Through managerial coaching, employees have the opportunity to acquire new skills and job knowledge because of the experienced vocational support. The greater the vocational support provided by the coaches the more protégés should experience *personal learning* (Lankau & Scandura, 2002). It was also found that role modelling in a coaching relationship is positively associated with protégés personal development. The coachee perceives the coach as one with massive technical knowledge about the job and the organisation at large and this according to Morrison (1993) may result in increased *personal learning*.

2.4.1.4 Consequences of Employee Personal Learning

In Lankau and Scandura (2002) *role ambiguity*, *job satisfaction*, *intention to leave* a job (turnover intentions) and actual leaving (*turnover*) were found to be consequences of *personal learning*.

2.4.1.4.1 Job Satisfaction

According to Lankau and Scandura (2002) the link between *job satisfaction* and employee *personal learning* comes about because of increased understanding through learning how one's job fits in with an organisation's overall mission.

Additionally experienced meaningfulness of work has been associated with increased personal learning (Hackman & Oldham, as cited in Lankau & Scandura, 2002).

Results in Lankau and Scandura (2002) show that both relational job learning and personal skill development were positively associated with *job satisfaction* although not all that strong (β=.26 (p<.05) and β=.24 (p<.05) respectively). From a sample of 405 nurses from two countries Lee and Bruvold (2003) found that perceived investment in employee development was positively associated with *job satisfaction* and *affective commitment*. They viewed employee development as a means of equipping employee with new knowledge and skills. They further state that employee development refers to organised learning experiences provided by employers to enhance performance and personal growth. Empirical results show that perceived investment in employee development had a positive association with job satisfaction (β=.33 (p<.05) for the Singapore sample in the study, β=.40 (p<.05) for the United States of America sample in the study). *Job satisfaction* in turn can be expected to positively impact on *organisational commitment* and through that to impact negatively on employee's *intention to leave* (Oehley, 2007; Smuts, 2011).

2.4.1.4.2 Intention to Leave

According to Gouillart and Kelly (1995) (as cited in Lankau & Scandura, 2002) environments that encourage self-development may reduce individuals desire to seek employment elsewhere (i.e., intention to leave) if they are acquiring new skills and competencies that allow them to increase their *self-efficacy*. Industries which require that individual employees possess specific job knowledge may encourage employees to stay rather than again "climb the learning curve" at a new organisation (Lankau & Scandura, 2002). Park (2007) found a significant but small negative relationship between *personal learning* and *intention to leave* (β=-.29; p<.05). Lankau and Scandura (2002) also found that relational job learning was negatively associated with *intention to leave* (β=-.16). From an affirmative development perspective talent retention is clearly an important objective. Success at identifying

and developing learning potential is effectively nullified if the newly developed intellectual capital does not remain within the organisation.

2.4.1.4.3 Role Clarity

According to Lankau and Scandura (2002) employee *personal learning* may decrease *role ambiguity* in that knowledge about various perspectives may enhance clarity about role responsibilities. Results of a hierarchical regression analyses in Lankau and Scandura (2002) show that relational job learning and skill development are negatively associated with role ambiguity though not strong (β=-.24 ($p<.05$) and β=-.20 ($p<.05$) respectively. In addition, it does not seem unreasonable to hypothesise that *role clarity* should affect *intention to leave* negatively but that it should affect job satisfaction positively. The effect of *personal learning* on *intention to leave* is therefore hypothesised to be mediated by *role clarity* and by *job satisfaction*.

2.4.1.4.4 Organisational Commitment

Organisational commitment is another consequence of employee *personal learning*. Employees' perceptions and beliefs on how committed their organisations are towards them in terms of competence development contribute to the establishment of high quality exchange relationships that create obligations for employees to reciprocate in positive beneficial ways (Settoon as cited in Lee & Bruvold, 2003). Employees who believe that their organisation is committed to providing the training skills and competencies that they need to remain employable may reciprocate by demonstrating attitudes and behaviours commensurate with the amount of commitment they feel the employer has for them (Lee & Bruvold, 2003). In Lee and Bruvold (2003) it was found that perceived investment in employee development had a positive association with affective commitment (β=.44 ; $p<.05$) for the Singapore sample, and β=.43 ($p<.05$) for the United States of America sample. Results in Park (2007, p. 87) show that *personal learning* and *organisational commitment* were significantly ($p<.05$) and moderately correlated with a coefficient of .41. In Arnold and Davey (1999), correlations suggest that intrinsic work characteristics and career

development might be the experiences with the most impact on *organisational commitment*. *Organisational commitment* (and specifically affective commitment) in turn has been shown to be significantly (β=-.37; p<.05) and negatively related to intention to leave (Oehley, 2007); and [β=-.542; p<.05: Smuts, 2011]. The effect of *personal learning* on *intention to leave* is therefore hypothesised to be mediated by *organisational commitment*.

2.4.1.4.5 Employee Self-Efficacy

Employee *personal learning* leads to the acquisition of knowledge, skills and experience that have economic value to the organisation. Employee capabilities can therefore be expected to increase the confidence of the employee in his/her ability to successfully perform on the job. Personal learning can therefore be expected to build self-esteem and to promote feelings of competence and self-efficacy in approaching work related problems (Gouillart & Kelly as cited in Lankau & Scandura, 2002).

2.4.1.4.6 Employee Engagement

According to Bakker and Demerouti (2008) job resources such as *learning opportunities* are positively associated with *work engagement*. Job resources refer to those physical, psychological, social or organisational aspects of the job that are functional in achieving work goals, reduce job demands and the associated physiological and psychological costs as well as stimulate personal growth, learning and development (Bakker & Demerouti, 2006). According to Bakker and Demerouti (2006) job resources have motivational potential and lead to high *work engagement*. Job resources play either an intrinsic motivational role because they foster employee's growth, learning and development or they may play an extrinsic motivational role because they are instrumental in achieving work goals (Schaufeli & Bakker, 2004). In terms of extrinsic motivation Bakker and Demerouti (2006) are of the view that work environments that offer many resources foster the willingness to dedicate ones efforts and abilities to the work task. Empirical results of a study done

by Schaufeli and Bakker (2004) show that the path between job resources and engagement was significant ($p<.05$). The study involved four samples. For sample one to three the path coefficients between job resources and engagement ranged between ($\beta=.51$and $\beta=.53$) while for sample 4 alone, it was ($\beta=.51$).

2.4.1.4.5 Summary: Link between Affirmative Development Based Coaching Behaviours, Personal Learning and and the Downstream Outcomes associated with it

The relationship between supervisors and employees through coaching serves as avenues through which employee development and *personal learning* can be achieved. Affirmative development based coaching is aimed at developing employees to improve their skills so as to foster a sense of competence on the job and also as a tool for career advancement. Employee *personal learning* through managerial coaching leads to individual development. According to Lankau and Scandura (2002), coaches provide both vocational and psychosocial support to the coachees. Through performance feedback, encouragements and counselling employees are able to acquire the necessary job knowledge and skills. This is possible because a perceived supportive relationship in form of managerial coaching between employees and managers allows the coachee to feel safe in asking questions, take risks and discuss fears, anxieties or disagreements (Lankau & Scandura, 2002). Without the coach it is difficult to foster employee *personal learning* and development because the employees will have no one to guide them and provide coaching functions that will impact on employees' behaviours.

It is hypothesised that for affirmative development coaches:

- Effective affirmative development coaching behaviours positively influences *employee personal learning*.
- Employee *personal learning* is positively related to *role clarity*.
- Employee *personal learning* is positively related to *job satisfaction*.
- Employee *personal learning* is positively related to *organisational commitment* (affective commitment).

- Employee *personal learning* is negatively related to *intention to leave*.
- Employee *personal learning* is positively related to employee *self- efficacy*.
- Employee *personal learning* is positively related to employee *engagement.*
- *The effect of personal learning on intention to leave is mediated by role clarity, engagement, job satisfaction* and *organisational commitment.*

2.4.2 ROLE CLARITY

The quality of any work to be performed in any organisation by employees depends on the availability of necessary information pertaining to how the job ought to be done, the goals and processes involved. Every position in a formal organisational structure has a specified set of tasks or position responsibilities. The specification of duties or formal definition of role requirements is intended to allow management to hold subordinates accountable for specific performance and to provide guidance and direction for subordinates (Fourie, 2009). Lack or inadequate information will force employees to engage in coping mechanisms that can result in dissatisfaction, anxiety and lower performance (Hartenian, Hadaway & Badovick, 1994). If an employee does not know for which decisions he/she has the necessary authority for, what he/she is expected to accomplish, and how he/she will be judged, the employee will hesitate to make decisions and will have to rely on a trial and error approach in meeting the expectations of his/her superior (Fourie, 2009).

2.4.2.1 Definition of Role Clarity

Biddle and Thomas (as cited in Schuler, Aldag & Brief, 1977) define the term role as the set of prescriptions defining what the behaviour of an incumbent in a position should be. Hartenian et al. (1994) are of the view that the term role includes expectations about social behaviour as well as functions (activities) or positions (jobs) that employees perform for the organisation. Expectations define behavioural requirements or limits ascribed to the role by the person filling that position or by others who relate to the role (Fourie, 2009). They serve as standards for evaluating the worth or appropriateness of behaviour and they tend to condition or determine

such behaviour (Fourie, 2009). Roles represent the expectations of the individual and the organisation and if they are dysfunctional may lead to tension, turnover, dissatisfaction, anxiety and lower performance (Schuler, Aldag & Brief, 1977). When expected and perceived roles are different the employee will experience role ambiguity or lack of clarity (Hartenian et al., 1994). Role ambiguity is the lack of necessary information available in a job position leading to uncertainty on key requirements of the job and how one is supposed to behave in those jobs leading the perceiver to feel lost at sea and helpless (Onyemah, 2009; Graen & Kahn in Lgbaria & Guimaraes, 1992). If employees do not have the necessary information about their jobs then *role clarity* is non-existent. *Role clarity* refers to the degree to which required information is provided about how the employee is expected to perform his or her job (Teas, Wacker & Hughes, 1979). *Role clarity* is the extent to which required information is communicated and understood (Donnelly & Ivancevich, 1975; Ivancevich & Donnelly, 1974). *Role clarity* is the extent to which an individual receives and understands information about the nature of the job that is required to do the job (Kelly & Hise, 1980). *Role clarity* is the opposite of role ambiguity and shall be used as such in this study. Lack of role clarity has also been referred to as role ambiguity hence the theoretical support for hypotheses about role clarity includes research findings on role ambiguity (Hartenian et al., 1994).

Every position in a formal organisation has specified tasks or position responsibilities. Duty specification according to Rizzo, House and Lirtzman (1970) is intended to allow management to hold subordinates accountable for specific performance and to provide guidance and direction for subordinates. If the employee lacks the necessary information that will enable him or her perform job related tasks in an effective way he/she is more likely to make bad decisions and rely on trial and error in meeting the expectations of the superiors (Rizzo et al., 1970). Individuals require sufficient information to perform tasks effectively. Hall (2008) brings out two dimensions of *role clarity* in which information is needed, namely *goal clarity* which is the extent to which the outcome goals and objectives of the job are clearly stated and defined and *process clarity* which is the extent to which the individual is certain about how to perform his or her job.

2.4.2.2 Employee Role Clarity in the Context of Affirmative Development

Affirmative development is aimed at the development of malleable job competency potential latent variables that Black South Africans were denied the opportunity to develop due to discriminatory Apartheid policies and practices. The objective is to empower the learner with the job competency potential required to successfully perform the tasks that constitute the job. The tasks that constitute the job extend beyond task performance and also include contextual performance (Myburgh, 2013; Viswesvaran & Ones, 2000). Ability is, however, insufficient to ensure competence on the competencies constituting job performance. An accurate perception is required of the nature of the tasks that constitute the job. The expectancy theory of motivation (Latham , 2007) persuasively argues that inaccurate role perception will negatively impact on job performance despite high ability (and high motivation).

Gaining clarity on the nature of the tasks that constitute the job is therefore another challenge facing the coachee. The coach therefore needs to increase the probability that the crystalised job competency potential developed in the classroom will translate into effective task performance by honing the coachees understanding of what is expected of him. The question is through which latent variables a coach can impact on the coachee's level of role clarity.

2.4.2.3 Antecedents of Role Clarity

Empirical studies have established that *job/performance feedback*, *social support*, *participation* and *team support* are antecedents of *role clarity* (Mukherjee & Malhotra, 2006; Teas, Wacker & Hughes, 1979).

Performance feedback is the degree to which carrying out the work activities required by the job results in the individual obtaining direct and clear feedback information about the effectiveness of his or her performance (Hackman & Oldham,1976). The primary role of feedback is in behaviour regulation where it

helps employees to keep work-related activities directed toward desired goals (Taylor, Fisher & Ilgen, 1984). In terms of *performance feedback* the interaction and communicative relationship between the coach and coachee should increase the learner's understanding of the expectations of the supervisor with regards to what needs to be done and what needs to be achieved (Teas et al., 1979). Feedback helps the coachee in learning about and clarifying their roles and hence has a significant effect on the *role clarity* perceived by them (Singh, 1993; Evans, Schlacter, Schultz & Gremler, 2002). In Mukherjee and Malhotra (2006) the direct effect of feedback on *role clarity* was significant though weak (.11; $p<.05$). Teas et al. (1979) examined the relationships among the sales persons' perception of *performance feedback*, participation, *role clarity* and job satisfaction. The results indicated that *performance feedback* is related to *role clarity*. In a study done by Whitaker, Dahling and Levy (2007) it was found that feedback both from supervisors and co-workers lead to increased *role clarity* with statistically significant path coefficients of .18 and.24 ($p<.05$).

Participation is the degree to which the employee is able to influence decisions about the job (Teas et al., 1979). The employee's participation in the decisions of the supervisor results in congruent perceptions about role prescriptions and hence improved *role clarity* (Teas et al., 1979). Participation in decisions helps to reconcile employees and management perspectives in terms of priorities and required service levels (Mukherjee & Malhotra, 2006). According to Schaubroeck, Cotton and Jennings (1989) participation is associated with role clarity because it enhances the availability of job related information.

Results of the analysis in Teas et al. (1979) suggest that employee participation in decision-making causes sales personnel's perceived role clarity. In Mukherjee and Malhotra (2006) the standardised regression coefficient for the direct effect of participation in decision making on *role clarity* though relatively weak was significant ($\beta=.38$; $p<.05$). In Schaubroeck et al. (1989) the relationship between participation and role ambiguity was significant ($\beta=-.61$; $p<.05$).

Team support refers to employees perceptions of supportive and helpful co-workers that co-operate with one another as a team in delivering quality service to customers (Mukherjee & Malhotra, 2006). In order to be effective, employees need to continually interact with their co-workers in terms of absorbing new information about their products, services, technology and ways of attending to customer inquires (Mukherjee & Malhotra, 2006). Support from co-workers and supervisor not only provide an outlet from work burnout arising from difficult work encounters but also acts as a channel for disseminating practical knowledge and information (Sergent & Frenkel,2000). At work employees consider peer-based learning to be their most important source of work-related knowledge; hence *support* from the co-workers would lead to *role clarity* (Korczynski, Frenkel, Shire, Tam & Donoghue, 1996). Carson, Carson, Yallapragada and Roe (2001) as well as Mukherjee and Malhotra (2006) provide empirical evidence supporting the relationship between *role clarity* and *support*. In Ganster, Fusilier and Mayers (1986) social support from co-workers as well as supervisors has been directly linked to role ambiguity. In Carlson and Perrewe (1999) standardised path loading for the antecedent model showed the path between social support and work role ambiguity was significant (β=-.43; $p<.05$). In Schaubroeck et al. (1989) the path between social support and role ambiguity was also significant though not all that strong (β=-.20; $p<.05$). According to Schaubroeck et al. (1989) social support is related to role ambiguity because it increases job-related communication.

2.4.2.4 Consequences of Role Clarity

In several research studies four constructs have been investigated as outcomes of role ambiguity/*role clarity*. These are *job satisfaction*, *commitment*, *turnover intention* and *job performance* (Babin & Boles, 1996; de Ruyter et al., 2001).

2.4.2.4.1 Job Satisfaction

Job satisfaction refers to the extent to which the employee feels satisfied with the kind of work they do and with the nature of their job **(**Mukherjee & Malhotra, 2006). Employees who perceive *role clarity* are found to be more satisfied with their jobs than those who do not (de Ruyter, Wetzels & Feinberg, 2001). According to Mukherjee and Malhotra (2006) it seems that employees who are clear about what is expected of them are more satisfied with their jobs than those who are not clear as to how they should perform their duties. In Mukherjee and Malhotra (2006) the direct effect of role clarity on job satisfaction was statistically significant (β=.25; p<.05).

In Koustelios, Theodorakis and Goulimaris (2004) it was found that role ambiguity was a significant predictor of *job satisfaction*. According to Schaubroeck et al. (1989) the relationship exists because lack of clarity impedes the opportunity to improve performance and obtain rewards thus reducing satisfaction. Kahn (as cited in Rizzo et al., 1970) indicates that high degrees of role ambiguity were associated with increased tension, anxiety, fear, hostility, loss of confidence as well as decreased *job satisfaction*. Regression results in Boles and Babin (1996) showed that role ambiguity is negatively related to *job satisfaction* (β=-.22; p<.05). Similarly Koustelios and Kousteliou (1998) found significant negative correlations between scores on role ambiguity and job satisfaction on the dimension of work itself (- .37) and supervision (- .56). Igbaria and Guimaraes (1992) found that role ambiguity was found to be inversely related to overall *job satisfaction*. Keller (1975) also found that role ambiguity was inversely related to satisfaction with work but was not related to satisfaction with pay, co-workers, supervision and promotion. One other study that indicated that role ambiguity is negatively related to *job satisfaction* was the Behrman and Perreault (1984) study. Employees experiencing high levels of role ambiguity report relatively low *job satisfaction* (Boles & Babin, 1996). The same situation is expected with regards to affirmative development coaching because of the opportunities afforded to the coachee to seek for clarification on performance issues and hence a reduction in role ambiguity. The lower the perceived levels of role ambiguity the higher the levels of performance and satisfaction (Schuler, 1980). Reporting on the interactive relationship of education on satisfaction with work

Igbaria and Guimaraes (1992) say that for the lower levels of role ambiguity, less educated employees reported high satisfaction with work and supervision but lower satisfaction with promotion.

2.4.2.4.2 Intention to Leave

It is believed that employees who experience role ambiguity will be forced to avoid the work situation by staying away or actually developing the intention to leave or eventually leave. The higher the role ambiguity experienced by the employee the higher the *intention to leave*. This means that in a work place where there is role clarity employees are less likely to quit or even to have the intention of leaving. In Viator (2001) there was a significant positive association between role ambiguity and turnover intention (0.151; $p<.05$). This is in line with Kemery, Bedeian, Mossholder and Touliatos (1985) who found that role ambiguity directly affected turnover intention. In Lyons (1971) *role clarity* was negatively related to propensity to leave ($\beta= -.27$; $p<.05$) and voluntary turnover ($\beta= -.21$; $p<.05$). Bauer, Erdogan, Truxillo and Tucker (2007) found that *role clarity* is positively related to intention to remain. On the other hand findings from other studies suggest that role ambiguity affects turnover intentions indirectly through *organisational commitment* (Igbaria & Guimaraes, 1992; Mobley, Horner & Hollingsworth, 1978). The results from these studies suggest that job conditions such as role ambiguity only appear to be important in as far as they influence commitment because turnover intention is globally determined by one's identification with and loyalty to the organisation.

2.4.2.4.3 Organisational Commitment

Commitment is another outcome of *role clarity*. Several studies conducted have shown that *role clarity* is significantly correlated with *organisational commitment* (Wetzels, de Ruyter & Bloemer, 2000). According to Mukherjee and Malhotra (2006), employees who perceive *role clarity* in their jobs are more likely to feel attached to the organisation (affectively), identify with the organisation and accept organisation goals and thus will have more commitment to their organisation. In

Mukherjee and Malhotra (2006) the direct effect of *role clarity* on *organisational commitment* was found to be significant.

2.4.2.4.4 Job Performance

A lack of information regarding the goals of the job and the most effective job behaviours can result in effort that is inefficient, misdirected or insufficient for the task and thus reduce *job performance* (Tubre & Collins, 2000, Jackson & Schuler, 1985). This represents the primary reason for focusing on role clarity as a critical outcome in affirmative development coaching. When role ambiguity is high, employee performance is negatively affected because of lack of proper information concerning the scope and responsibilities of their jobs. In a study conducted by Cohen (as cited in Rizzo et al., 1970) an ambiguous definition of a task and inconsistent direction from a superior resulted in an increase in anxiety, less favourable attitude toward the superior and a decrease in productivity. In Schuler et al. (1977) it was shown that higher levels of role ambiguity lead to lower levels of effort and performance. In Viator (2000) a negative association of role ambiguity with *job performance* was found (-.245; $p<.05$). Hall (2008) found a positive association between *role clarity* and *job performance* ($\beta=.380$; $p<.05$). In Hartenian et al. (1994) it was found that increased *role clarity* did result in increased *job performance*.

In Whitaker, Dahling and Levy (2007) it was found that the standardised path coefficient between *role clarity* and *task performance as well as role clarity and contextual performance* in the final supervisory feedback environment path model were statistically significant ($\beta=.43$ & $\beta=.26$). On the other hand, standardised path coefficient between role clarity and task performance, as well as role clarity and *contextual performance* in the final co-worker feedback environment path model ($\beta=.39$ & $\beta=.28$) were statistically significant ($p<.01$). *Role clarity* increases an employee's understanding of the expectations of his or her job in terms of *task performance* as well as helping them to determine when and how to perform organisational citizenship behaviour that contribute to performance rating without unexpected negative outcomes (Whitaker, Dahling & Levy, 2007).

2.4.2.4.5 Engagement

The absence of role ambiguity is essential for *engagement* to occur (Harter, Schmidt and Keyes, in Simpson, 2009). Expectations need to be clarified if employees are to perform to required standards. Without clarity on job duties and their relative importance employees are uncertain as to what tasks to complete and also how best to evaluate or alter their performance on those tasks relative to expectations (Wright & Millesen, 2008). In a study by Wright and Millesen (2008) it was found that role ambiguity adversely affects *engagement*.

2.4.2.4.6 Summary: Link between Role Clarity and Affirmative Development Based Coaching

A manager acting as an affirmative development coach is more likely to be more qualified and experienced in comparison to the coachee and as such will possess necessary job information that, if communicated effectively, will help in aligning the coachee's behaviour on the job with role expectations. According to Lankau, Carlson and Nielson (2005) vocational support provided by a coach enables employees to have a better sense of how to do their work and balance the priorities and demands placed upon them and may thus experience less role ambiguity. Onyemah (2009) is of the view that coaching provides the coachee with opportunities to ask clarification questions and by so doing obtain a better understanding of what is expected of him/her. Jackson and Schuler (1985) believe that the coaching relationship allows the coachee to obtain feedback information that helps clarify the coachee's role. A study by Sawyer (as cited in Viator, 2000) shows that the quality of feedback from supervisors and co-workers is associated with lower role ambiguity. In Challagalla and Shervani (1996) as well as Piercy, Cravens and Lane (2001) it was observed that coaching was negatively associated with role ambiguity.

It is hypothesised that for affirmative development coachees:

- *Role clarity* is positively related to *job satisfaction*.
- *Role clarity* is positively related to *organisational commitment*.
- *Role clarity* is negatively related to *intention to quit*.
- *Role clarity* is positively related to *engagement*.
- *Role clarity* is positively related to *task performance*.
- *Role Clarity* is positively related to *contextual performance*.
- That competence at affirmative development coaching is positively related to *role clarity*.

2.4.3 JOB SATISFACTION

2.4.3.1 Definition of Job Satisfaction

Job satisfaction is defined as a multidimensional psychological response to one's job that has cognitive (evaluative), affective (emotional) and behavioural components (Hulin & Judge, as cited in Crede, Chernyshenko, Stark, Dalal & Bashahur, 2007). Oehley (2007) acknowledges that the concept of *job satisfaction* has several dimensions as seen in the Job Descriptive Index (JDI) which has five subscales measuring different facets of the job namely satisfaction with pay, satisfaction with the job, satisfaction with promotion opportunities, satisfaction with supervision and satisfaction with co-workers.

2.4.3.2 Employee Job Satisfaction in the Context of Affirmative Development

Affirmative development is aimed at the development of malleable job competency potential latent variables that Black South Africans were denied the opportunity to develop due to discriminatory Apartheid policies and practices. The objective is to empower the learner with the job competency potential required to successfully perform the tasks that constitute the job. Succeeding in this and succeeding in

translating the relevant job competency potential required into actual successful job performance brings to the fore the challenge of retaining the newly developed Black talent. *Job satisfaction* has been shown (Crede et al., 2007) to be negatively and significantly ($p<.05$) related to *intention to leave*.

Fostering/facilitating coachee *job satisfaction* is therefore another challenge facing the coach. The coach needs to increase the probability that the coachee that succeeds at translating the crystalised job competency potential developed in the classroom into effective task performance will remain in the organisation by fostering the coachee's *job satisfaction*. The question is through which latent variables a coach can impact on the coachee's level of *job satisfaction*.

2.4.3.3 Antecedents of Job Satisfaction

Crede et al. (2007) identified four factors that act as antecedents of job satisfaction. These include the economic/macro-environmental factors, objective characteristics of the job, reaction to work place events as well as dispositional influences. Oehley (2007) also added organisational characteristics. Expectancy theory would suggest that the coachee's level of job performance and his/her evaluation of the equity of rewards received for the performance should also affect *job satisfaction* (Porter, Bigley & Steers, 2003).

In literature the objective characteristics of the job or rather job/task characteristics have received a lot of attention (Glisson & Durrick, 1988). Hackman and Oldham's job characteristic model (Hackman & Oldham, 1976) identified and used skill variety, task significance, task identity, autonomy and feedback as aspects of the job that are likely to be satisfying to employees. Fried and Ferris (1987) summarised 200 studies and reported corrected correlations for the objective characteristics of the job with *job satisfaction* at .45 (skill variety), .35 (task significance), .26 (task identity), .48 (autonomy) and .43 (feedback). In Behson, Eddy and Lorenzet (2000) autonomy had the strongest link with satisfaction of .48. One other job/task characteristics that have an impact on job satisfaction is role ambiguity/clarity (Koustelios, Theodorakis & Goulimaris, 2004). Other aspects of the objective characteristic of the job as

advocated by Oehley (2007) that acts as antecedents of job satisfaction include person-job fit (Saks & Ashforth, 2002), working hours (Gazioglu & Tansel, 2006), workload or overload (Scott, Gravelle, Simoens, Bojke & Sibbals, 2006), job training (Gazioglu & Tansel, 2006), job Involvement (Rayton, 2006), fairness of rewards and remuneration (Rayton, 2006; Scott et al., 2006).

Most of these antecedents under objective characteristics of the job can be manipulated by the manager acting as an affirmative development coach 9assuming that the manage and the coach is the same person) hence making or allowing them to have an impact on the satisfaction of employees (Oehley, 2007).

Economic/macro-environmental factors that affect *job satisfaction* include external economic conditions such as availability of job opportunities and standard of living. According to Crede et al. (2007) employees use a frame of reference such as the availability of potentially satisfying alternative employment to evaluate their current jobs. They further argue that employees will rate their jobs more favourably during difficult economic times when opportunities are scarce than during prosperous times when alternatives are plentiful.

In terms of reaction to workplace events, several workplace events have been identified as responsible for lowering levels of job satisfaction. According to Crede et al. (2007) these include job incivility, stressful events, favouritism, workplace discrimination and sexual harassment.

Individuals are different and as such there are more likely to appraise or evaluate their job either in a negative or positive way. Individuals with high levels of negative affect are better able to recall the negative aspects of a job and therefore report higher levels of dissatisfaction (Necowitz & Roznowski, 1994). A study by Judge and Hulin (1993) found strong empirical support that *job satisfaction* exhibits a strong relationship with the trait affectivity. A meta-analytic finding by Connolly and

Visweswaran (2000) show that there is a strong relationship between *job satisfaction* and positive affect. Within the domain of personality dispositions *job satisfaction* has been linked to the big five personality constructs of extraversion, neuroticism, agreeableness and conscientiousness. Judge, Heller and Mount (2002) found that the correlation between the big five personality constructs and job satisfaction were as follows: -.29 for neuroticism, .17 for agreeableness, .02 for openness to experience, .25 for extraversion and .26 for conscientiousness. Other characteristics of an individual that predict *job satisfaction* include age (Scott et al., 2006) as well as the level of education and one's health (Gazioglu & Tansel, 2006).

According to Oehley (2007) organisational characteristics affecting *job satisfaction* include leadership characteristics, supervision, peer characteristics, personal-organisational fit, communication quality, career opportunities and perceived knowledge of performance-appraisal process.

2.4.3.3.4 Consequences of Job Satisfaction

Consequences of job satisfaction as shown in empirical studies include general job performance, organisational citizenship behaviour, counterproductive workplace behaviour as well as job withdrawal behaviour.

2.4.3.3.4.1 Job Performance (Task performance)

Judge, Bono, Thoresen and Patton (2001) proposed seven models of the possible job satisfaction and job performance relationship. One of the models suggests that *job satisfaction* causes job performance. This model is grounded on the premise that attitudes lead to behaviour and that they carry with them behavioural implications. Eagly and Chaiken (1993) as cited in Judge et al. (2001) concluded that people who evaluate an attitude object favourably tend to engage in behaviours that foster or support it, while people who evaluate an attitude object unfavourably tend to engage in behaviours that hinder or oppose it. Employee's attitudes towards

their job therefore should be related to behaviours on the job of which performance on the job is central. Keaveney and Nelson (1993) found a statistically significant (β=.12; p<.05) job satisfaction-job performance path coefficient.

Although there exist a positive and statistically significant (p<.05) relationship between job performance and *job satisfaction* the correlations are small. Meta-analytic estimates of the relationship range from .18 to .30 (Laffaldano & Muchinsky, Judge et al. as cited in Crede et al., 2007). The relative weakness of this relationship may be due to the fact that much of this research has adopted a narrow view of job performance by focusing primarily on the task performance subset of the job performance space as opposed to the contextual space (Crede et al., 2007). According to Oehley (2007) the correlations are most likely underpinned by a complex casual process in which job satisfaction is determined by both performance levels achieved and the perceived equity of the rewards received but in which performance is simultaneously affected by *job satisfaction* via its impact on the value of performance and therefore; indirectly, motivation.

2.4.3.3.4.2 Organisational Citizenship Behaviour/contextual performance[4]

According to Crede et al. (2007) *organisational citizenship behaviour* refer to behaviours that are intended to help co-workers, the supervisor or the organisation and include acts such as assisting co-workers, trying to improve workplace morale, volunteering for work that is not part of the job description, speaking highly of the organisation to outsiders as well as suggesting improvements in the functioning of the organisation. A statistically significant (p<.05) correlation of .24 between *job satisfaction* and *organisational citizenship behaviour* was recorded in Lepine, Erez and Johnson (2002). Organ and Ryan (1995) also found a modest overall correlation of .24 between satisfaction and altruism as a predictor of *organisational citizenship behaviour*. These findings show that the relationship between *job satisfaction* and

[4] Organisation citizenship behaviour (OCB) is used interchangeably with contextual performance. See explanation on page 76.

organisational citizenship behaviour does not exceed that of satisfaction and task performance. *Organisational citizenship behaviour* can be considered another dimension of performance (Viswesvaran & Ones, 2000).

Counterproductive workplace behaviour is one other consequence of *job satisfaction*. Counterproductive behaviour is defined as intentional behaviours viewed by the organisation as contrary to its legitimate interest (Sackett & DeVore, 2001). Crede et al. (2007) are of the view that counter productivity can be split into dimensions which includes theft, destruction of property, poor attendance, poor work quality, drug use as well as misuse of time and resources. A path coefficient for a model of antecedents and consequences of *job satisfaction* (in Crede et al., 2007) registered a negative value of (β =-.40) for the path linking satisfaction with counterproductive behaviour. *Counterproductive work behaviour* likewise can be considered another dimension of performance (Viswesvaran & Ones, 2000).

2.4.3.3.4.3 Intention to Leave

Job withdrawal behaviour is also linked to *job satisfaction*. Job withdrawal includes behaviours such as intention to leave or searching for another job while work withdrawal includes behaviours such as arriving late for work or leaving early. Employees with low levels of *job satisfaction* are more likely to quit their jobs or have the intention to leave (Crede et al., 2007). Findings in Tett and Meyer (1993) support the notion that there exists a link between job attitudes such as satisfaction and turnover intentions. In a study done by Crede et al. (2007) the relationship between *job satisfaction* and job withdrawal was (β=-.66; p<.05). Other studies that have found a negative effect of job satisfaction on intention to look for alternative jobs, actual quitting as well as intention to leave, include Arnold and Feldeman (1982), Elangovan (2001) and Freeman (1978).

2.4.3.3.4.4 Organisational Commitment

Organisational commitment is another outcome of *job satisfaction*. Employees that get more satisfaction from work and view their jobs as fulfilling more of their personal needs are as a result more willing to exert considerable effort on behalf of the organisation (Mowday et al., 1982 as cited in Van Scotter; 2000). A study by William and Hazer (1986) supports the view that *job satisfaction* is an antecedent of affective organisational commitment.

2.4.3.4 Summary: Link between Affirmative Development Based Coaching and Job Satisfaction

The preceding argument suggests that the level of *job satisfaction* experienced by coachees can be expected to influence their level of *job performance*, *organisational commitment*, *organisational citizenship behaviour* and *intention to leave*. All these outcome latent variables are of relevance and importance in the search for acceptable coachee performance.

According to Onyemah (2009) employees in organisations are likely to perceive coaching as part of the organisations concern for and investment in their professional development and as such it is expected that coaching will be positively related to job satisfaction. Empirical evidence obtained from a study done by Ellinger (2003**)** shows a statistically significant ($p<.05$) positive association between supervisory coaching behaviour and warehouse worker *job satisfaction*. The regression model explained 40 percent of the variance in warehouse worker *job satisfaction.* Supervisory coaching behaviour and supervisor hours of training for the job position were significant predictors of warehouse worker *job satisfaction*. In a study done by Onyemah (2009) it was found that the amount of coaching increases sales person satisfaction with their job.

It is therefore hypothesised that for affirmative development coachees:

- *Job satisfaction* is positively related to *task performance*.
- *Job satisfaction* is positively related to affective organisational *commitment*.

- *Job satisfaction* is positively related to *contextual performance (OCB)*.
- *Job satisfaction* is negatively related to *intention to leave*.
- Affirmative development coaching is positively related to *job satisfaction*.

2.4.4 ORGANISATIONAL COMMITMENT

2.4.4.1 Definition of Organisational Commitment

Organisational commitment is used to refer to the extent to which the coachee is attached, identifies with and is involved with his work and the organisation as a whole. Meyer and Allen (1997) defined *organisational commitment* as a process by which the goals of an organisation and individual goals become congruent, an involvement with a particular organisation and a feeling of obligation to continue employment in an organisation. Mowday (as cited in Park, 2007) defined *organisational commitment* as the strength of an individual's identification with and involvement in an organisation. Porter (as cited in Rashid, Sambasivan & Johari, 2003) defined commitment in terms of:

- A belief in, and acceptance of, the goals and values of the organisation and profession;
- A willingness to exert considerable effort on behalf of the organisation; and
- A desire to retain membership in the organisation.

2.4.4.2. Dimensions of Organisational Commitment

Allen and Meyer (1990) identified three types of *organisational commitment* namely affective commitment, normative commitment and continuance commitment. Meyer and Allen (as cited in Meyer, Stanely, Herscovitch & Topolnytsky, 2002) define affective commitment as an emotional attachment to, identification with, and involvement in the organisation. Employees who are emotionally attached are seen as having a sense of belonging and identification that increases their involvement in organisational activities, their willingness to pursue the organisation goals and their desire to remain with the organisation (Mowday, Porter & Steers as cited in Rhoades, Eisenberger & Armeli, 2001). According to Allen and Meyer (1990)

employees with strong affective commitment remain with the organisation because they want to. Normative commitment reflects a perceived obligation to remain in the organisation while continuance commitment denotes the perceived costs associated with leaving the organisation (Allen & Meyer, 1990; Meyer & Allen as cited in Meyer et al., 2002). Employees with strong normative commitment will tend to stay in the organisation because they feel they ought to do so while those with strong continuance commitment will tend to stay because they need to (Allen & Meyer, 1990). This research study will focus on affective commitment because the interest is in exploring how affirmative development based coaching impacts on the emotional attachment that coaches develop towards the organisation and the willingness of coachee's (employees) to remain in the organisation rather than the perceived costs associated with leaving and the moral pressure employees/coaches experience to remain in the organisation.

2.4.4.3 Employee Organisational Commitment in the Context of Affirmative Development

Affirmative development is aimed at the development of malleable job competency potential latent variables that Black South Africans were denied the opportunity to develop due to discriminatory Apartheid policies and practices. The objective is to empower the learner with the job competency potential required to successfully perform the tasks that constitute the job. Succeeding in this and succeeding in translating the relevant job competency potential required into actual successful job performance brings to the fore the challenge of retaining the newly developed Black talent. *Organisational commitment* has been shown (Oehley, 2007) to be negatively and significantly ($p<.05$) related to *intention to leave*.

Fostering/facilitating coachee *organisational commitment* is therefore an additional challenge facing the coach. The coach needs to increases the probability that the coachee that succeeds at translating the crystalised job competency potential developed in the classroom into effective task performance will remain in the organisation by fostering the coachee's *organisational commitment*. The question is

through which latent variables a coach can impact on the coachee's level of *organisational commitment*.

2.4.4.4 Antecedents of Organisational Commitment

Empirical evidence on several studies conducted on the antecedents of *organisational commitment,* specifically affective commitment, show that support from supervisors or the organisation at large plays a crucial role in enhancing *organisational commitment* (Allen & Meyer, 1990, Eisenberger, Huntington, Hutchingson & Sowa, 1986). *Perceived organisational support* is defined as a social exchange relationship that results from exchanges between an employee and his or her employing organisation (Eisenberger as cited in Branik, Roling & Eby, 2009). In this case the coaching behaviours exhibited by managers or supervisors who are seen as agents of the organisation enhances the development of feelings of being valued and appreciated by their employing organisations in employees. Branik, Roling and Eby (2009) found support (though weak) that coaching support makes employees perceive their organisations to be more supportive and more concerned with their well-being. The relationship between *perceived organisational support* and *organisational commitment* was quite strong (β=.51). In the Rhoades, Eisenberger and Armeli (2001) study, *perceived organisational support* was statistically significantly ($p<.05$) related to affective commitment (β=.72) with a moderate and significant relation between supervisor support and perceived organisational support. Using Amos software Eisenberger, Armeli, Rexwinkel, Lynch and Rhoades (2001) also found a significant but moderately strong path (β=.39; $p<.05$) from *perceived organisational support* to affective commitment. Morever, the same study found that the path between *perceived organisational support* and felt obligation was significant (β=.38; $p<.05$) and also between felt obligation and affective commitment (β=.45; $p<.05$) which in a way (through reciprocity theory) explains why employees feel obliged to care about the welfare of the organisation and hence help the organisation to meet its objectives. The meta-analytic findings by Meyer et al. (2002) shows that there is a strong relationship between organisation support and affective commitment (r=.63). Generally, correlations involving work experience variable were much stronger than those involving personal characteristics (Meyer et al., 2002). For

example role ambiguity and role conflict correlated strongly with affective commitment (r=-.39 and r=-.30). On the other hand the correlation between self-efficacy (personal characteristics) and affective commitment was weak (r=.11).

In Allen and Meyer (1990) all the proposed affective antecedent variables correlated statistically significantly (p<.05) with affective commitment. Personal importance was one of the proposed variables which referred to the extent to which employees feel that they were important to the organisation. According to Park (2007, pp. 40-41):

> Personal importance and competence are related to employees perceptions of the extent to which they make important contributions to the organisation and that these feelings are based not only on work experience and support within the organisation but also the trust that the organisation or managers place in them such as management receptiveness of employees ideas, participation in decision making as well as task autonomy.

Other antecedent variables of affective commitment include *job satisfaction,* feedback concerning work performance, job challenge (perceptions of the extent to which employees jobs were challenging), *role clarity*, goal clarity, goal difficulty, management receptiveness, peer cohesion, organisational dependability, equity and participation (Williams & Hazer, 1986).

2.4.4.5 Consequences of Organisational Commitment

Empirical studies have shown that *organisational commitment* predicts *intention to leave* (Baranik et al., 2009), *abseentism* (Meyer et al., 2002) as well as improved task and contextual performance (Malhotra & Mukherjee, 2004; Meyer et al., 2002).

2.4.4.5.1 Intention to Leave

Tett and Meyer (as cited in Oehley, 2007) defines *intention to leave* as a conscious and wilful decision to leave the organisation. Meyer et al. (2002) found that the

correlation between *intention to leave* and the three commitment scales were negative. Affective commitment correlated most strongly with intention to leave followed by normative and lastly continuance commitment. In Baranik et al., (2009) the path between *organisational commitment* and turnover intention was strong (β=-.44) and statistically significant (p<.05). This means the more the employee is affectively committed to the organisation, the less likely he or she will want to leave the organisation. In Park (2007) the path coefficient from organisational commitment to intention to quit was (β=-.88; p<.05), while in Oehley (2007) organisational commitment was statistically significantly (p<.05) and negatively related to intention to quit (β=-.39). In Bakker et al. (2003) the path coefficient between organisational commitment and *intention to leave* was also statistically significant (p<.05) and negative (β=-.66). These findings are in line with what was found in literature that organisational commitment is a good predictor of intention to quit. As employees perceive support and they get involved with the job in a meaningful way they tend to identify with the organisation and as such they are more likely to stay with the organisation.

Meyer et al. (2002) meta-analytic study also explored the relationship between *organisational commitment* and *absenteeism*. The results show that only affective commitment was found to correlate negatively with *absenteeism* (r=-.15) while normative and continuance commitment both correlated positively. The emotional attachment developed by the employee towards the organisation leads to less absenteeism among employees.

2.4.4.5.2 Task Performance

In terms of job performance (task performance) Malhotra and Mukherjee (2004) found that affective commitment had a significant positive effect on service quality (performance). In Meyer et al. (2002) meta-analytic study affective and normative commitment is positive but weakly correlated (r=.16 & r=.06) with job performance while continuance commitment correlated negatively with job performance (r=-.07).

2.4.4.5.3 Contextual performance

For contextual performance specifically *organisational citizenship behaviour* (OCB) the meta-analytic study by Meyer et al. (2002) found that affective commitment was correlated. (r=.32) with organisational citizenship behaviour. Findings in this same meta-analytic study (Meyer et al., 2002) supports a modest relationship between normative commitment and *organisational citizenship behaviour* (r=.24).

2.4.4.6. Summary: Link between Affirmative Development Based Coaching and Organisational Commitment

A study by Joiner, Bartram and Garreffa (2004) found a positive relationship between coaching and *organisational commitment*. Affirmative development based coaching affects *organisational commitment* in a number of ways. According to Onyemah (2009, p. 941) "coaching fosters organisational commitment because the principle of reprocity evoked in exchange theory suggests that employees who receive coaching will show appreciation by developing a sense of attachment to the organisation". Coaching support given to employees by the organisation as well as supervisors makes employees feel valued and appreciated by their employers and as such are more likely to reciprocate by being committed so as to balance out the social exchange. In this case the manager or supervisor acting as an affirmative development coach is seen as an agent of the organisation, hence employees develop feelings of being appreciated by the organisation. A coachee who is empowered through affirmative development coaching will not only develop a sense of competence and become engaged with his or her work but also remain committed. Results of a study done by Onyemah (2009) found that the amount of coaching provided by management increases salesperson affective commitment to the organisation. The coachee will feel attached or part of the organisation upon realising that the organisation is highly interested in developing his or her potential so that performance can be enhanced as well as personal development. Craumer (as cited in Ellinger et al., 2005) says that people through managerial coaching feel

valued and respected by their employers and tend to be loyal and hardworking because they get more out of their jobs.

Secondly, Park (2007) argues that managerial coaching affects organisational commitment in that employees' need for affection and belonging are satisfied at work hence strengthening their sense of attachment to the organisation. According to Kram (as cited in Branak et al., 2009) friendship creates positive social experiences at work and allows the employee/coachee to feel like a peer with his/her supervisor or manager which in turn positively impacts on the employee's perceptions of authority figures in the organisation.

Thirdly Kidd and Smewing (2004) are of the view that a satisfying coaching relationship may make an organisation more attractive such that *organisational commitment* is enhanced.

It is therefore hypothesised that for affirmative development coachees:

- Affective organisational commitment is negatively related to *intention to quit*.
- Affective organisational commitment is positively related to *task performance*.
- Affective organisational commitment is positively related to *contextual performance* (OCB).
- Affirmative development coaching is positively related to affective *organisational commitment*.

2.4.5 SELF-EFFICACY

2.4.5.1 Definition of Self-efficacy

This latent outcome variable is defined as the belief in ones abilities to do a certain task or to achieve a certain goal (Vancouver & Kendall, 2006). *Self-efficacy* is task specific and has to do with the individual's conviction that he or she can perform a specific task at a specific level of expertise (Gist as cited in Fourie, 2009). In this case it refers to the extent to which the coachee/mentee develops self-confidence in doing the job or completing a job-related task. According to Sweetman and Luthans

(2010) it is the belief in one's ability to succeed at a particular task in a specific context. Stajkovic and Luthans (1998) defines *self-efficacy* as the employees conviction or confidence about his or her abilities to mobilise the motivation, cognitive resources and courses of action needed to successfully execute a specific task within a given context. It is an employee's estimate of his or her ability to produce good performance on a specific task (Gist & Mitchell, 1992).

2.4.5.2 Employee Self-efficacy in the Context of Affirmative Development

Affirmative development is aimed at the development of malleable job competency potential latent variables that Black South Africans were denied the opportunity to develop due to discriminatory Apartheid policies and practices. Learning comprises two core learning competencies, namely *transfer* and *automisation* (Burger, 2012; Taylor, 1994). Through t*ransfer* the coachee adapts and applies that which he/she already know through prior learning to the novel learning problems encountered in the affirmative development programme (De Goede & Theron, 2010). Through t*ransfer* the coachee creates meaningful structure in initially largely meaningless novel learning material (Burger, 2012; Taylor, 1994). Through a*utomisation* the coachee writes the cognitive insight (i.e., the meaningful structure) gained through *transfer* to memory in a manner where it can be retrieved again (De Goede & Theron, 2010).

The cognitive insights gained through *transfer* in the classroom that are written to memory form the basis along with earlier insights for solving subsequent learning problems encountered on the job through *transfer*. A job continuously presents the incumbent with novel problems for which no readily available solution exists. A solution needs to be obtained by transferring crystalised abilities developed through prior learning onto the novel job problem.

Transferring the automated cognitive insights gained through *transfer* in the classroom is the primary challenge facing the coachee. The introductory argument stressed the point that the newly gained insights are probably still rather fragile both in terms of in depth understanding and in terms of the ability to recall the insight and

to use it in subsequent problem solving. Through coach-assisted personal learning on the job these aspects can be addressed. Transferring the automated cognitive insights gained through affirmative development onto job-relevant problems (i.e. action learning performance) is, however not only dependent on ability (Burger, 2012; De Goede & Theron, 2010; Van Heerden, 2013). It also depends on learning motivation (Burger, 2012; Van Heerden, 2013). Viewed from the perspective of expectancy theory (Porter et al., 2003) learning motivation is influenced by the multiplicative combination of the subjective probability that effort will result in performance (i.e., P(E→P)) and the valence of performance. The expectancy the effort will result in performance is affected by *self-efficacy* (Burger, 2012; Van Heerden, 2013).

The coach therefore needs to increases the probability that the cognitive insights gained through *transfer* in the classroom will eventually naturally be used by the coachee in job-related problem solving by developing the coachee's *self-efficacy*. A serious lack of self-efficacy will effectively prevent the coachee from attempting to utilise his/her newly newly developed crystalised abilities.

Achieving success under the guidance and supervision of the coach when attempting to utilise his/her newly developed crystallised abilities should in turn feed back onto the coachee's *self-efficacy* and enhance *self-efficacy* levels (Burger, 2012; Van Heerden, 2013).

2.4.5.3 Antecedents of Self Efficacy

Studies that have examined *self-efficacy* have shown that supervisor behaviour influences employee's feelings of *self-efficacy* (Eden & Kinnar, 1991; Natanovich & Eden, 2001 in Schyns & Von Collani, 2002). Supervisor behaviour (leader-member exchange) enhances *self-efficacy* (Murphy & Ensher, as cited in Schyns & Von Collani, 2002) if the exchange relationship is characterised by development, feedback and support. Leader-member exchange puts emphasis on a dyadic relationship between the leader and each member. In this kind of relationship the leader is expected to exhibit support and encouragement hence promoting *self-efficacy* among the subordinates. Murphy and Ensher (1999) (as cited in Schyns

and Von Collani, 2002) found a correlation of .23 between subordinate's *self-efficacy* and supervisor's rating of leader-member exchange. According to Bandura (1986) as well as Sweetman and Luthans (2010) determinants of *self-efficacy* include social persuasion, positive feedback or encouragement from the coach, mentor or other respected role models. Observing someone like the coach who is the role model or even peers that succeed at a task can convey a sense of efficacy to the learner (coachee) that he or she can also accomplish the task (Schunk,1985). When employees know how they are performing through performance feedback they are provided with intrinsic motivation especially when it is positive (Armstrong, 1996, as cited in Mukherjee & Malhotra, 2006).

Another antecedent of *self-efficacy* is *personal learning*. Through learning individual employees acquire technical job knowledge, declarative and procedure information about the organisation which influence a change in ones perceptions, behaviour, values and attitudes about the job (Lankau & Scandura, 2002). Learning builds self-esteem and promotes competence and efficacy in approaching work related problems (Gouillart and Kelly, 1995 as cited in Lankau & Scandura, 2002). According to Lankau and Scandura employees who experience *personal learning* may have more positive reactions to their work because they have greater confidence and skill.

2.4.5.4 Consequences of Self Efficacy

Consequences of *self-efficacy* include *job satisfaction*, *commitment*, *performance* and *engagement* (Bozeman, Perrewe, Hochwarter & Brymer, 2001; Judge & Bono, 2001).

2.4.5.4.1 Job Satisfaction

In terms of *job satisfaction,* Judge and Bono (2001) argue that *self-efficacy* affect *job satisfaction* through its association with practical success on the job. Individuals with high *self- efficacy* deal more effectively with difficulties and persist in the face of

failure (Gist & Mitchell, 1992) and as a result they are more likely to attain valued outcomes and thus derive satisfaction from their jobs**.** An empirical study by Judge and Bono (2001) found a correlation of .45 between *self-efficacy* and *job satisfaction*. In Schyns and Von Collani (2002) occupational *self-efficacy* was positively related to specific facets of *job satisfaction* namely superior, colleagues as well as the task.

2.4.5.4.2 Organisational Commitment

Employees who trust in their competence to fulfil their job because of a high sense of *self-efficacy* are thought to be affectively committed to the company that provides that job (Schyns & Von Collani, 2002). According to Mathieu and Zajac (1990), an organisational variable such as leader behaviour enhances occupational self-efficacy. Schyns and Von Collani (2002) found a statistically significant ($p<.05$) but moderate correlation (.38) between affective commitment and occupational *self-efficacy*. In Bauer et al. (2007) a statistically significant ($p<.05$) path between *self-efficacy* and *organisational commitment* of .20 was found. Bozeman et al. (2001) also found that *self-efficacy* influences commitment.

2.4.5.4.3 Job-Performance (Task Performance)

One other construct that is related to *self-efficacy* is job performance. Meta-analytic evidence in Stajkovic and Luthans (1998) has shown that *self-efficacy* is related to work performance (.38). In Bauer et al. (2007) correlation of .35 was found between *self-efficacy* and job performance. In Judge and Bono a statistically significant ($p<.05$) relationship of .23 between the two constructs was found, while in Krishnan, Netemayer and Boles (2002) the completely standardised path estimate between *self-efficacy* and performance was statistically significant (.29). Employees who think they can perform well on a task tend to do better than those who think they will fail.

Self-efficacy is a good predictor of performance (Chowdhury & Shahabuddin, 2007). When the coachee has high *self-efficacy* high work performance will more likely be the end result. *Self-efficacy* has a significant impact on almost every aspect of a person's life. It affects the way they think productively, their optimism and pessimism, their vulnerability to stress and depression, the choices they make in life and the degree to which they motivate themselves (Pajares, 2002). When a person is confident that a certain task can be done successfully, positive *self-efficacy* occurs (Burns, 2009). Luthans and Peterson (2002) found in their results that manager's self-efficacy was a partial mediator of the relationship between his or her employee's engagement and the managers rated effectiveness. Krishnan, Netemayer and Boles (2002) found that *self-efficacy* was positively related to effort (.43). The authors further suggest that self-efficacy may not only be related to performance directly but also indirectly through an increased level of effort.

2.4.5.4.4 Engagement

Additionally self-efficacy also affects *engagement* (Vancouver & Kendall, 2006). Self-efficacy views influence the motivation and ability to engage in a specific behaviour (Tierney & Farmer, 2002).

2.4.5.4.5 Summary: Link between Affirmative Development Coaching and Self-efficacy

The support and guidance that the coachee receives from a competent coach leads to the acquisition of job-related knowledge and enhanced skills that enhance the confidence to attend to job-related challenges and problems**.** Coaching helps individuals from former disadvantaged groups make headway towards positions from which they were previously excluded. Coaching/mentoring programmes empower employees with skills that will help them cope with the demands and expectations of the job. This will make them fit well in that self-image and confidence on the job is boosted. Confidence in this case lies in the acquisition of skills. Confidence in this case is necessary to effectively deal with issues of prejudice because employment equity positions are regarded by the minority as jobs where people are appointed not

on merit. Gerber (2004) calls them token appointees. This can be offensive but more detrimental in that it leads to loss of status and lack of authority.

It is therefore hypothesised that for affirmative development coachees:

- *Self-efficacy* is positively related to *job satisfaction*;
- *Self-efficacy* is positively related to affective commitment;
- *Self-efficacy* is positively related to *task performance*; and
- *Self-efficacy* is positively related to *engagement*.
- Affirmative development coaching is positively related to *self-efficacy*.

2.4.6 ENGAGEMENT

Engagement is the key to an organisation gaining a competitive advantage and overall success (Macleod & Clarke, 2009). The energy and focus inherent in *work engagement* allow employees to bring their full potential to the job which enhances the quality of their work, leading to increases in profitability through higher productivity, sales, customer satisfaction and employee retention (Leiter & Bakker, 2010; Schaufeli & Bakker, 2010). Hogan (2005) is of the view that the key to success in business is money and people. It should not only be people at work but those that will invest their energies physically, cognitively and emotionally to attain the much required performance at work. Schaufeli and Salanova (2007) as well as Macey, Schneider, Barbera and Young (2009) claim that *engagement* is central to organisations given the many drawbacks and challenges they face and that organisations can gain a competitive advantage through employee engagement. According to Grumman and Saks (2011) *engagement* is the driver of individual attitudes, behaviour and performance as well as organisational performance, productivity, retention, financial performance and shareholder return. Macey et al. (2009) have shown that among a sample of 65 firms in different industries, the top 25% on an engagement index had a greater return on assets (ROA), profitability, and more than double the shareholder value compared to the bottom 25%. In the modern world of work, mental capabilities are of importance, hence the need by organisations to have a motivated workforce that is engaged.

2.4.6.1 Definition of Work Engagement

Maslach and Leiter (as cited in Mauno, Kinnunen & Ruokolainen, 2007) define *engagement* as energy, involvement and professional efficacy which are considered to be direct opposites of the burnout dimensions. Schaufeli, Martinez, Pinto, Salanova and Bakker (2002) define *engagement* as a positive fulfilling work-related state of mind characterised by vigour, dedication and absorption. Vigour is characterised by energy and mental resilience while working, the willingness to invest effort in one's work and persistence even in the face of difficulties (Bakker, Schaufeli, Leiter & Taris, 2008). With vigour an employee will be persistent amidst difficulties. The second dimension of work engagement is dedication which refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm, inspiration, pride and challenge (Bakker et al., 2008). The third dimension is absorption. According to Mauno et al. (2007) absorption refers to total concentration on and immersion in work characterised by time passing quickly and finding it difficult to detach oneself from one's work.

2.4.6.2 Employee Engagement in the Context of Affirmative Development

Affirmative development is aimed at the development of malleable job competency potential latent variables that Black South Africans were denied the opportunity to develop due to discriminatory Apartheid policies and practices. The objective is to empower the learner with the job competency potential required to successfully perform the tasks that constitute the job. Succeeding in this and succeeding in translating the relevant job competency potential required into actual successful job performance brings to the fore the challenge of retaining the newly developed Black talent. *Engagement* has been shown (Saks, 2006) to be negatively and significantly (β=-.22; $p<.05$) related to *intention to leave*.

Fostering/facilitating coachee *engagement* is therefore another challenge facing the coach. The coach needs to increases the probability that the coachee that succeeds at translating the crystalised job competency potential developed in the classroom

into effective task performance will remain in the organisation by fostering the coachee's *work engagement*. The question is through which latent variables a coach can impact on the coachee's level of *work engagement*.

2.4.6.3 Antecedents of Work Engagement

Work engagement is predicted by personal resources like optimism, self-esteem and self-efficacy as well as by job resources like autonomy, performance feedback and supervisory coaching. According to Schaufeli and Bakker (2004) job resources refer to those physical, social or organisational aspects of the job that may reduce job demands and the associated physiological and psychological costs, be functional in achieving work goals or stimulate personal growth, learning and development. According to Bakker and Demerouti (2008) job resources such as learning opportunities, social support from colleagues and supervisors are positively associated with *work engagement*. According to Salanova, Schaufeli, Xanthopoulou and Bakker (2010) job resources are functional in achieving work goals and may stimulate personal growth, learning and development and as such may initiate a motivational process that may lead to *work engagement* and positive organisational outcomes including enhanced performance. In terms of the social exchange theory when employees receive economic and social-emotional resources from their organisation they feel obliged to repay the organisation with great levels of engagement (Engelbrecht, personal communication, 2011).

In a study by Mauno et al. (2007) it was found that job resources were robustly related to experiences of *work engagement*. Hakanen, Bakker and Demerouti (2005) examined the relationship between job demands, job resources and *work engagements* among Finnish dentists. It was found that job resources are useful in coping with the demands of dentistry and help dentist stay engaged.

In another study done by Xanthopoulou, Bakker, Demerouti and Schaufeli (2009) it was found that job resources such as autonomy, coaching and team climate had an

effect on *work engagement* through personal resources including *self-efficacy*. However it was also found that coaching had a direct positive relationship with *work engagement*.

Xanthopoulou, Bakker, Demerouti and Schaufeli (2007) examined personal resources such as *self-efficacy*, organisational based self-esteem and optimism in predicting exhaustion and *work engagement* among 714 Dutch employees of an electrical engineering company. It was found that *self-efficacy*; organisational based self-esteem and optimism mediated the relationship between job resources and *work engagement* and exhaustion. High levels of efficacy beliefs that employees and groups experience as a result of job resources such as managerial coaching enabled the employee to be engaged in their tasks at work and to perform well.

In Harter, Schmidt and Keyes (as cited in Simpson, 2009), clarity of expectations was one of the antecedent elements deemed necessary for *engagement* to occur within the workplace.

2.4.6.4 Consequences of Work Engagement

According to the conservation of resources (COR) theory individuals strategically invest their resources to gain additional resources (Halbesleban, 2010) and as such *engagement* should be associated with a lot of positive outcomes because the availability of job resources allows individuals to invest their extra resources in positive endeavours (Salanova, Schaufeli, Xanthopoulou & Bakker, 2010). A study by Habesleban (2010) shows that *engagement* is associated with *performance*, *organisational commitment* and *turnover intention***.**

2.4.6.4.1 Performance

One variable that has been receiving increasing attention as a key determinant of *performance* is *employee engagement*. Engaged employees take greater initiative and generate their own positive feedback and as such they have high levels of energy and are enthusiastic about their work (May, Gilson & Harter, 2004; Schaufeli & Bakker, 2001). *Job performance* can be seen as an aggregate value to an organisation of the set of behaviours that an employee contributes both directly and indirectly to organisational goals (Motowidlo & Campbell as cited in Rich, Lepine & Crawford, 2010). Behavioural performance has multiple dimensions such as task and contextual performance. Employees who are highly engaged in their work roles not only focus their physical effort on the pursuit of role-related goals but are also cognitively vigilant and emotionally connected to the endeavour (Ashforth & Humphrey, Kahn as cited in Rich et al., 2010).

In terms of *task performance* Brown and Leigh (1996) found that employees who worked harder by investing physical energy towards accomplishing the task exhibited high levels of job performance. Rich et al. (2010, p. 620) argue that employee's investment of cognitive energy into work roles contributes to organisational goods because it promotes behaviour that is more vigilant, attentive and focused.

> Since behaviours that comprise task performance are established and controlled to any given job and there is consensus about what they are and they are relatively static over time employees who invest their physical, cognitive and emotional energies into their work should exhibit enhanced performance because they work with greater intensity on their tasks for a longer periods of time, pay more attention and are emotionally connected to the task.

Xanthopoulou et al. (2008) show that there is a positive relationship between *engagement* and performance. Standardised path estimates in Rich et al. (2010) between job *engagement* and task performance as well as citizenship behaviour were both positive and statistically significant (β=.25 and β=.27 respectively; $p<.05$).

Bakker, Schaufeli, Leiter and Taris (2008) are of the view that engaged employees perform exceptionally well and are willing to go the extra mile. In Schaufeli, Taris and Bakker (2006) *work engagement* was positively and statistically significantly ($p<.05$) related to in-role performance ($\beta=.37$), extra-role performance ($\beta=.32$) and innovativeness ($\beta=.37$). Saks (2006) examined the antecedents and consequences of employee engagement among 102 employees working in a variety of jobs and organisations. Results shows that organisational and job engagement were positively and statistically significantly ($p<.05$) related to organisational citizenship behaviour aimed at the organisation though not strong ($\beta=.30$, $\beta=.20$) and that organisational engagement was positively and statistically significantly ($p<.05$) related to organisational citizenship behaviour aimed at individual co-workers ($\beta=.20$).

In a study done by Halbesleben (as cited in Rich et al., 2010) *engagement* is significantly related to a number of consequences including *commitment*, health, *turnover intentions* and *performance*. Harter, Schmidt and Keyes (2002) examined the relationship between *employee satisfaction*, *engagement* and the business unit outcomes of customer satisfaction, productivity, profit, employee turnover and accidents. Results showed generalisable relationships between unit level employee satisfaction, engagement and organisational outcomes of profitability, productivity, customer satisfaction, employee safety and turnover. Findings in Christian, Garza and Slaughter (2011) indicate that there is a statistically significant relationship between *work engagement* and task and contextual *performance*.

2.4.6.4.2 Relationship between Engagement and Job Satisfaction, Commitment and Intention to Leave.

Engagement refers to the extent to which the coachee is dedicated to exceptional performance at work. Employees who are absorbed into their work tend to be dedicated and committed to their work and organisation (Schaufeli & Bakker, 2010), are more likely to stay with the organisation and generally tend to be happy employees who experience job satisfaction. Engaged employees enjoy doing their

work and they want to be of value to the organisation (Leiter & Bakker, 2010). Koyuncu, Burke and Fiksenbaum (2006) examined potential antecedents and consequences of *work engagement* with 286 women managers and professionals at a Turkish bank and found that *work engagement* predicted job satisfaction, intention to leave and psychological well- being. In Saks (2006) organisation and *job engagement* was positively related to *job satisfaction* (β=.41, β=.26), *organisational commitment* (β=.59, β=.17) and negatively related to *intention to leave* (β=-.31, β= .22).

2.4.6.4.4 Summary: Link between Affirmative Development Coaching and Engagement

Wageman (2001) argues that leader coaching behaviours can directly affect subordinates *engagement* with the task. A coachee who is highly engaged will find it difficult to detach from work because he or she strongly identify with the work and continually invest high levels of energy in goal directed behaviour. A coachee who has been empowered with job knowledge and has developed self-confidence is more likely to be dedicated to his or her work.

It is hypothesised that for affirmative development coachees:

- Employee engagement is positively related to *task performance*.
- Employee engagement is positively related to contextual performance (*organisational citizenship behaviour*).
- *Employee engagement* is positively related to *job satisfaction*.
- *Employee engagement* is positively related to affective *organisational commitment.*
- *Employee engagement* is negative related to *intentions to quit*.
- Affirmative development coaching is positively related to *work engagement*.

2.4.7 TURNOVER INTENTION

2.4.7.1 Definition of Turnover intention

According to Bluedorn (1982) *intention to leave* refers to plans by the employee of leaving the organisation. Tett and Meyer (as cited in Oehley, 2007) define *intention to leave* as conscious and a deliberate wilfulness to leave the organisation. A study done by Griffeth, Hom and Gaertner (2000) as well as a study performed by Sutherland and Jordan (2004) has shown that *intention to leave* acts as an antecedent of actual turnover. So as the intention of leaving increases the likelihood of actual turnover is also expected to increase. Bedian, Kemery and Pizzolatto's (1991) study on nurses found that *intention to leave* had a direct effect on actual turnover. In view of this, examining intention to leave is important because it helps in determining actual turnover behaviour.

2.4.7.2 Turnover Intention in the Context of Affirmative Development

Affirmative development is aimed at the development of malleable job competency potential latent variables that Black South Africans were denied the opportunity to develop due to discriminatory Apartheid policies and practices. The objective is to empower the learner with the job competency potential required to successfully perform the tasks that constitute the job. Succeeding in this and succeeding in translating the relevant job competency potential required into actual successful job performance brings to the fore the challenge of retaining the newly developed Black talent. The likelihood of retaining the newly developed Black talent increases as the *intention to leave* decreases.

Lowering the coachee's *intention to leave* is therefore another challenge facing the coach. The coach needs to increases the probability that the coachee that succeeds at translating the crystalised job competency potential developed in the classroom into effective task performance will remain in the organisation by minimising the

coachee's *intention to leave*. The question is through which latent variables a coach can impact on the coachee's level of *intention to leave*.

2.4.7.3 Antecedents of Turnover Intention

Research has identified several variables that predict employee's *turnover intention*. These include *role clarity*, *job satisfaction*, affective *commitment* as well as *organisation citizenship behaviour* (Lyons, 1971; Oehley, 2007; Park, 2007; Podsakoff et al., 2009). Cottan and Tuttle (1986) found that *role clarity* overall *job satisfaction*, satisfaction with pay, satisfaction with work itself, satisfaction with supervisor, satisfaction with co-workers and satisfaction with promotional opportunities have been studied in association with turnover intentions. In Oehley (2007) it was found that organisational *job satisfaction* had a statistically significant ($p<.05$) and negative effect on intention to leave ($\beta=-.42$). In the same study of Oehley (2007) it was found that affective *commitment* is statistically significantly ($p<.05$) and negatively related to intention to leave ($\beta=-.39$). Other studies have also shown that *commitment* is significantly but negatively to intentions to quit (Baranik et al., 2009; Park, 2007). Podsakoff et al. (2009) have provided evidence that *organisation citizenship behaviour* is negatively related to *turnover intention*.

2.4.7.4 Summary: Link between Affirmative Development Coaching and intention to Leave

Affirmative development is aimed at the development of malleable job competency potential latent variables that Black South Africans were denied the opportunity to develop due to discriminatory Apartheid policies and practices. The objective is to empower the learner with the job competency potential required to successfully perform the tasks that constitute the job. Succeeding in this and succeeding in translating the relevant job competency potential required into actual successful job performance brings to the fore the challenge of retaining the newly developed Black talent. Intention to leave has been shown (Crede et al., 2007, Lyon, 1971; Oehley,

2007; Podsakoff et al., 2009) to be negatively and significantly (p<.05) related to *job satisfaction, role clarity and organisational commitment.*

Fostering/facilitating reduction on coachee *intention to quit* is a challenge facing the coach. The coach needs to increase the probability that the coachee that succeeds at translating the crystalised job competency potential developed in the classroom into effective task performance will remain in the organisation.

2.4.8 JOB PERFORMANCE

Employee job performance is very important in any organisation because it determines how well the organisation is able to produce and offer quality goods and services to the public, being in the position to meet the objective of making profits as well as social responsibility targets. In industrial-organisational psychology it is often referred to as the focal criterion latent variable. Traditionally the term *job performance* referred to a unitary composite criterion as a measure of performance. According to Dalal (2005) the traditional view restricts the usage of performance to what Borman and Motowidlo (1997) call task performance. According to Lievens, Conway and De Corte (2008) task performance has long been recognised as the core of the job and is generally used as a point of comparison. However, recent performance theoretical models (Hattrup, O'Connell & Wingate, 1998) suggest that performance is multidimensional.

Campbell et al. (as cited in Hattrup et al., 1998) listed eight dimension of performance that are presumed to account for the latent structure of performance in all jobs (shown in Table 2.1). These dimensions include job specific task proficiency, non-job–specific task proficiency, written and oral communication, demonstrating effort, maintaining personal discipline, facilitating team and peer performance, supervision/leadership and management and administration (Campbell et al., as cited in Hattrup et al., 1998).

Table 2.1

An integrated model of job performance dimensions

Task performance	Citizenship performance
Job-specific task proficiency • Handling emergencies or crisis situations • Physical adaptability • Technical proficiency • Other job specific task examples	Ponscientious initiative • Demonstrate effort • Handling work stress • Showing Initiative • Engaging in self development
Non-job-specific task proficiency • Physical adaptability • Solving problems creatively • Decision making • Other non-job specific task examples	Organisational support • Maintain personal discipline • Handling work stress • Representing the organisation to customers & the public • Organisational commitment • Suggesting improvements
Written& oral communication proficiency • Written communication proficiency • Oral communication proficiency	Personal support • Supervision • Demonstrating interpersonal adaptability • Demonstrating cultural adaptability • Handling work stress • Maintaining good working relationships • Helping Others • Cooperating • Showing consideration
Management/Administration • Planning and organising • Administration and paper work • Coordinating resources • Staffing • Monitoring and controlling resources	
Supervision • Guiding, directing and motivating subordinates and providing feedback • Training, coaching and developing subordinates • Delegating	
Conscientious initiative • Learning work tasks, technologies and procedures • Demonstrate effort(similar to persisting to reach goals	

Adapted from Johnson (2003)

Borman and Motowidlo (1997) suggest that the domain of job performance can be summarised in terms of two broad second-order factors that are presumed to exist in almost all jobs namely task and contextual performance. According to Hattrup et al. (1998) *task performance* includes behaviours that contribute to transforming raw

materials into goods and services and maintain the organisation's technical core. *Task performance* according to Hattrup et al. (1998 is consistent with the Campbell et al. (1996) as cited in Hattrup, O'Connell & Wingate (1998) dimensions of job and non-job specific proficiency, written and oral communication, supervision/leadership and management and administration.

Contextual performance represents behaviours that do not necessarily support the organisation's technical core as much as they support the organisations climate and culture (Hattrup et al., 1998). *Contextual performance* is consistent with Campbell (1996) dimensions of maintaining personal discipline, facilitating team and peer performance as well as demonstrating effort. Research studies have shown that there is a distinction between the concept of task and contextual performance (Campbell, Henry & Wise, 1990; Day & Silverman, 1989; Motowidlo & Van Scotter, 1994).

Another important criterion construct along with task and citizenship behaviour is counterproductive work behaviours which consist of behaviours that violate the organisation's legitimate interest such as theft, misuse of time, information as well as resources (Sackett & DeVore as cited in Lievens et al., 2008). Rotundo and Sackett (2002) define counterproductive performance as voluntary behaviour that harms the wellbeing of the organisation.

Lievens et al. (2008) are of the view that both the unitary and the multi-dimensional interpretation of job performance criterion are useful. The unitary composite criterion is useful for making decisions while the multi-dimensional criterion is useful for the theoretical understanding of work behaviour. Increased understanding of the criterion construct should lead to better practice and theoretical understanding requires a framework that is applicable across different jobs and organisations.

2.4.8.1 Task Performance

2.4.8.1.1 Definition of Task Performance

Task performance according to Murphy (as cited in Myburgh, 2013) is the completion of role activities prescribed in the job description. *Task performance* deals with how effective the job incumbent is at performing activities that contribute to the organisation's technical core. *Task performance* is the effectiveness with which job incumbents perform activities that contribute to the organisations technical core either directly by implementing a part of its technological process, or indirectly by providing it with needed materials or services (Borman & Motowidlo, 1997).

2.4.8.1.2 Task Performance in the Context of Affirmative Development

Task performance lies at the very heart of affirmative development and affirmative development coaching. Affirmative development is aimed at the development of malleable job competency potential latent variables that Black South Africans were denied the opportunity to develop due to discriminatory Apartheid policies and practices. Learning comprises two core learning competencies, namely *transfer* and *automisation* (Burger, 2012; Taylor, 1994). Through t*ransfer* the learner adapts and applies crystalised knowledge developed through prior learning to novel learning problems (De Goede & Theron, 2010) encountered on the affirmative development programme. Through a*utomisation* the cognitive insight (i.e., the meaningful structure) gained through *transfer* is written to memory in a manner where it can be retrieved (Burger, 2012; De Goede & Theron, 2010; Taylor, 1994).

Attempting to successfully perform the activities that contribute to the organisation's technical core continuously presents the incumbent with novel problems for which no readily available solution exists. A solution needs to be obtained by transferring crystalised abilities developed through prior learning onto the novel job problem.

Learning interpreted in terms of *transfer* and *automisation* does not stop once classroom learning has been completed.

It is in this on-the-job learning that many previously disadvantaged Black South Africans were set up for failure under a traditional, quota interpretation of affirmative action. Lack of opportunity prevented them from developing the necessary crystalised abilities required to succeed on the task performance dimension. For many of them the problem is not the lack of fundamental *abstract reasoning capacity* (De Goede & Theron, 2010) but rather the distance over which the *abstract reasoning capacity* has to attempt to *transfer* the available but underdeveloped crystalised abilities.

Transferring the automated cognitive insights gained through *transfer* in the classroom to problems faced on the job is the primary challenge facing the coachee in his/her attempt to succeed on the task performance dimension.

2.4.8.1.2 Antecedents of Task Performance

Task performance is complexly determined by a comprehensive nomological net of latent variables characterising the employee and the work context. Explicating all the determinants of *task performance* would almost be tantamount to summarising the four volume handbook of industrial and organisational psychology (Dunnette & Hough, 1991). Some of the determinants of *task performance* include affective organisational *commitment* (Malhotra and Mukherjee, 2004; Meyer et al., 2002), job *engagement* (Brown & Leigh, 1996; Rich et al., 2010), *job satisfaction* (Keaveney & Nelson, 1993; Iaffaldano & Muchinsky as cited in Crede et al., 2007 and Judge et al., 2001) as well as *role clarity* (Whitaker, Dahling & Levy, 2007).

2.4.8.1.3 Consequences of Task performance

Empirical studies have shown that *task performance* influences job satisfaction (Judge, Bono, Thoresen & Patton, 2001**).** Among the seven proposed models in

Judge et al. (2001) on the relationship between job satisfaction and performance is one which depicts that job performance causes job satisfaction. This model is derived from the assumption that performance leads to valued outcomes that are satisfying to individuals (Judge et al., 2001). Using expectancy theory of motivation, Vroom (as cited in Judge et al., 2001), Lawler and Porter (as cited in Judge et al., 2001) as well as Naylor, Pritchard and Ilgen (as cited in Judge et al., 2001) argue that good performance would lead to rewards which in turn lead to satisfaction. Results in Van Scotter (2000) show that *task performance* predicted levels of job satisfaction and *commitment* but that *contextual performance* explained additional variance in *job satisfaction* and *commitment*. In Mackenzie, Podsakoff and Ahearne (1998) *job performance* had a significant causal effect on *job satisfaction*.

Commitment is an outcome of *task performance* (Van Scotter, 2000). Feedback on *task performance* is more likely to influence an employee's *commitment*. Since rewards are tied to performance levels which in turn influences ones satisfaction and commitment, feedback from supervisors on how well one is performing on tasks will also influence one's dedication to one's work in the quest of meeting performance targets as a prerequisite to obtaining the desired rewards.

Intention to leave is another outcome of *task performance* (Van Scotter, 2000). In this same study *task performance* predicted turnover. How well the employee performs on job tasks determines withdrawal behaviour. Higher task performance therefore tends to be associated with lower levels of intention to leave.

2.4.8.1.4 Task Performance as a Primary Outcome of Affirmative Development Coaching

Managerial coaching exists in organisations to improve the work performance of the subordinates**.** According to Orth et al. (as cited in Ellinger, Ellinger & Keller, 2005) managerial or supervisory coaching revolves around the notion of helping employees recognise opportunities to improve their performance and job skills. Rogers (2000) is

also of the view that managerial coaching involves empowering people to make their own decisions, unleashing their potential, enabling learning and improving learning. So if managerial coaching exists to improve work performance then *task performance* has to be the primary outcome. Likewise affirmative development coaching exists in organisations to improve the work performance of affirmative development candidates during and after the affirmative development programme.

Any employee is recruited and selected to be part of the organisation to meet specific objectives on the job. The coachee who is the employee is expected to perform some tasks on the job in order to accomplish the objective for which the job exist that is to produce a product or service for a specific market of consumers (Theron, 2011). According to Myburgh (2013) a job is defined as a set of inter-related behavioural tasks, constraints and opportunities in the deliverance of a product or service. The performance of a job incumbent (and therefore also the affirmative development candidate) should therefore first and foremost be evaluated in terms of the level of competence with which both the job-specific and non-job-specific behavioural tasks are completed.

A study done by Evered and Selman (1989) as well as a study by Orth, Wilkinsonson & Benfari (1987) identified performance improvement as a primary outcome of managerial coaching. Hannah (2004) suggests that investing in workplace coaching interventions to develop the individual level of competences improves performance. Ellinger, Ellinger and Keller (2005) examined warehouse worker development associated with managerial coaching in the logistic industry. A regression analysis was performed to test for associations between supervisory coaching behaviour and warehouse worker job-related performance. The analysis identified supervisory coaching behaviour as a significant predictor of warehouse worker performance. The regression model explained 18 percent of the variance in warehouse worker job-related performance.

In a study done by Garavan and Morley (1997) a stepwise multiple regression analysis yielded two significant and independent correlates. Job coaching was

statistically significantly (p<.05) related to increased levels of job performance (β =.36) and specific skills training was also related to increased levels of job performance (β=.46). Using a sample consisting of 340 managers from 38 organisations Li-Yan (2008) examined the relationship between managerial coaching behaviours and employee performance. The results of structural equation modelling (SEM) analysis show that managerial coaching behaviours namely self-awareness enlightenment and role modelling influenced *task performance* in a positive way.

2.4.8.2 Contextual performance-Organisational citizenship behaviour (OCB)

2.4.8.2.1 Definition of Contextual Performance

Contextual performance is similar in definition to organisational citizenship behaviour (Organ, 1988) as well as other concepts such as pro-social organisational behaviour, extra-role behaviour and organisational spontaneity (Van Scotter, Motowidlo & Cross, 2000). According to Borman, Penner, Allen and Motowidlo (2001) as well as Coleman and Borman (2000) *contextual performance*, organisational citizenship behaviour (OCB) and other related concepts are often regarded as the same and are therefore placed under the same label of citizenship performance.

Organ (1988) defines *organisational citizenship behaviour* (OCB) as spontaneous behaviour that is discretionary, not part of employee formal role requirements, not directly recognised by the organisation's formal reward system and promotes the effective functioning of the organisation. Organ (1997) on the other hand defines *organisational citizenship behaviour* as performance that supports the social and psychological environment in which task performance takes place. On the other hand Bolino and Turnley (2003) define *organisational citizenship behaviour* as employee efforts that go above and beyond the call of duty.

Borman and Motowidlo (as cited in Myburgh, 2013) defined *job performance* in terms of *task performance* and *contextual performance*. While task performance deals with

the effectiveness with which job incumbents perform activities that contribute to the organisation's technical core, contextual performance deals with activities that contribute to organisational effectiveness in ways that shape the organisational, social, and psychological context and serves as the catalyst for task activities and processes (Borman & Motowidlo as cited in Myburgh, 2013). The concept of employee performance cannot therefore be limited to task performance but that a comprehensive analysis requires that one also consider *contextual performance*. This study therefore embraces the concept of contextual performance, specifically, *organisational citizenship behaviour*. According to Johnson (as cited in Myburgh, 2013) personal support and organisational support form part of the citizenship performance dimension. Personal support according to Myburgh (2013) includes behaviour directed towards benefiting individuals within the organisation like helping, motivating, cooperating with and showing consideration of others as seen in the integrated model of job performance dimension above in Table 2.1. On the other hand organisational support has to do with behaviours intended to benefit the organisation like loyalty towards the organisation, being a good ambassador and complying with organisational rules and norms (Johnson as cited in Myburgh, 2013).

2.4.8.2.2 Contextual Performance in the Context of Affirmative Development

Contextual performance is not the primary focus of affirmative development and affirmative development coaching. Affirmative development is aimed at the development of malleable job competency potential latent variables that Black South Africans were denied the opportunity to develop due to discriminatory Apartheid policies and practices in an attempt to improve task performance.

Contextual performance is nonetheless important because it reflects the extent to which the affirmative development candidate feels comfortable, psychologically empowered (Viswesvaran & Ones, 2000) at ease and at home in his/her new position and in the work unit/organisation. As such the display of organisational citizenship behaviour is of value in that it signals a low intention to leave.

Affirmative development is aimed at transforming the organisation in terms of the extent to which it reflects the demographic composition of society. At its very core therefore it involves change. Change tends to evoke uncertainty. In the case of affirmative development it seems reasonable to assume that the affirmative development candidate initially will feel somewhat less comfortable, psychologically somewhat disempowered somewhat ill at ease and a little bit like an Englishman in New York[5] in his/her new position and in the work unit/organisation.

Successfully psychologically grafting the affirmative development candidate onto the existing organisation is therefore another challenge facing the coach. The display of contextual performance would serve as a behavioural symptom of the extent to which the coach succeeded in not only achieving task performance but also in making the affirmative development candidate feel at home, welcome, at ease and part of the organisation.

2.4.8.2.3 Antecedents of Organisation Citizenship Behaviour (OCB)

Several studies (Meyer et al., 2002; Netemeyer, Boles, Mckee & Macmurrian, 1997; Organ & Ryan, 1995; Smith, Organ & Near, 1983) have identified antecedents of *organisational citizenship behaviour*. The first one is *job satisfaction* (Lepine, Erez & Johnson, 2002; Organ & Ryan, 1995). Happy workers will be supportive and cooperative. Another antecedent of organisational citizenship behaviour is affective organisational *commitment* (Meyer et al., 2002). When employees find their jobs and tasks to be interesting and meaningful commitment will be enhanced (Engelbrecht, 2011). The other antecedent of organisational citizenship behaviour is *engagement* (Rich et al., 2010). Transformational and supportive leadership (Engelbrecht & Chamberlain, 2005), trust and organisational justice (Engelbrect & Chamberlain, 2005) are other antecedents of organisational citizenship behaviour. In the context of affirmative development a number of additional determinants normally not associated with organisational citizenship behaviour should probably be considered. Foremost amongst these is a diversity appreciating organisational

[5] With apologies to Sting.

culture (Kamps & Engelbrecht, 2011). Being transplanted in a hostile organisational environment that opposes transformation will most likely inhibit organisational citizenship behaviour and will probably positively impact on intention to leave.

2.4.8.2.4 Consequences of Contextual Performance (OCB)

2.4.8.2.4.1 Intention to Leave

According to Van Scotter (2000) the very nature of *contextual performance* suggests that there is a link with turnover. *Contextual performance* is a form of discretionary behaviour that demonstrates an employee willingness to participate in the organisation and interact with other members while turnover or the intention thereof has to do with withdrawal behaviour**.** Although other factors certainly influence employee participation in the organisation or turnover, higher levels of participation seem likely to be associated with lower levels of turnover and *vice versa* . In Chen, Hui and Sego (1998) it is theorised that levels of *organisation citizenship behaviour* (OCB) predicts employee *turnover intention*. The results showed that subordinates who were rated as exhibiting low levels of OCB were found to be more likely to leave an organisation than those who were rated as exhibiting high levels of *organisational citizenship behaviour*.

Secondly employees learn to discern the types of behaviours that are rewarded by their supervisor. In terms of this line of reasoning employees will adapt their behaviours in ways that are positively reinforced. So an employee will tend to display *contextual performance* if it is expected to influence the favourability of the feedback an employee receives concerning opportunities for advancement and continued membership in the organisation (Van Scotter, 2000). Although the relevance of this psychological dynamic cannot be denied it nonetheless fails to acknowledge the potential intrinsic motivation of *organisational citizenship behaviour*. Organisational citizenship behaviour can be displayed simply because that which the job and the organisation stand for has meaning and matters psychologically.

Lastly Podsakoff and Mackenzie (1997) are of the view that altruistic behaviour which is part of *contextual performance* can lead to a decrease in turnover because contextual performers helps to maintain a pleasant and cohesive work environment. This line of reasoning applies especially to employees from the previous dispensation displaying organisational citizenship behaviour towards affirmative development candidates.

A study by Podsakoff, Whiting, Podsakoff and Blume (2009) found that *organisational citizenship behaviour* was negatively related to *turnover intention*. A meta-analysis by McEvoy and Cascio (1987) also shows a negative correlation between performance and turnover.

2.4.8.2.4.2 Job Satisfaction

Performance leads to rewards and rewards, when evaluated as equitably awarded (Porter et al., 2003), leads to satisfaction and hence employees feel satisfied when they receive outcomes that are valued and when they feel they have been treated fairly (Steers & Porter, 1983). Additionally employees might find some tasks rewarding or enjoyable in and by themselves (Van Scotter, 2000). Podsakoff and Mackenzie (1997) are of the view that *contextual performance* increases employee's *job satisfaction* by transforming the work context into a more supportive and pleasant one. High contextual performers are therefore more likely to be satisfied with their jobs. Results of a study by Van Scotter (2000) shows that employees whose *contextual performance* was higher also reported being more *satisfied* with their jobs. *Job satisfaction* in turn most likely also indirectly again fuels *contextual performance*.

2.4.8.2.4.3 Organisational Commitment

Podsakoff and Mackenzie (1997) suggest that by helping to create a psychologically more attractive work environment, contextual performers might increase employee *commitment* and improve retention. The model of Steers and Porter (1983) suggest that *organisational commitment* leads to more effective *contextual performance* for which employees would receive proportionally higher levels of rewards which in turn

would lead to increased satisfaction and higher commitment (Van Scotter, 2000). In Van Scotter (2000) hierarchical regression analyses showed that *contextual performance* explained additional variance in job satisfaction and *organisational commitment* over what was explained by *task performance*. In this study employees whose contextual performance was higher also reported being more satisfied with their jobs and more committed to the organisation.

2.4.8.2.4.4 Summary: Link between Affirmative Development Coaching and Contextual Performance

A meta-analysis study done by Li-Yan (2008) shows that managerial coaching behaviours have a positive influence on *contextual performance*. Results showed that self-awareness, enlightenment, psychological support, vocational development and role modelling all had positive influence on contextual performance. These results goes to suggest that actions by managers acting as affirmative development coaches should lead the coachee to develop perceptions about how the organisation, through its agents, care for their wellbeing. The coachee will, therefore, be more likely to engage in citizenship behaviour which, according to Bolino and Turnley (2003), has the advantage of contributing to organisational competitiveness and performance.

It is therefore hypothesised that for affirmative development coachees:

- *Contextual performance* (OCB) is negatively related to *intention to quit*;
- *Contextual Performance* (OCB) is positively related to *job satisfaction*;
- *Contextual Performance* (OCB) is positively related to affective *organisational commitment*; and
- Affirmative development coaching is positively related to *contextual performance*.

2.4.9 SUMMARY: COACHING OUTCOMES TO BE USED IN THIS STUDY

Task performance lies at the very heart of affirmative development and affirmative development coaching. Affirmative development is aimed at the development of

malleable job competency potential latent variables that Black South Africans were denied the opportunity to develop due to discriminatory apartheid policies and practices. Transferring the automated cognitive insights gained through *transfer* in the classroom is the primary challenge facing the coachee. The insights developed via affirmative development probably are still rather fragile both in terms of in depth understanding and in terms of the ability to recall the insight and to use it in subsequent problem solving. The affirmative development coach therefore needs to increases the probability that the cognitive insights gained through *transfer* in the classroom will eventually naturally be used by the coachee in job-related problem solving by deepening the initial insights and by modelling and practicing the use of the derived insights in solving job-related problem. *Task performance* is therefore one of the primary lagging latent outcome variables in an affirmative development coaching competency model.

Retention of talented affirmative development candidates that were successfully coached to high task performance is a second challenge. It makes little business sense to invest scarce organisational resources in identifying, developing, coaching, introducing and integrating disadvantaged Black South Africans if the elicited intellectual capital cannot be retained and leveraged for the benefit of the organisation that made the initial investment. *Intention to leave* must therefore also be considered one of the primary lagging latent outcome variables in an affirmative development coaching competency model.

Contextual performance is nonetheless also important because it reflects the extent to which the affirmative development candidate feels comfortable, psychologically empowered (Viswesvaran & Ones, 2000), at ease and at home in his/her new position and in the work unit/organisation. As such the display of organisational citizenship behaviour is of value in that it signals a low intention to leave. *Contextual performance* must therefore be considered a third primary lagging latent outcome variables in an affirmative development coaching competency model.

The standing that affirmative development candidates achieve on these three latent outcome variables depend on a complex nomological network of latent variables characterising the candidate and his work environment. The foregoing argument

tried to capture part of this nomological net in the hypotheses that were derived. The hypothesised structural linkages between the various latent outcome variables that were theorised to play a pivotal role in determining the performance (comprising *task performance*, *contextual performance* and *intention to leave*) of the affirmative development candidate are depicted in Figure 2.1.

The challenge facing the affirmative development coach is to affect the three primary lagging latent outcome variables in an affirmative development coaching competency model through the structurally inter-related network of leading outcome latent variables. These coachee competency potential latent variables are not explicitly targeted by the affirmative development programme. They are in terms of this line of reasoning nonetheless required to achieve successful job performance as defined by the three primary lagging latent outcome variables. It is the task of the affirmative development coach to develop these coachee competency potential latent variables. In terms of the foregoing argument these coachee competency potential latent variables that serve as latent outcome variables for the affirmative development coach because they act as prerequisites for achieving high coachee performance (comprising high *task performance*, high *contextual performance* and low *intention to leave*) are *personal learning*, *self-efficacy*, *engagement*, and *organisational commitment*.

To influence the structurally inter-related network of leading outcome latent variables the coach needs to do specific things. The question is what the nature of the affirmative coaching competencies are through which the coach can affect the coachee competency potential latent variables that are instrumental in achieving successful affirmative development candidate job performance as defined in terms of task performance, *contextual performance* and *intention to leave*.

2.4.10 FURTHER CONSIDERATION-OUTCOMES

The following outcomes (*learning motivation, commitment to vision* and *trust in the coach*) are included after considering the content of the affirmative development coach competencies. It was later realised that these three outcomes are in a

meaningful way pre-requisites of *employee personal learning* and therefore deserved to be part of the outcomes.

2.4.10.1 Learning Motivation

Colquitt and Simmering (1998) has defined *learning motivation* as the desire on the part of trainees to learn the content of the training programme task. According to Ryman and Biersner (1975*) learning motivation* is the desire on the part of learners to learn the learning material. Motivation influences direction of the coachee attentional effort, the proportion of total coachee attentional effort directed at a task and the extent to which attentional effort toward the task is maintained over time (Van Heerden, 2013).

It seems reasonable to argue that, to achieve success at learning, an individual should in addition to the requisite cognitive abilities also have the motivation to succeed in the learning task (Burger, 2012). *Learning motivation* is therefore a pre-requisite of *employee personal learning*. Before the coachee can engage himself/herself into learning he or she needs to be motivated**.** *Learning motivation* determines the extent to which an individual directs his or her energy towards the learning task in an attempt to form structure and ultimately to *transfer* existing knowledge to the current task (Van Heerden, 2013). Even if individuals enjoy the coaching programme or learning material they will not learn very much unless they are motivated to learn, as only then will they be prepared to learn (Burger,2012). Kuyper, Vander Werf and Lubbers (2000) found *learning motivation* to be a major determinant of success at learning. In Burger (2012) it was found that the more an individual is motivated to learn, the more time that individual will spend cognitively engaged in associated learning tasks. *Learning motivation* was therefore found to serve as the force that brings an individual's intention to learn into action.

It is therefore hypothesised that *learning motivation* positively influences *employee personal learning.*

2.4.10.2 Commitment to Coach Vision

Businesses need a purpose (Avery, 2005). The purpose of a business goes beyond making a profit, to something better, a higher-level purpose (Handy, 2002). Organisations with a well-articulated vision can achieve sustained competitive advantage over those organisations lacking such a vision (Hamel & Prahalad, 1989). Leaders have a vision or a higher-order purpose that they are capable of communicating to their followers in such a way as to ensure that followers will enthusiastically commit themselves to it (Bryman,1992). The coach's role as a leader then is to empower the coachee to carry out the vision, and to structure the organisation and its culture according to the vision (Kantabutra, 2008). Organisations today want coaches who have vision. Vision can be seen as a core coaching task (Lashway, 2000 as cited in Barnett & McCormick, 2003). Effective organisations must have leaders who create and articulate a vision for the organisation. Vision refers to a cognitive image of a desired future state (Bennis & Nanus, 1985) "Vision refers to an idealised goal that the leader wants the organisation to achieve in the future" (Conger and Kanungo, 1987, p. 640). *Commitment to the coach vision* will therefore be used to refer to the strength of the coachee internalisation of and identification with the coach. It is manifested by: (a) a strong belief in and acceptance of the coach's goals and values; (b) a willingness to exert considerable effort on behalf of the coach; and (c) a strong desire to maintain the athlete coach relation (Zhang, 2004). According to Becker, Billings Eveleth and Gilbert (1996) identification with and internalisation of the goal and value of a supervisor should be used to form the bases of commitment to the supervisor.

Commitment to the vision of the coach is a pre-requisite to learning motivation. The more information the members know about the leader's vision, goals and decisions, the more likely they are to accept them and work hard to achieve them.

It is therefore hypothesised that *commitment to the vision of the coach* will positively influence *motivation to learn*.

2.4.10.3 Trust in the coach

Trust is an important element in the study of the behaviour of working man especially between the coach and the coachee at work (Rasch, 2012) because it allows the coachee to make assumptions, make decision quickly and generally operate in the world of uncertainity (Mc Evily, Perrow & Zaheer, 2003). Trust is important especially in modern organisations that puts emphasis on participative management styles and work teams (Mayer, Davis & Schoorman, 1995) and where tasks are complex and require high levels of interdependence, co-operation, information sharing and trust (Hassan & Ahmed, 2011). In such scenarios, trust is the key because it enables voluntary cooperation (Tyler, 2003) and will allow the coachee who depends on others to accomplish personal and organisational goals. In order to fully understand coaching at work, there is a need to explore the role that trust plays in the interactions between the coach and the coachee.

2.4.10.3.1 Trust/Definition

Trust is seen as faith in and loyalty to the leader (Ngodo, 2008; Nooteboom & Six, 2003). Doney, Cannon and Mullen (1998) define trust as the willingness to rely on another party and to take action in circumstances where such actions makes one vulnerable to the other party. In a similar way, Mayer et al. (1995, p. 712) define *trust* as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor (the one who trusts), irrespective of the ability to monitor or control that other party".

Trust occurs between two parties: a trustor and a trustee (one who is trusted) (Rasch, 2012; Zhang, 2004). In the case of coaching at work the interpersonal relationship will be between the trustor (coachee) and the trustee (coach). Trust is an internal psychological state. The coachee as the trustor is vulnerable to the actions of the trustee (coach). The coachee is relying on the coach to do something important failure to which the coachee may experience negative consequences (Rasch, 2012).

2.4.10.3.2 Antecedents of trust in the coach

The characteristics of the coachee play an important role in determining *trust* (Rasch). Propensity to trust is one of the characteristics which can be conceptualised in two ways: a general tendency to trust strangers across situations (Rotter, 1967; 1980), and a general belief in the goodness of human nature (Rosenberg, 1957). The characteristics of the coachee should be a determinant of trust in the coach, especially propensity to trust (Rotter, 1980). A coachee who is high in propensity to trust is believed to generally trust others more than those who are low in it (Mayer et al., 1995). Empirical evidence supports a modest relationship between propensity to trust and trust itself (r=.27; Colquitt, Scott & Lepine, 2007). In Rasch (2012) propensity to trust is moderately, positively related to trust in leadership (r=.35, p<.05).

Other determinants of trust include the characteristic of the coach (Butler, 1991) and how the coachee perceives or evaluates the coach. According to Good (1988) this is because trust is derived from the expectations of how the trustee will behave. Coach characteristics would include competence and ability which is typically characterised by knowledge and skills necessary to perform the expected behaviors Ability on the other hand connotes potential for knowledge and skill acquisition (Rasch, 2012). Comptence and ability is defined as “the ability to do for the other person what the other person needs to have done” (McKnight & Chervany, 1996, p. 34 as cited in Rasch, 2012). On the other hand Mayer et al., (1995, p. 717) defines the two concept of competence and ability as “that group of skills, competencies, and characteristics that enable a party to have influence within some specific domain” The relationship between comptence and trust has been firmly established (ρ=.67; Colquitt, et al., 2007). In Rasch (2012) trust in the direct manager is very strongly, positively related to evaluations of the direct manager competence (r=.80, p = .00). In Zhang (2004) the standardised beta weight of perceived ability (β=.173. p < .05) was positive, suggesting that perceived ability had a significant positive and unique effect on an athletes trust in the coach.

Another characteristic of the coach that influences trust in the coach is the integrity of the coach. (Mayer, et al., 1995, p. 719) defines integrity as the extent to which the

trustee adheres to a set of principles that the trustor finds acceptable. McKnight and Chervany (1996) as cited in Rasch (2012) discussed integrity in terms of honesty, which includes telling the truth and fulfilling promises, and predictability or consistency. In Rasch (2012) trust in the direct manager is very strongly, positively related to evaluations of direct manager integrity (r=.89, p =.00).

Benevolence is another characteristic of the coach. Benevolence is the extent to which a trustee is believed to want to do good to the trustor, aside from an ego-centric profit motive (Mayer, et al., 1995, p. 718). Furthermore Mayer et al., (1995) are of the view that benevolence implies some specific attachment of a trustee to the trustor and the perception of a positive orientation of the trustee toward the trustor. Trust in the direct manager is very strongly, positively related to evaluations of direct manager benevolence (r=.82, p=.00). In Zhang (2004) the coachee's perception of the coach benevolence had a positive and unique effect on the athlete's trust in the coach (β=.665. p <.01).

2.4.10.3.3 Consequences of trust in the coach

Trust has been linked to the sense of identity with the authority (Tyler & Degoey, 1996) and internalisation of the goal and vision of a supervisor (Zand, 1972). The coachee is more likely to identify with and internalise the vision and the value of the coach, and consequently, have a higher level of commitment to the coach (Zhang, 2004). Empirical evidence in Zhang (2004) shows that trust in the coach had a significant positive and unique effect on the coachee's commitment to the coach. (β=.881, p <.01).

It is therefore hypothesised that *trust in the coach* will positively influence *coachee commitment to the vision of the coach*.

2.4.10.4 Pychological Empowerment

South African organisations need to build competencies, resources and strategies to respond proactively to the economic challenges in the post-apartheid era. This

according to Stander and Rothmann (2009) is possible only when employees feel psychologically empowered. According to Stander and Rothmann (2010) psychological empowerment is one important concept to consider when dealing with changes at work and improving performance (Stander & Rothmann, 2009). *Psychological empowerment* increases employee's sense of personal control and motivates them to engage in work, which in turn results in positive managerial and organisational outcomes (Quinn & Spreitzer, 1997).

2.4.10.4.1 Definition

Conger and Kanungo (1988, p. 474) defined *empowerment* as the "process of enhancing feelings of self-efficacy among organisational members through the identification of conditions that foster powerlessness and through their removal by both formal organisational techniques of providing efficacy information."

Thomas and Velthouse (1990) extended Conger and Kanungo (1988) stance on empowerment by suggesting that *psychological empowerment* consists of a set of four cognitions reflecting an employee's orientation to his or her role, namely meaning, competence , self-determination, and impact. According to Mishra and Spreitzer (1998) meaning refers to a sense of purpose or personal connection to work. Empowered people feel that their work is important to them and they care about what they are doing (Quinn & Spreitzer, 1997). Competence has to do with an individual's belief that he/she possesses the necessary abilities and skills to perform work related tasks well (Mishra & Spreitzer, 1998). Without a sense of confidence in their abilities, individuals will feel inadequate, and they will likewise lack a sense of empowerment (Dewettinck & Van Ameijde as cited in Dhladhla, 2011). Self-determination refers to a sense of freedom about how individuals do their work (Mishra & Spreitzer, 1998). If employees feel that they are just following the orders from their supervisors, if they feel little autonomy, they will also lack a sense of empowerment (Dewettinck & VanAmeijde as cited in Dhladhla, 2011). Impact describes a belief that individuals can influence the system in which they are embedded (Mishra & Spreitzer, 1998).

According to Spreitzer (1995) *psychological empowerment* reflects an individual's active orientation to his or her work role and consists of cognitions that are shaped by the work environment rather than a fixed personality attribute. *Psychological empowerment* according to Kraimer, Seibert and Liden (1999) differs from the structural *concept of* empowerment in that it focuses on intrinsic motivation rather than on the managerial practices used to increase individuals' levels of power. This study will take the psychological view of coachee *psychological empowerment* which puts emphasis on individual's perceptions of their work roles.

2.4.10.4.2 Antecedents of Psychological empowerment

Studies on *psychological empowerment* identified leader behaviour to be one of the antecedents of *psychological empowerment* (Kirkman & Rosen, 1999; Seibert, Wang & Courtright, 2011). According to Miner (1992) leadership refers to an interaction between two or more members of a group that involves a structuring or restructuring of the situation and the perceptions and expectations of the members. Coaching involves interactions between the coach and the coachee just like in leadership. The behaviour of the coach plays an important role in the provision of experiences of empowerment to the coachee which contribute directly to the employees' feelings of self-worth and sense of self-determination (Deci, Connell & Ryan, 1989). In this case the coach's behaviour of empowering the coachee can be considered. When the coach who in essence is a leader exhibits encouraging coach behaviors, by for instance, delegating responsibility to a coachee, soliciting and using coachee input when making decisions, enhancing the coachee's senses of personal control, encouraging goal setting among the coachees, self-evaluation, and high coachee expectations, and trusting the coachee, the more the coachee will experience empowerment. Findings in Kirkman and Rosen (1999) showed that empowerment was significantly related to team leader behaviors (β=.37, p<.01).

2.4.10.4.3 Consequences of Psychological Empowerment

2.4.10.4.3.1 Organisational commitment

Research studies (Bartram & Casimir, 2007; Liden, Wayne & Sparrowe, 2000) have shown that *organisational commitment* is an important outcome of *psychological empowerment.* Steers (1977) found that work-related experiences and perceptions, rather than personal, job, or organisational factors, were the most powerful predictors of *organisational commitment***.** A coachee who feels more empowered is more likely to reciprocate by being more committed to the organisation (Koberg, Boss, Senjem & Goodman, 1999; Liden et al., 2000). Experiencing empowerment can result in an employee being more committed to his/her work and/or to the organisation as a whole (Bordon, Bartram & Casimir, 2007).

According to Kristof-Brown, Zimmerman and Johnson (2005) the meaning dimension of *psychological empowerment* in particular invokes affective *organisational commitment* because it assesses the fit between the demands of the work role and the individual needs and values. On the other hand (Seibert et al., 2011) feelings of autonomy, competence, and impact are likely to increase the individual's commitment to the organisation, as they will further enhance the ability of the individual to express his values and interests through his work. Findings in Seibert et al. (2011) shows that *psychological empowerment* is positively related to *organisational commitment*. In Kirkman & Rosen (1999) team empowerment was significantly related to *organisational commitment* (r=.56, p<.001).

It is therefore hypothesised that *psychological empowerment* will positively influence *organisational commitment*.

2.4.10.4.3.2 Job Satisfaction

Seibert et al. (2011) as well as Thomas and Tymon (1994) found a positive relation between *empowerment* and *job satisfaction*. Gorn and Kanungo (1980) found that the more meaningful an employee's job was, the more satisfied the employee was with his or her job. Employees find more meaning in their jobs when the scope of their activities is large (Griffin, 1991). The more the coachee feels and experience

empowerment the higher the level *of job satisfaction. Job satisfaction* is seen as the extent to which ones needs are fulfilled at work (Locke, 1976). Considering the two dimension of empowerment namely meaning and self determination in relation to *job satisfaction* it is said that they allow an employee to fufill important needs for growth through the experience of autonomy, competence and self control at work (Deci & Ryan, 1985). Additionally Seibert et al. (2011) argue that an employee sense of competence and impact augment the extent to which one's work serves to fulfil innate needs hence a coachee who is psychologically empowered is likely to experience more intrinsic need fulfilment through work and will likely experience higher levels of *job satisfaction*. In Kirkman & Rosen (1999) team empowerment was significantly related to *job satisfaction* ($r = .48$, $p < .001$).

It is therefore hypothesised that *psychological empowerment* will positively influence *job satisfaction*.

2.4.10.4.3.3 Turnover Intentions

A coachee who views psychologically empowering work as a valuable resource provided by the organisation is likely to feel obliged to reciprocate such a beneficial work arrangement with increased loyalty to the organisation and continued employment (Blau, 1964). In Seibert et al. (2011*) psychological empowerment* was negatively related to *turnover intentions*. The relationship was statistically significant ($p < .05$).

It is therefore hypothesised that *psychological empowerment* will negatively influence *intention to quit*.

2.4.10.4.3.4 Task Performance

Psychologically empowered employees develop feelings of competence and impact hence increased effort and willingness when performing work related tasks (Seibert et al., 2011). Empirical research (Bandura & Locke, 2003; Stajkovic & Luthans, 1998) has shown that competence and impact on beliefs increase performance by

increasing task effort and persistence. In addition Fried & Ferris (1987) as well as Humphrey Nahrgang & Morgeson (2007) shows that the two dimension of *psychological empowerment* namely meaning and determination have a small but statistically significant relationship with job performance. Spreitzer (2008) argues that employees that are psychologically empowered usually anticipate problems and will act independently in risky situations, will exert influence over goals and operational procedures so as to produce high quality outcomes. It is expected *that psychological empowerment* would positively be associated with *task performance*.

It is therefore hypothesised that *psychological empowerement* will positively influence *task performance*.

2.4.10.4.3.5 Contextual performance

A coachee who feels a sense of empowerment is more likely to take an active orientation towards his work and perform above and beyond the call of duty (Spreitzer, 2008). Seibert et al. (2011) believe that meaningful work over which one has individual discretion is likely to lead to *organisational citizenship behaviors* because it fosters a sense of identification and involvement in the overall workplace, not just one's defined work role. Bandura (1997) on the other hand is of the view that competence and impact are likely to further encourage *organisational citizenship behaviours* because the employee will feel capable of achieving positive outcomes in her work unit if she tries (Bandura, 1997).

It is therefore hypothesised that *psychological empowerem*ent will positively influence *organisational citizenship behaviour*.

2.5 AFFIRMATIVE DEVELOPMENT COACH COMPETENCIES

Although the ultimate outcome of coaching is the performance, effectiveness and wellbeing of a particular coachee this can only be achieved through specific behavioural actions of the coach. The affirmative development candidate under coaching is appointed in a job that exists to achieve specific objectives. The superior

of the affirmative development candidate who acts as managerial/supervisory coache aims to achieve these objectives through specific coaching behaviours. The objectives set for the affirmative development candidate reflect desired target levels of performance. Coaching outcomes refer to conditions or states required for achieving the desired target levels. Specific coaching behaviours (competencies) are required to achieve these outcomes.

2.5.1 DEFINITION OF COMPETENCIES

Quite a bit of semantic confusion seems to exist in the literature regarding the definition of competencies and competency modelling. Essentially two schools of thought seem to exist. Competencies are on the one hand defined as person characteristics that determine performance. Performance is here seemingly interpreted in terms of desired behaviours. Competencies are on the other hand defined as behaviours that determine performance. In this case performance is seemingly interpreted in terms of the outcomes for which the job exists. Competencies are sets of behaviour that are instrumental in the delivery of desired results or outcomes (http://www.shl.com). Competencies are sets of behaviour arising from underlying aspects of the individual which are determinants of job success (Spangenberg as cited in Theron, 2012). For the purpose of this research the definition of Theron (2012) as shown below will be used.

> Competencies are the abstract representations of bundles of related observable behaviour,driven by a nomological network of [unknown] constructs [competency potential, situational characteristics and competency potential*situation characteristics latent interaction effects], which, when exhibited on a job, would constitute high job performance and would [probably, depending on situational constraints/opportunities] lead to job success defined in terms of output/the objectives for which the job exists.

2.5.2 REVIEW OF GENERIC MODELS OF MANAGERIAL COACHING BEHAVIOURS

2.5.2.1 Ellinger and Bostrom

Ellinger and Bostrom (1999) used the critical incident technique to identify the performance dimensions for managers acting as coaches in four organisations. This approach was taken so as to reveal the behavioural dimensions specific to the job of a coach at work. Although Ellinger and Bostrom (1999) did not interview managers serving as coaches for affirmative development candidates the assumption is that the results of their study hold relevance for the affirmative development coaching as well. According to Ellinger, Hamlin and Beattie (2007) the critical incident technique is a systematic and sequential method for collecting concrete examples of past behavioural episodes/incidents that at the time are considered to be critical. They identified 13 coaching behaviour sets or coaching competencies depicted in two competency clusters namely empowering and facilitating behaviours. The two clusters can be interpreted as two higher-order coaching competencies.

Table.2.2

Clusters of coaching behaviour sets

Empowering cluster
Question framing to encourage employees to think through issues
Being a resource- removing obstacles.
Transferring ownership to employees
Holding back- not providing the answers
Facilitating cluster
Providing feedback to employees
Soliciting feedback from employees
Working it out together-talking it through
Creating and promoting a learning environment
Setting and communicating expectations-fitting into the big picture
Stepping into other to shift perspectives
Broadening employees perspectives-getting them to see things differently.
Using analogies, scenarios and examples
Engaging others to facilitate learning

Ellinger and Bostrom (1999)

Ellinger and Bostrom (1999) brought in the empowering cluster because managers and supervisors acting as coaches in the work places should attempt to facilitate employee *personal learning* using the empowerment paradigm instead of exercising

considerable control over their employees because of the positions and authority/ power they possess.

The empowering cluster comprises four coaching behaviours. The first competency is *question framing* to encourage employees to think through issues. This competency allows managers/supervisors to encourage their subordinates to think through solutions instead of always relying on their mangers for solutions. This has a positive effect on employee self-efficacy which in turn has an impact on task performance. The more independent and confidence the worker is the more the improvement in task performance. In order to achieve this, the managers will have to learn techniques on asking questions that are not provokative and judgemental but that nonetheless provoke reflective though in the coachee. This competency is in line with the views of Orth, Wilkinson and Benfari (1987) that contend that coaches need to possess interviewing skills in which they ask open-ended, closed and reflective questions to employees to encourage the employees to think. The second coaching competency under the empowering cluster is *being a resource* to the coachee. According to the managers interviewed providing information, materials and other resources to the coachee was key to ensuring success as a coach because doing so would facilitate learning by leading to the growth and development of the coachee. The third competency is *transferring ownership* to the coachee. In terms of this competency the coach wants the coachee to become accountable by helping him/her but not taking responsibility for their work and decisions. The final coaching competency under this cluster is *holding back and not providing the answers*. This is done to foster the spirit of exploring for work-related solutions with minimal help from the supervisor. The empowering cluster is focused on giving power and authority to employees.

The facilitating behaviour set is oriented towards offering guidance, understanding and support to employees so as to foster learning and development. The study done by Ellinger and Bostrom (1999) lists *providing feedback* to coachee as one of the coaching competencies in organisations. They suggested that the coach can provide observational, reflective and third-party feedback. In observation feedback

the coach observes the behaviours of employees at work and may provide feedback in terms of performance reviews concerning strengths and weaknesses. In reflective feedback the coach helps in recounting what transpired by “holding the mirror” so as to enable the coachee make his/her own assessment and see how his/her behaviours impacts on others in the organisation. Third party feedback involves obtaining feedback from others other than the coachee such as clients concerning performance similar to the 360 degrees approach to performance appraisal. Not only should the coach be providing feedback to the coachee but the coach also needs to *solicit feedback* from the coachee. In the context of coaching, obtaining this latter feedback is very important because it will provide the coach with information on how the coachee is coping, whether the coachee is comfortable with his or her work or is having difficulties and what kind of interventions should be used to remedy the situation.

The third coaching competency under the facilitating cluster is the *working it out together –talking it through* competency. Coaches are expected to engage in conversations with the coachee in the hope of discussing work-related problems in an honest and open way. This in turn should lead to working through solutions together. This behaviour is important because relationships and communications are becoming increasingly important within organisations.

The managers interviewed in this study also indicated *creating and promoting a learning environment* as one of the important competencies for coaching. The managers reported that this competency constitutes attempts to foster learning opportunities to the coachee by allowing them to participate in work activities. The managers also indicated *setting and communicating expectations-fitting into the big picture* as yet another important coaching competency. The coach need to communicate expectations and objectives and their importance so that the coachee can understand why the objectives are important and how his/her efforts impact on the organisation (Ellinger & Bostrom, 1999). Explaining how the coachee fit into the big picture creates a sense of belonging among employees.

In order to help the coachee perceive and analyse things from another person's mental frame or perspective the coach need to use the coaching competency that Ellinger and Bostrom (1999) refer to as *stepping into other to shift perspectives*. In order to facilitate learning the coach can act as an audience to the coachee so as create different perspectives. The seventh identified coaching competency was *broadening employee's perspectives so that they can see things differently*. In the study coaches tried to make the employees work in other departments, so that they are exposed to different people and ways of doing things.

The last two coaching competencies are using *analogies, scenarios and examples* as well as *engaging others to facilitate learning*. According to Ellinger and Bostrom (1999) using analogies, scenarios and examples represented coaches' attempts to personalise their coaching interventions with their coachees. Coaches also need to seek for assistance by engaging others from either within or outside of the organisation to facilitate learning behaviour especially if they feel that they have exhausted all avenues when it comes to coaching their subordinates.

2.5.2.2 Beattie

Beattie (2002) conducted a study also using the critical incident technique and came up with categories of managerial coaching/facilitator behaviours/competencies. From sixty informants including senior line managers, first line managers and other people she obtained a range of critical incidents that according to Hamilin, Ellinger and Beattie (2006) served as examples of effective coaching behaviours that facilitated learning. The study identified nine behavioural categories as shown below in Table 2.3.

Table 2.3

Categories of managerial coaching behaviour

Caring-support, encouragement, approachable, reassurance, commitment/involvement, empathy
Informing-sharing knowledge
Being a professional-role model, standard-setting, planning and preparation
Advising-instruction, coaching, guidance, counselling
Assessing-feedback and recognition, identifying development needs
Thinking-reflective or prospective thinking, clarification
Empowering-delegation, trust
Developing others-developing developers
Challenging-challenging

(Hamlin, Ellinger & Beattie, 2006)

Beattie (2002) says that *caring* involves providing support to coachees, inspiring and instilling confidence. The manager acting as a coach must be approachable to the coachee, must be committed to the coaching relationship and should be understanding. In the study the managers involved in the study indicated that for one acting as a coach at work to be successful he or she will need to *share work-related information*. Successful transmission of knowledge will enable the coachee to possess the necessary information that will be of help in executing tasks at work (task performance).

The third identified behaviour by Beattie is *being professional, standard-setting, planning and preparation*. For the coach to be effective he or she needs to be a role model to the employees by behaving in ways that the coachee will want to emulate. The coach also needs to set a standard by encouraging acceptable levels of performance (Hamlin et al., 2006). This is achieved by *acting as a professional role model*. *Advising* was another identified coaching behaviour. This behaviour involves counselling, coaching in terms of discussions and guided activities as well as guidance in terms of giving advice.

Corroborating the results obtained in the study conducted by Ellinger and Bostrum (1999), Beattie (as cited in Hamlin et al., 2006) also identified *assessment and feedback* as a very important coaching behaviour because it helps when dealing with

coachee developmental needs. Additionally Beattie (2004) also identified *thinking and reflection* which involves taking time to consider what happened in the past which in a way is similar to question framing to encourage employees to think through issues as earlier seen in the study by Ellinger and Bostrum (1999).

The last three coaching behaviours are *empowering*, *developing others* as well as *challenging*. Empowering involves delegating responsibilities and duties to others as well as developing confidence in someone (trust). The coach needs to take steps towards developing the coachee and must make sure that the articulated vision and activities involved are challenging.

2.5.2.3 Hamlin

Hamlin's (2004) model is not explicitly aimed at coaching *per se*. It is essentially a management and leadership model. It can, however, be argued that the coach essentially serves as a leader to the coachee. Generic leadership models can therefore by implication shed light on the behaviours that effective coaches have to perform. Hamlin's (2004) generic model was derived from several comparative analyses of criteria of managerial and leadership effectiveness. Hamlin also used the critical incident technique (CIT) to obtain examples of observed effective and ineffective manager and managerial leader behaviours. Hamlin's (2004) generic model comprises six positive criteria (see Table 2.4) measured by forty-eight behavioural items indicative of effective management and leadership plus five negative criteria (see Table 2.5 measured by forty-nine behavioural items indicative of ineffective management and leadership.

Table 2.4

Behavioural categories of managerial and leadership effectiveness

Effective organisation and planning/proactive management
Participative and supportive leadership/proactive team leadership
Empowerment and delegation
Genuine concern for people/looks after the interests and development needs of staff
Open and personal management approach/inclusive decision making
Communicates and consults widely/keeps people informed

Table 2.5

Behavioural categories of managerial and leadership ineffectiveness

Shows lack of consideration or concern for staff/ineffective autocratic or dictatorial style of management.
Uncaring,self-serving management/undermining depriving and intimidating behaviour.
Tolerance of poor performance and low standards/ignoring and avoidance.
Abdicating roles and responsibilities
Resistant to new ideas and change/negative approach.

The *effective organisation and planning/proactive management* dimension involves being organised, well prepared for situations, thinking ahead of time and making sure things are done in good time. According to Hamlin, Ellinger and Beattie (2006) the manager as coach should do the necessary ground work research and gather all the facts, produce detailed plans and procedures; be well prepared for meetings and must make sure that the coachee is well prepared and willing to follow these procedures. Additionally the coach is expected to take initiative in resolving problems as well as being proactive in confronting difficult/sensitive issues. The second behaviour criterion requires the coach/manager to be *supportive of employees*, to respond immediately to requests for help and also to offer personal support to the coachee when confronted with difficult and stressful situations. *Empowerment* on the other hand means encouraging coachees to take on new responsibilities, to give them the freedom to make their own decisions without close supervision and also to encourage the coachees to run their own units.

The last three dimensions are *genuine concern for people*, *open and personal management approach* as well as *communicates and consults widely*. *Genuine*

concern involves responding quickly and appropriately to problems experienced by coachees, allocating work fairly as well as recognising, nurturing and developing the abilities and potential of employees (Hamlin et al., 2006). *Open and personal management approach* refers to the manager/coach's ability to actively listen to the views and opinions of coachees and also to encourage coachees to be involved in planning, decision making and problem solving. Lastly *communicates and consults widely* refers to the coach's ability to consult and discuss change of plans with coachees and to proactively seek ideas from coachees. This dimension also refers to the ability of the coach to frequently communicate with the coachees so as to keep them informed.

2.5.2.4 Spangenberg and Theron

Spangenberg and Theron's (2004; 2011a) model is also not explicitly aimed at coaching *per se*. It is a leadership model. This study argues that the coach essentially serves as a leader to the coachee. Sufficiently comprehensive leadership models can therefore by implication shed light on the behaviours that effective coaches have to perform. Spangenberg and Theron (2011a) developed a leadership behaviour inventory called the LbI-2 in order to measure how effectively leaders are in leading people, driving change and effectively managing work unit performance. A coach is in essence a leader whose aim is to empower the coachee so that they can realise their full potential. A successful leader is one that succeeds in empowering his/her followers to such a degree that he/she essentially becomes redundant (Conger & Kanungo, 1998). The same principle applies to coaching. The coach should eventually be declared redundant because at the end the coachee should be in a position to independently work effectively because he or she would possess the required job competency potential required to succeed in the job. The coaching leadership link is hypothesised by Evered and Selman (1989). Hamlin et al. (2006) found similarity between managerial and leadership effectiveness. According to Kim and Yukl (as cited in Hagen, 2010) a manager must exhibit coaching behaviours in order to be viewed as successful in terms of their leadership skills. The LBI-2 identified 20 competencies which are shown in Table 2.6 below.

Table 2.6.

LBI-2- 20 leadership competencies

Monitoring the external environment	Identifies and interprets external developments that may affect unit performance. Understand the business and positioning of the organisation.
Monitoring the internal environment	Interprets internal dynamics and identifies weaknesses that may affect unit performance
Developing a challenging Vision	Develops a vision that gives people a sense of purpose, is customer focused and advanced
Conceptualising strategy	Builds strategies based on thorough problem analysis and broad-based fact-finding. Considers consequences of decisions.
Developing performance plans	Ensure that the employee and sectional/ departmental goals and plans support unit strategy and that the employees know what is expected of them.
Leader self-discovery, reflection and self awareness	Has good insight into his/her own capabilities, weakness and behaviour and manages him/herself well.
coach personal growth and development	Identifies challenging opportunities for self-development and is committed to continuous learning. Is willing to try new ways of doing things.
Empowering the followers	Facilitates the learning and personal growth of followers by building out and utilising their skills in a hassle free learning oriented work environment
Optimising processes and structures	Adapts production and people structures, processes and systems to support implementation of strategy in a changing environment.
Articulating the vision	Articulates the vision for the future that provides direction, excites the follower and inspires commitment in the follower
Inspiring and motivating the follower	Raises the aspirations, confidence and motivation of the follower. Conveys important information convincingly.
Building trust and demonstrating integrity	Builds trust in the unit, assures agreed upon values are adhered to, considers ethical implications of decisions, and deals honestly with all stake holders.
Demonstrating decisiveness and hardiness	Acts decisively and makes tough decisions. Performs effectively under stress and reacts positively to change and uncertainty.
Acting entrepreneurial	Develops new ideas, seises opportunities, and

	initiates projects for the benefit of the unit and the organisation.
Showing concern for the others	Shows understanding and concern for the aspirations, needs and feelings of others.
Displaying sound interpersonal skills	Effectively handles interpersonal relations. Proactively solves conflicts
Facilitating inter-departmental co-ordination	Facilitates inter-departmental co-ordination and helps people to see the wider picture.
Influencing across external boundaries	Builds the image of the department or organisation and practices socially responsible citizenship behaviour.
Reviewing performance	Provides followers with feedback about unit performance as well as with specific feedback about their own performance.
Acknowledging and celebrating performance	Acknowledges and celebrate positive coachee behaviour or success.

(Spangenberg & Theron, 2011a)

2.5.3 COMPARISON OF EFFECTIVE COACHING BEHAVIOURS (COMPETENCIES) MODELS AND THE DEVELOPMENT OF A MODEL FOR MANAGERS/SUPERVISORS ACTING AS AFFIRMATIVE DEVELOPMENT COACHES

Table 2.7 provides a summary and comparison of coaching competencies proposed by the researchers as discussed above in paragraph 2.5.2.

Table 2.7

Comparisons of coaching behaviours for managers/supervisors acting as affirmative development coaches.

Behavioral Dimension	Model listing dimension
Caring-support	Beattie
Stepping into others to shift perspective	Ellinger and Bostrom
Genuine concern for others	Hamlin
Leading with compassion-showing concern for others/displaying sound interpersonal skills	Spangenberg & Theron
Assessing- feedback and recognition	Beattie
Providing/soliciting feedback from employees	Ellinger and Bostrom
Participative and supportive leadership	

Reviewing and rewarding performance/ acknowledging & celebrating performance	Hamlin Spangenberg & Theron
Informing-sharing knowledge	Beatties
Being a resource- removing obstacles	Ellinger and Bostrom
Effective organisation and planning	Hamlin
Sharing the vision and inspiring followers/ monitoring the external& internal environment	Spangenberg & Theron
Empowering,delegation,trust	Beattie
Transferring ownership to employees	Ellinger and Bostrom
Empowerment and delegation	Hamlin
Empowering the followers/ Building trust	Spangenberg & Theron
Thinking-reflective thinking	Beattie
Question framing-encourage employees to think through issues	Ellinger and Bostrom
Empowerment	Hamlin
Empowering the followers	Spangenberg & Theron
Setting and communicating expectations	Ellinger and Bostrom
Being professional-standard setting(level of Performance	Beattie
Effective organisation and planning	
Articulating the vision/developing performance plans	Hamlin Spangenberg & Theron
Creating and promoting a learning environment	Ellinger and Bostrom
Advising-instruction, coaching, guidance, counselling	
Participative & supportive leadership-provides active support and guidance to staff	Beattie
Developing performance plans	Hamlin Spangenberg & Theron
Challenging-challenging by stimulating people To stretch themselves	Beattie
Developing a challenging vision	Spangenberg & Theron
Conceptualising strategy	
Coach self discovery,reflection and self awareness	
Coach personal growth and development	Spangenberg & Theron
Demonstrating decisiveness and hardiness	
Acting entrepreneurial	Spangenberg & Theron
Facilitating interdepartmental co-ordination	
Influencing across external boundaries	
Optimising process and structures	
	Spangenberg & Theron

This study will adapt and make use of the majority of the competencies of the LBI-2. Twelve of the LBI-2 dimensions compare well with those in the models of Beattie (2002a, 2002b, 2004), Ellinger and Bostrom (1999) and Hamlin (2004). An additional five of the LBI-2 competencies not corresponding to coaching competencies identified in the models of Beattie (2002, 2004) and Ellinger and Bostrom (1999), however, also have relevance for coaching (*Conceptualising strategy*, *Coach self discovery, reflection and self awareness, Coach personal growth and development*, *Demostrating decisiveness and hardiness & Acting entrepreneurial*) and are therefore also included in the proposed affirmative development coaching competency framework (Spangenberg & Theron, 2011a). Three of the LBI-2 dimensions are not regarded as relevant to coaching (Facilitating interdepartmental co-ordination, Influencing across external boundaries and Optimising process and structures) because they are typical of leader competencies in terms of authority and may at times be beyond the coaches reach in terms of authority within an organisation set up.

The LBI-2 provides an assessment of the capabilities needed by leaders and managers to implement major change while sustaining unit performance in the South African context. The intention is to base the Chikampa Coaching Competency questionnaire on a subset of the LBI-2 dimensions to thereby obtain an assessment of the capabilities needed by affirmative development coaches to affect major change in affirmative development candidates that will enhance the individual work performance of the candidates while sustaining unit performance. The process of coaching for change and performance begins with monitoring and understanding the nature of the organisational unit environment in which the affirmative development candidate will have to work, developing a challenging vision for the coachee, empowering the coachee to realise the vision, creating processes and structures to pursue the vision, providing formative feedback, showing concern and caring right through to reviewing and rewarding performance (Spangenberg & Theron, 2011a).

The seventeen coaching competencies that are included in the proposed coaching competency framework[6] are shown and defined in Table 2.8

Table 2.8.

Proposed coaching competency framework

Monitoring the external environment	Identifies and interprets external developments that may affect coachee performance. Understand the business and positioning of the organisation.
Monitoring the internal environment	Interprets internal dynamics and identifies weaknesses that may affect coachee performance
Developing a challenging coahee Vision	Develops a vision that gives the coachee a sense of purpose, is coachee focused and advanced
Conceptualising strategy	Builds strategies based on thorough problem analysis and broad-based fact-finding. Considers consequences of decisions.
Developing coachee performance plans	Ensure that the coachee goals and plans support overall strategy and that the coachee's know what is expected of them.
Coach self-discovery, reflection and self awareness	Has good insight into his/her own capabilities, weakness and behaviour and manages him/herself well.
Coach personal growth and development	Identifies challenging opportunities for self-development and is committed to continuous learning. Is willing to try new ways of doing things.
Empowering the coachee	Facilitates the learning and personal growth of the coachee by building out and utilising their skills in a hassle free learning oriented work environment
Articulating the vision to the coachee	Articulates the vision for the future that provides direction, excites the coachee and inspires commitment in the coachee
Inspiring and motivating the coachee	Raises the aspirations, confidence and motivation of the coachee. Conveys important information convincingly.
Building trust and demonstrating integrity	Builds trust in the coachee, assures agreed upon values are adhered to, considers ethical implications of decisions, and deals honestly with all stake holders.
Demonstrating decisiveness and hardiness	Acts decisively and makes tough decisions. Performs effectively under stress and reacts positively to change and uncertainty.
Acting entrepreneurial	Develops new ideas, seizes opportunities, and initiates projects for the benefit of the coachee and the organisation.
Showing concern for the coachee	Shows understanding and concern for the

[6] The term coaching competency framework is used to refer to the list of coaching competencies that warrants inclusion in the affirmative coaching competency model. The competency framework therefore differs from the competency model in that it refers only to the competencies (i.e., it excludes the outcome latent variables and the competency potential latent variables) and in that it does not contain any structural relations between the competencies.

	aspirations, needs and feelings of the coachee
Displaying sound interpersonal skills	Effectively handles interpersonal relations. Proactively solves conflicts
Reviewing performance	Provides coachee with feedback about performance as well as with specific feedback about their own performance.
Acknowledging and celebrating performance	Acknowledges and celebrate positive coachee behaviour or success.

2.5.4 AFFIRMATIVE DEVELOPMENT COACHING COMPETENCIES

The appropriateness of the proposed coaching competencies needs to be verified. The appropriateness of each of the latent performance dimensions listed in Table 2.8 needs to be considered. The critical question is whether a theoretical rationale can be established to justify the inclusion of the competency in the proposed competency framework. Why should each of the proposed competencies be utilised when the performance of an affirmative development coach is evaluated? A convincing theoretical rationale should exist to warrant the inclusion of competency in the proposed framework. The instrumentality of each affirmative development coaching competency in achieving desired outcomes will be considered in the development of such a theoretical rational. In principle it should, however, be acknowledged that affirmative development coaching competency could have intrinsic value in its own right that justifies its inclusion in the conceptualisation of the coach performance construct without necessarily resulting in any high-valence coaching outcome.

The question should, however, also be considered whether the proposed affirmative development coaching competency framework suffers from criterion deficiency in as far it fails to reflect coach behaviours that are instrumental in achieving desired coaching outcomes.

2.5.4.1. Monitoring the External Environment

Organisations are seen as open systems that engage in transactions with their environments and as such they need to scan and assess the environment for

subsequent matching of employee's capabilities and opportunities. According to Bourgeois (1980) the concepts of strategy and environment are integrated in that primary strategy concerns opportunities in the general environment and secondary strategy involves navigating within a task environment.

According to Spangenberg and Theron (2011a) organisations and organisational units are to a greater or lesser extent extent affected by developments in the external environment. The more complex and dynamic the environment becomes the more the leader acting as an affirmative development coach needs to keep in touch with these developments. The manager acting as a coach must make a comprehensive analysis of available resources, opportunities constraints that may have a material impact on the coachee's performance. The resultant understanding and appreciation of relevant developments in the external environment allows the coach to create a compelling but appropriate vision and strategy that would create and sustain competitive advantage for the coachee. Without a sound understanding of relevant developments in the external environment, the affirmative development manager acting as a coach may find it difficult to create a compelling vision that is appropriate given the prevailing and future environmental conditions and therefore would create and sustain competitive advantage for the coachee. Inadequate environmental scanning or misinterpretation of environmental trends may have a negative effect on the coachee either in terms of lost opportunities or inappropriate, below-standard performance (Spangenberg & Theron, 2011a).

Monitoring involves scanning the external environment for information or data. Scanning is concerned with data collection which needs to be interpreted for it to have meaning. According to Daft and Weick (1984) the manager acting as a coach will have to translate data into knowledge and understanding about the environment which need to be inculcated into the coachee. The acquired knowledge and understanding must be translated into action. Learning involves a new response or action based on the interpretation (Argyris & Schon, 1978). Learning is the process of putting cognitive theories into action (Argyris & Schon, 1978).

It is hypothesised that for affirmative development coaches:

- The coach's level of competence on the m*onitoring the external environmen*t competency positively influences the coachee's *personal learning*.

2.5.4.2 Monitoring the Internal Environment

For the coach to develop a challenging yet appropriate coachee vision and effectively implement strategy to realise that vision, understanding of developments in the external environment need to be complemented by a careful analysis and insight into internal dynamics, resources and constraints characterising the organisational unit (Spangenberg & Theron, 2011a) in which the coachee will have to operate. *Monitoring the internal environment* helps to provide information for the creation of the coachee vision, facilitate in the formulation of an effective strategy to realise that vision, wise risk taking as well as building of credibility with the coachee (Spangenberg & Theron, 2011a).

Inability of the coach to monitor the internal environment may result in inadequate insight into emerging production and people dynamics of the unit which in turn may hamper the creation of a challenging coachee vision and strategy, which are critical elements in developing the coachee into a person with appropriate, relevant, difficult to copy, scarce competency potential attributes (Spangenberg & Theron, 2011a). Moreover, insufficient understanding of internal dynamics of the unit may have other negative effects as well, such as below standard individual coachee and eventually unit performance that over time may lead to possible unit morale problems (Spangenberg & Theron, 2011a).

Using the same argument as above under monitoring the external environment the same effect can also be hypothesised for *monitoring the internal environment*.

It is hypothesised that for affirmative development coaches:

- The coach's level of competence on the *monitoring the internal environment* competency positively influences the coachee's *personal learning*.

2.5.4.3 Developing a Challenging Coachee Vision

The coach need to articulate a future vision for the coachee that depicts the person the coachee will be in future and how he/she differs from the present coachee. The coachee vision describes the new coachee that should emerge from the coaching process. Affirmative development candidates cannot be mechanically tooled into employees with job competency potential. They can only be persuaded to harvest the development opportunities created by the affirmative development programme and the subsequent internship under affirmative development coaching to develop the job competency potential latent variables underpinning job performance. To harvest these development opportunities however requires that coachees should be clear on how they need to develop. Coachees need to be clear on who they need to become. So there is need to keep the vision alive in the heart and mind of the coachee as well as creating the conditions that allow the coachee to pursue a diversity of opportunities that serve the vision. If the coach lacks competence on this competency it may result in the coachee not knowing what to strive for or the direction to follow.

In Noer (2005) the triangle coaching model dimensions include challenging which is in line with Spangenberg and Theron (2011a) model. In Noer (2005) challenging is defined as stimulating the person being coached to confront obstacles, re-conceptualise issues and move forward with energy and self-reliance. One of the four behaviour components confronting entails helping the coachee face and understand issues, behaviours or perceptions that are blocking him or her. Any help to be rendered by the coach comes through developmental interaction that is aimed at enhancing learning.

According to Yukl (2010) the appeal of a vision depends on its ideological content as well as on its relevance for the challenges facing the coachee. If the vision embodies shared values and ideals of the coachee's it is more likely to elicit their commitment to the vision.

It is hypothesised that for affirmative development coaches:

- The coach's level of competence on the *developing a challenging coachee vision* competency is positively associated with the coachee's *personal learning*.
- The coach's level of competence on the *developing a challenging coachee vision* is positively associated with the coachee's *affective organisational commitment*.

2.5.4.4 Conceptualising Strategy

According to Spangenberg and Theron (2011a) a challenging vision needs to be supported by a clearly defined strategy if the vision is to be realised. To realise the coachee vision a coaching strategy is required that the coach needs to develop in collaboration with with the coachee. Strategy is like a roadmap that spells out the way forward in achieving the vision and also explains the competitive advantage for the coachee. A flawed strategy may have serious negative consequences for the coachee and his/her performance. By not clearly spelling out the way forward to achieving the coachee vision, and by not purposefully steering resource allocations and actions towards achieving the vision, coachee personal learning will be affected hence eventual performance. Inadequate understanding of the short and long term implications of strategies may affect employee morale (Spangenberg & Theron, 2011a).

It is hypothesised that for affirmative development coaches:

- The coach's level of competence on the *conceptualising strategy* competency positively influences the coachee's *personal learning*.

2.5.4.5 Developing Coachee Performance Plans

Strategy in and by itself will not realise the coachee vision. The coachee vision needs to be translated into concrete performance plans and these plans need to be executed if the coachee vision is to be achieved. In complex organisations the

coach's appeal to the coachee to follow his/her values and to be motivated to strive for the implementation of the vision is insufficient unless the coach is able to also devise and manage a comprehensive performance script to guide and direct coachee behaviour in support of the vision. The major part of the script is planning and organising. Ineffective and inadequate planning may negatively impact on the coachee's personal learning due to disruptions and lack of resources and in the longer term result in poor performance. In the absence of thorough planning and organising the danger exists that the coachee vision will not be realised. Performance plans enhances learning by the coachee in that through guidance he/she will be in the position to acquire the necessary knowledge and skills that will help in the attainment of the stipulated vision. According to D'Abate, Eddy and Tannenbaum (2003) behaviours exhibited by the coach that enables the learner (coachee) to learn include directing.

It is hypothesised that for affirmative development coaches:

- The coach's level of competence on the *developing coachee performance plans* competency positively influences the coachee's *personal learning*.

2.5.4.6 Coach Self-discovery, Reflection and Self-awareness

The coach need to improve him-/herself in ways that enhance his/her leadership ability and through that the ability to motivate the coachee to achieve the coachee vision. As a leader the coach needs to have an honest and accurate self-awareness and insight into his/her development level, so as to allow him-/herself the opportunity to focus on areas that are crucial for his/her personal wellness as well as effectiveness as a coaching leader (Spangenberg & Theron, 2011a). Lack of self-awareness and insight will deny the coach insight into feedback regarding his/her personal strengths and weaknesses which in the long run would be instrumental in helping him/her to focus on developmental areas that are cardinal for personal wellness and growth as well as success as a coach. Coach self-discovery, reflection and self-awareness have a direct influence on how the developmental interaction between the coach and the coachee unfolds. If the coach is unaware of his or her weaknesses then the learning process will be negatively affected. Coaches cannot

successfully guide their coachees unless they are capable of leading themselves first.

Li-Yan (2008) showed that managerial behaviour self-awareness enlightenment had positive influence on contextual performance as well as task performance of their subordinates.

It is hypothesised that for affirmative development coaches:

- The coach's level of competence on the self-*discovery, reflection and self-awareness* competency has a positive influence on the coachees *personal learning*.
- The coach's level of competence on the *self-discovery, reflection and self-awareness* competency has a positive influence on the coachee's *contextual performance*.
- The coach's level of competence on the self-discovery, reflection and *self-awareness* competency has a positive influence on the coaches *task performance*.

2.5.4.7 Coach Personal Growth and Development

A challenging and competitive work environment requires that the coach continually adjust and continually develops new coaching skills. The coach should apply continuous learning and development to his/her own coaching. Lack of personal growth and development in the coach may hamper the coach's growth and development as a coach. Moreover, unwillingness to undergo personal change and resistance of continuous learning may prevent the coach from utilising opportunities provided by a changing environment (Spangenberg & Theron, 2011a). Mullen (1994) defined mentoring which is used interchangeably with the term coaching as a one-to-one relationship between a less experienced (i.e. protégé) and a more experienced person (i.e., mentor), and is intended to advance the personal and professional growth of the less experienced individual. Coaching is designed to help employees address individual functional knowledge gaps and skills (Joo, 2005; Yu, 2007). Lack of personal growth and development will prevent the coach from

successfully guiding the learner because of inadequate knowledge and skills. Lack of coach personal growth and development may hinder the coachee's progress in learning and mastery of coaching skills which are essential if effective learning is to take place (Li-Yan, 2008). Managers are increasingly being asked to assume roles as mentors, trainers and coaches and to develop coaching skills so as to facilitate employee learning and development.

It is therefore hypothesised that for affirmative development coaches:

- The coach's level of competence on the *personal growth and development* competency has a positive influence on the coachee's *personal learning***.**

2.5.4.8 Empowering the Coachee

The manager acting as affirmative development coach needs to help the coachee increase his or her work related knowledge base, to develop the requisite self-efficacy and to gain sufficient role clarity on the nature of the task and contextual demands that the job imposes. These are all prerequisites to facilitate the development of necessary skills and abilities if the coachee is to be successful at performing his or her tasks. Inability to reach his/her potential coupled with a lack of motivation and dissatisfaction are but some of the consequences of not empowering the coachee effectively. To achieve the coachee vision the coachee needs to experience a state of psychological empowerment (Spreitzer, 1995). Psychological empowerment, however, cannot develop in the absence of structural empowerment. The coach needs to create a specific work environment for the coachee that according to Wagner, Cummings, Smith, Olson, Anderson and Warren (2010) provides access to opportunities within the organisation, information, resources, support, formal power and informal power. Creating such a work environment constitutes structural empowerment (Wagner et al., 2010). The Wagner et al. (2010) study found statistically significant ($p<.05$) and positive correlations between the facets of structural empowerment, which include opportunities in the organisation, information, resources and support, and psychological empowerment.

Thomas and Velthouse (1990) gave a comprehensive definition of psychological empowerment. They define empowerment as a set of four cognitions reflecting an individual's psychological orientation to his or her work role: meaning, competence, self-determination, and impact.

Meaning is the value of a work goal or purpose, judged in relation to an individual's own ideals or standards (Thomas & Velthouse as cited in Spreitzer, 1995). Meaning results in high commitment and concentration of energy (Kanter, 1983).

Competence has to do with the individual feeling competent to perform their work role (Boudrias, Gaudreau, Savoie & Alexandre, 2009), a belief in one's capability to perform activities with skill. Competence results in effort and persistence in challenging situations, coping and high goal expectations and high task performance (Locke, Frederick, Lee, & Bobko, 1984).

Self-determination is an individual's sense of having choice in initiating and regulating actions. Self-determination reflects autonomy in the initiation and continuation of work behaviours and processes; examples are making decisions about work methods, pace, and effort (Bell & Staw, 1989; Spector, 1986). Most definitions of coaching revolve around the aim of empowering the coachee to make his or her own decisions, unleashing their potential, enabling learning and improving performance. Managerial coaching is focused on sharing power and discovering actions that empower people to contribute more productively and comprehensively than traditional control based management paradigms (McLean et al., 2005, as cited in Ladyshewsky, 2009). The freedom accorded to the coachee to make his or her own decisions does not only foster the spirit of learning but also confidence on tasks. Empowered coachees feel self-efficacious they are more likely to be innovative in their work and to expect success (Amabile, 1988; Redmond, Mumford &Teach, 1993). In Boudrias et al. (2009) the path between behavioural empowerment and task efficacy was significant (.53). According to Stewart, McNulty, Quinn, Griffin & Fitzpatrick (2010) empowering workplaces provide coachees with access to information, support, resources, and opportunities to learn and grow

Impact is the degree to which an individual feels he/she can influence strategic, administrative, or operating outcomes at work (Ashforth, 1989). It is the belief that empowered coachees have, that they can have a real impact on organisational outcomes (Boudrias et al., 2009). Impact is associated with an absence of withdrawal from difficult situations and high performance (Ashforth, 1990).

It is therefore hypothesised that for affirmative development coaches:
The coach's level of competence on the *empowering the coachee* competency positively affects the coachee's *psychological empowerment*.

The coach's level of competence on the *empowering the coachee* competency positively affects the coachee's *personal learning*

The coach's level of competence on the *empowering the coachee* competency positively affects the coachee's *self-efficacy*.

The coach's level of competence on the *empowering the coachee* competency positively affects the coachee's *work engagement*.

The coach's level of competence on the *empowering the coachee* competency positively affects the coachee's *affective organisational commitment*.

The coach's level of competence on the *empowering the coachee* competency negatively affects the coachee's *intention to leave***.**

2.5.4.9 Articulating the Vision to the Coachee

The coach need to sell the vision to the coachee and should convey the idea that the vision is attainable. According to Spangenberg and Theron (2011a) by communicating the belief that the coachee vision is atainable, the coach instils in the coachee the same passion and enthusiasm that the coach has for the vision. Inability to communicate a compelling vision may have adverse consequences for the dynamics of the coach-coachee relationship and the performance of the coachee. If the vision is not properly communicated the coachee may display little

passion and enthusiasm for the coachee vision. Trust in the coach also runs the risk of declining.

A vision is a general transcendent ideal that represents shared values (Kirkpatrick & Locke, 1996). Visions are typically ambitious, defy conventional wisdom, challenge existing norms and policies, convey expectations of high performance and communicates that the leader has confidence in followers that they can achieve the vision (Awamleh & Gardner, 1999). Visionary behaviour has to pass through two stages namely creation of the vision as well as communication of the vision. The coach has to articulate and communicate to the coachee's why there is a need for the specific coachee vision and how it can be accomplished (Javidan & Waldman (2003). The coach's credibility and how well the vision is articulated should affect the coachee's buy-in and commitment to the vision. The coachee's buy-in and commitment to the vision may also result in an enhanced identification with and loyalty and emotional attachment to the coach which may spill over to the organisation because the coach is usually seen as representing the organisation.

The process of articulating the vision is an on going process that occurs during interactions between the coach and the coachee aimed at fostering role clarity and self-efficacy and promoting personal learning. It is not a once-off event.

The coachee's buy-in and commitment to the vision should determine the passion and enthusiasm with which the coachee pursues the vision. Active purposeful pursuit of the coachee vision seems to be a necessary (although not sufficient) condition to achieve personal learning. Affirmative development candidates cannot be mechanically tooled into employees with job competency potential. They can only be persuaded to harvest the development opportunities created by the affirmative development programme and the subsequent internship under affirmative development coaching to develop the job competency potential latent variables underpinning job performance. To harvest these development opportunities requires that coachees should be clear on who they need to become. To harvest these development opportunities, however, also requires that they want to become that

person. The coachee has to buy-in and commit to the coahee vision if successful personal learning is to occur.

It is therefore hypothesised that for affirmative development coaches:

The coach's level of competence on the *articulating the vision to the coachee* competency influences the coachee's *commitment* to and buy-in into the coach vision.

The coach's level of competence on the *articulating the vision to the coachee* influences the coachee's *personal learning*.

2.5.4.10 Inspiring and Motivating the Coachee

Through a combination of high expectations and expression of high confidence the coach will inspire the coachee towards outstanding performance (Spangenberg & Theron, 2011a). The inability to inspire and raise the expectations of the coachee may lead to mediocre coachee performance, lack of personal learning as well as lack of self-efficacy and motivation. Empirical studies have shown that inspirational motivation is linked to learning orientation as well as extra effort (Banerji & Krishnan, 2000; Coad & Berry, 1998). In Densten (2002) the paths between extra effort and the two dimensions of inspirational motivation namely concept-based and image-based[7] inspirational motivation were significant (.31 and .64). According to Coad and Berry (1998) a learning-oriented individual is motivated to learn to but that one's motivation to learn is affected by the leader behaviour and goals hence influencing the amount of effort applied in achieving desired outcomes.

[7] In terms of leader charm and greatness there are two types of wording. Image based wording is concrete and vivid . Image based items use words such as "encouraging talks" as well as "symbols and images". The image based words suggest that leaders create vivid ideas, visions or images in the minds of followers. Concept based wording on the other hand is abstract. Concept based items use words such as "standard", "Vision" and "Expectations". These words suggest that leaders communicate bottom line goals or standard to followers.

It is therefore hypothesised that for affirmative development coaches:

- The coach's level of competence on the *inspiring and motivating* competency positively influences the coachee's level *of learning motivation*.

2.5.4.11 Building Trust and Demonstrating Integrity

Dirks and Ferrin (2001) defined organisational trust as a psychological state providing a representation of how individuals understand their relationship with another party in situations involving high risk or vulnerability. Borrowing from Gilbert and Tang's (1998) definition of trust it can be said that trust is the coachee's feeling of confidence in the coach and a belief that the coach will be dependable and will follow through on commitments. Trust refers to the willingness to submit to the influence of the coach in his or her pursuit of the coachee vision developed by the coach. If coaching is to be effective there is need for trust between the coachee and the coach. To achieve the coachee vision the coachee need to submit to the influence of the coach. If there is lack of trust the coachee will not identify with the vision and will not submit to the influence of the coach. The coachee will, however, only submit to the influence of the coach if he/she trusts the coach. The coach need to be dependable if trust is to develop between him/her and the coachee. The coach need to demonstrate that he/she can be relied upon so as to successfully implement the vision. This coaching behaviour compares well with Beattie's managerial learning facilitative behaviour empowering-delegation and trust (Hamlin et al, 2006). Moreover trust leads to mutual learning (Janowicz & Noorderhaven, 2002 as cited in Bijlsma & Koopman, 2003). Trust is one of the most important factors that need to be present if any coaching relationship is to flourish (Joo, 2005) because it improves cooperation as a result of the effective working relationships that develops between the coach and the coachee (Massey and Kyngdon as cited in Ladyshewsky, 2009). Without trust it is difficult to promote personal learning in the coachee which eventually affects other outcomes such as engagement on the task, commitment as well as satisfaction.

It is therefore hypothesised that for affirmative development coaches:

- The coach's level of competence on the *building trust* competency positively influences coachee's level of *trust in the coach.*

2.5.4.12 Demonstrating Decisiveness and Hardiness

The manager acting as a coach need strong self-confidence because he or she has to implement a vision that differs drastically from current realities and as a result may meet strong resistance from the coachee who has an inherent tendency to oppose change and to maintain the familiar status quo (Spangenberg & Theron, 2011a). By displaying decisiveness and hardiness, combined with a strong belief in the vision the coach as a change leader will succeed in inspiring and motivating the coachee towards the vision. The coach should be mentally strong and resilient. He/she should make tough and difficulty decisions that must be executed expediently. Failure to do so will negatively affect the motivation and morale of the coachee (Spangenberg & Theron (2011a).

It is therefore hypothesised that for affirmative development coaches:

- The coach's level of competence on the *demonstrating decisiveness and hardiness* competency positively influences the coachee's degree of *buying into the vision.*

2.5.4.13 Acting Entrepreneurial

Conditions in the global business environment demand that the coach adopts entrepreneurial strategies as a path to achieving the coachee vision (Ireland, Covin & Kuratko, 2009. According to Ireland et al. (2009) coaching by managers plays an important role in improving employee entrepreneurial behaviour. By acting entrepreneurial the coach will support the implementation of the vision. The leaders risk taking and innovative behaviour may become a symbol of the coach personal investment and commitment to the vision (Spangenberg & Theron, 2011a). Through coaching the coach will positively affect the learner's cognition. The coachee will understand what it takes to perform tasks that are entrepreneurial.

It is therefore hypothesised that for affirmative development coaches:

- The coach's level of competence on the *acting entrepreneurial* competency positively influences the coachee's *personal learning*.

2.5.4.14 Showing Concern for the Coachee

According to Spangenberg and Theron (2011a) implementation of the coachee vision requires change in processes and systems which often require changes in the beliefs and values of the coachee. For the coach to succeed in instilling these values in the coachee he or she must have a trusting and caring relationship with them. In such a scenario the coachee will identify with the coach. By consistently showing caring and empathy the coach may expedite this process (Spangenberg & Theron, 2011a). Lack of understanding and concern for the needs, feelings and aspirations of the coachee may have the effects on the coachee that he/she may feel unwanted and experience feelings of not being respected. The coachee may feel disempowered and may develop negative self-efficacy beliefs which may lead to low morale and below standard performance. As shown in Table 3 showing concern for others is equivalent to caring. In Hamlin et al. (2006) caring as a managerial behaviour enhances learning. The coach must show support, instil confidence and must be approachable without which the learning process is greatly affected.

It is therefore hypothesised that for affirmative development coaches:

- The coach's level of competence on the *showing concern* competency positively influences the coachee's *personal learning.*
- The coach's level of competence on the *showing concern* competency positively influences the coachee's *self-efficacy*.

2.5.4.15 Displaying Sound Interpersonal Skills

The extent to which the coach succeeds in selling and implementing the vision will among other things depend on interpersonal skills. That is how well he or she solicits for cooperation from the coachee in the pursuit of objectives. To do so

effectively the coach must display sound interpersonal skills that allow him or her to respond to problems and challenges faced by the coachee (Spangenberg & Theron, 2011a). Lack of interpersonal skills on the part of the coach may lead to poor communication and morale. If communication and morale is hampered then the learning process is also negatively affected.

It is therefore hypothesised that for affirmative development coaches:

- The coach's level of competence on the *displaying sound interpersonal skills* positively influences the coachee's *personal learning*.

2.5.4.16 Reviewing Performance

The coach need to mould and direct the performance of the coachee in accordance with a performance script in order to implement the coachee vision (Spangenberg & Theron, 2011a). However individual performance seldom meets expectations and as such continuous informal reviews of the coachee's performance combined with periodic formal reviews needs to be done. The coach need to monitor, guide and provide corrective/formative feedback to the coachee. Inadequate monitoring of the coachee's progress will deny the coach the possibility of taking appropriate corrective action. Inadequate performance reviews will have a detrimental effect on the performance of the coachee. According to Spangenberg and Theron (2011a) inadequate performance or behavioural feedback may deny the coachee the prospect of learning from experience and the opportunity to grow. In D'Abate et al. (2003) provision of feedback or constructive criticism is regarded as a behaviour exhibited by the coach that enables the coachee to learn.

Consequences of feedback include *role clarity* and *job satisfaction*. Mukherjee and Malhotra (2006) found that feedback acted as antecedents of *role clarity*. The interaction between the coach and the coachee gives the coachee an opportunity to seek for clarification in matters that are not clear about the job. The path between feedback as an antecedent of role clarity and role clarity was statistically significant (.11; $p<.05$) though weak (Mukherjee & Malhotra, 2006). However in Whitaker et al.

(2007) a relatively strong relationship between supervisor feedback and role clarity of .50 was found.

In terms of *job satisfaction* being consequences of feedback Fried and Ferris (1987) showed that feedback is an antecedent of job satisfaction. The path between feedback and *job satisfaction* was statistically significant (.43; p<.05).

Postive feedback also acts as an antecedent of *self efficacy* (Sweetman & Luthans, 2010) and *task performance*. In Whitaker et al. (2007) a weak but statistically significant positive relationship of .09 (p<.05) between feedback and *task performance* was found.

It is therefore hypothesised that for affirmative development coaches:

- The coach's level of competence on the *reviewing performance* competency positively influences the coachee's *personal learning*.
- The coach's level of competence on the *reviewing performance* competency positively influences the coachee's *role clarity*.
- The coach's level of competence on the *reviewing performance* competency positively influences the coachee's *job satisfaction*.
- The coach's level of competence on the *reviewing performance* competency positively influences the coachee's *self-efficacy*.
- The coach's level of competence on the *reviewing performance* competency positively influences the coachee's *task performance*.

2.5.4.17 Acknowledging and Celebrating Performance

Acknowledging and celebrating performance allows the coachee to experience the intrinsic reward of achieving some measure of success in pursuing the vision (Spangenberg & Theron, 2011a). Not celebrating the coachee's achievements may result in weakening morale that may ultimately lead to low performance.

At the same time acknowledging and celebrating performance serves to build and reinforce the coachee's self-efficacy (Bandura, 1989).

It is therefore hypothesised that for affirmative development coaches:

- The coach's level of competence on the *acknowledging and celebrating performance* competency positively influences the coachee's *personal learning*.
- The coach's level of competence on the *acknowledging and celebrating performance* competency positively influences the coachee's *self-efficacy*.

The structural relationships that are hypothesised to exist between the coachee outcomes as well as the coach competencies are depicted in a form of a structural model shown in Figure 2.1 below.

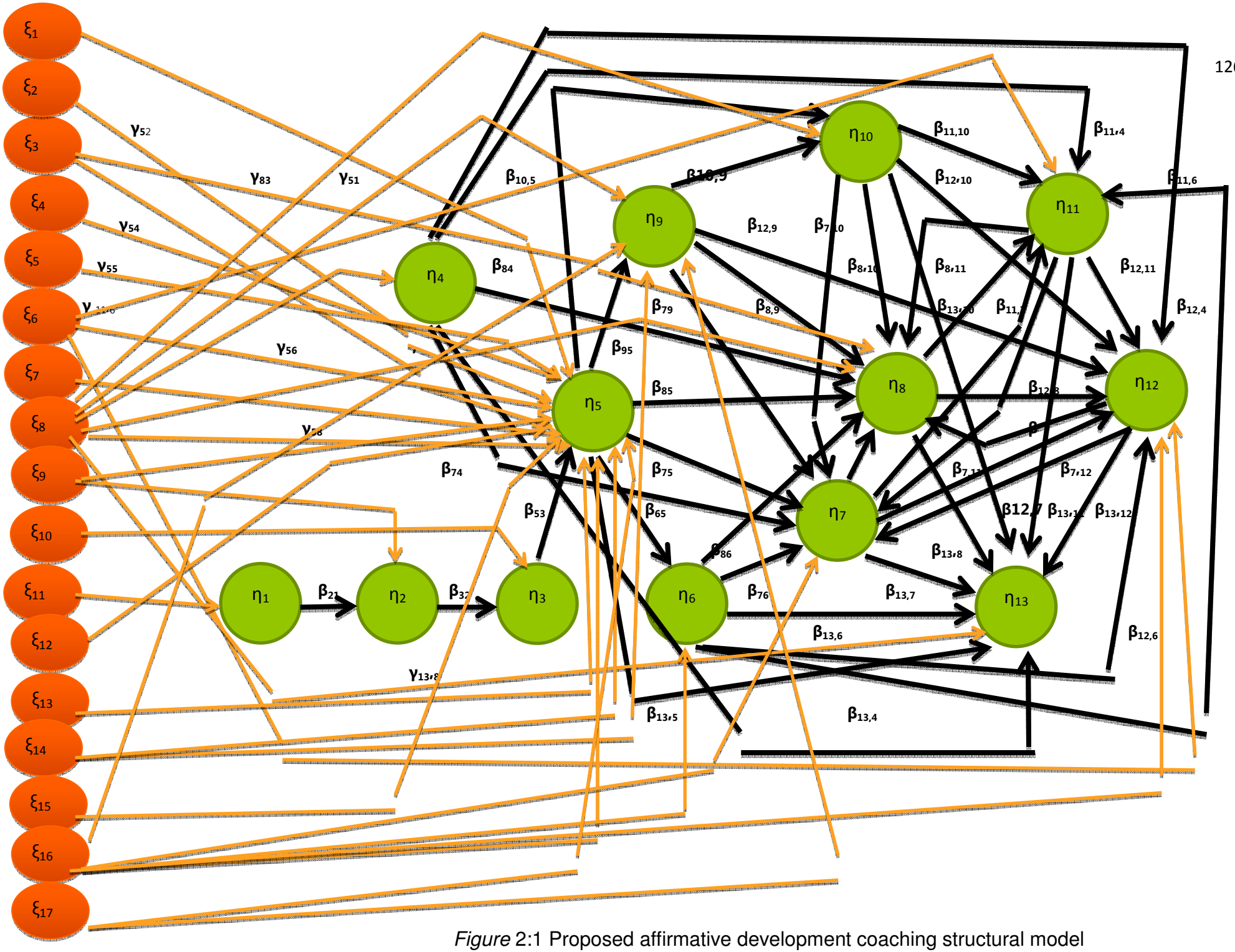

Figure 2:1 Proposed affirmative development coaching structural model

Key to understanding the structural model

COACH COMPETENCIES (RED)

ξ_1 : Monitoring external environment

ξ_2 : Monitoring internal environment

ξ_3 : Developing a challenging coachee vision

ξ_5 : Developing coachee performance plans

ξ_4 : Conceptualising strategy

ξ_6 : Coach self-discovery, reflection and self-awareness

ξ_7 : Coach personal growth and development

ξ_8 : Empowering the coachee

ξ_9 : Articulating the vision to the coachee

ξ_{10} : Inspiring & motivating the coachee

ξ_{11} : Building trust and demonstrating integrity

ξ_{12} : Demonstrating decisiveness and hardiness

ξ_{13} : Acting entrepreneurial

ξ_{14} : Showing concern for the coachee

ξ_{15} : Displaying sound interpersonal skills

ξ_{16} : Reviewing performance

ξ_{17} : Acknowledging and celebrating performance

OUTCOMES (GREEN)

η_1: Trust in the coach

η_2: Commitment to coach vision

η_3: Learning Motivation

η_4: Psychological empowerment

η_5: Employee personal learning

η_6: Role clarity

η_7 Job satisfaction

η_8: Organisational commitment

η_9: Self-efficacy

η_{10} Job(work) engagement

η_{11} Contextual performance

η_{12} Task performance

η_{13} Turnover intentions

2.5.5 AFFIRMATIVE DEVELOPMENT COACH COMPETENCIES

Paragraph 2.5.4 established a theoretical rationale to justify the inclusion of each of the proposed seventeen affirmative development coaching competencies in the proposed competency framework. The relevance of each of the proposed affirmative development coaching competencies shown in Table 2.8 has been established by presenting arguments that each competency is instrumental in achieving one or more of the outcomes for which the affirmative development coach is held accountable. The argument presented in paragraph 2.5.4 did not suggest that the proposed affirmative development coaching competency framework suffers from criterion deficiency in as far it fails to reflect coach behaviours that are instrumental in achieving desired coaching outcomes.

2.5.6 DEVELOPMENT OF THE AFFIRMATIVE DEVELOPMENT CHIKAMPA COACHING COMPETENCY QUESTIONNAIRE [CCCQ])

The definition of each performance dimension in conjunction with the original LBI item formulations were used to generate items for the Chikampa Coaching Competency Questionnaire (CCCQ]. Items were generated by identifying critical behavioural incidents associated with a high and a low standing on the latent performance dimension. The constitutive definition of each latent performance dimension was used to evaluate the content validity of each critical behavioural incident. Permission was obtained from the developers of the LBI to adapt the LBI items for the purpose of the CCCQ. The CCCQ comprises 82 items measuring seventeen affirmative development coaching competencies. The number of items per dimension ranged from four to seven.

The critical incidents were written as short, specific statements to which respondents have to respond by indicating on a 5 point rating scale the relative frequency with which the behaviour described in the incident had been displayed by the focal employee during the indicated rating period. The five scale points were anchored with the following descriptions: *rarely* (1), *once in a while* (2), *sometimes* (3), *fairly often* (4) and *very frequently* (5). Provision was also made for a *not observable*

response that was coded as 6. The latter responses were treated as user-defined missing values.

The CCCQ is intended to evaluate the competence of affirmative development coaches on an array of seventeen competencies. The instrument was developed to be used to obtain multi-rater assessments of the coaching performance of a focal manager. Since the CCCQ is aimed at assessing the coaching performance of managerial personnel the intention is to use the instrument for 360° performance evaluations. The instrument is therefore available in two forms, namely in a self-assessment form and another-assessment form. The latter form is used to obtain assessments of the focal manager from subordinates (all of which must have been exposed to coaching from the manager), peers and from a superior. The same set of items is used in both forms. The description of the behavioural denotations is provided in the first person in the self-assessment form whereas the same behavioural denotation is described in the third person in the other-assessment form.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

In this section an explanation of the research methodology used for empirically testing the research hypotheses is given. From the onset it was stated that the long-term objective of the study is to develop and test a coach manager competency structural model that reflects the impact of behaviours/competencies on coachee performance outcomes. Such a venture is important and fruitful because it will serve as a basis to be used for selecting and developing managers acting as affirmative development coaches for the disadvantaged groups in South Africa. The more immediate, short-term objective of the study was to develop and psychometrically evaluate an affirmative development coaching competency measure.

3.2 SUBSTANTIVE RESEARCH HYPOTHESES

The CCCQ was developed to measure affirmative development coaching performance so as to [a] enable the eventual development and empirical testing of a comprehensive affirmative development coaching performance structural model and [b] to offer an instrument that can provide formative feedback to affirmative development coaches. The CCCQ can, however, only be used with confidence to operationalise the seventeen latent behavioural performance dimensions in the coaching competency framework if credible evidence on the reliability and construct validity of the instrument exists. The overarching substantive research hypothesis is that the CCCQ provides a construct valid and reliable measure of affirmative development coaching performance as defined by the instrument, amongst South African managers.

The overarching substantive research hypothesis can be dissected into the following specific operational hypotheses:

- The measurement model implied by the scoring key and the design intention of the CCCQ can closely reproduce the covariances observed between the items comprising each of the sub-scales,
- The factor loadings of the items on their designated latent behavioural performance dimensions are statistically significant ($p<.05$) and large[8] ($\lambda_{ij} \geq .50$),
- The measurement error variance associated with each item is small
- The latent coaching competencies explain large proportions of the variance in the items that represent them, and
- The latent coaching competencies correlate low to moderate with each other;
- The 95% confidence intervals for the latent coaching competencies correlations do not contain 1;
- The average variance extracted (AVE) by the items of each latent coaching competencies is larger than the squared correlations between the latent coaching competencies.

3.3 RESEARCH DESIGN

This study aimed at establishing the relationship between various latent affirmative development coaching competencies and the CCCQ items written to reflect these coaching competencies. The design intention of the CCCQ is reflected in the CCCQ measurement model. The CCCQ measurement model is specified as a measurement equation in Equation 1.

$$\mathbf{X} = \Lambda\xi + \delta \quad \text{----------(1)}$$

Where:

- **X** is a 1x82 column vector of CCCQ item scores[9]

[8] The magnitude of the factor loadings is interpreted in the completely standardized solution. A factor loading will be considered sufficient large if the latent variable explains at least 25% of the variance in the item.

[9] Equation 1 assumes that the measurement model is fitted using the individual CCCQ items as indicator variables

- Λ is a 82x17 matrix of factor loading describing the slope of the regression of X_i on ξ_j.
- ξ is a 1x17 column vector of latent coaching competencies.
- δ is a 1x82 column vector of measurement error terms.

In terms of the design intention of the CCCQ the measurement error terms are assumed to be uncorrelated whereas the seventeen latent coaching competencies are assumed to correlate less than unity. The full specification of the CCCQ measurement is therefore given by Equation 1 and the claim that:

- the variance-covariance matrix Θ_δ is a 82x82 diagonal matrix in which only the diagonal measurement error variance terms are freed to be estimated but all off-diagonal terms are fixed to zero; and that
- the variance-covariance matrix Φ is a 17x17 symmetric matrix in which all lower off-diagonal covariance terms are freed to be estimated and the main diagonal variance terms are fixed to unity.

The various measurement model hypotheses proposed by the CCCQ measurement model with regards to Λ, Ψ and Φ as expressed by 1 have to be empirically investigated. To empirically investigate the overarching substantive hypothesis and the array of specific operational research hypotheses derived from it, a plan is required that will provide unambiguous empirical evidence in terms of which to evaluate the operational hypotheses. According to (Kerlinger, 1973; Kerlinger & Lee, 2000) a research design is such a plan which is put in place to provide empirical evidence that can be interpreted unambiguously for or against the operational hypothesis in an attempt to answer the research question. It actually aims to procure answers to the research question and also to control variance.

This study made use of an *ex post facto* correlational research design because of the inability to directly control the latent variables because they are inherently not manipulable.

To empirically test the hypotheses made by the measurement model, using the logic of the *ex post facto* correlational research design, the researcher observes the observed indicator variables and calculates the observed inter-item covariance matrix. The freed measurement model parameters in Λ, Ψ and Φ are estimated via structural equation modelling with the purpose of reproducing the observed covariance matrix as accurately as possible (Diamantopoulos & Siguaw, 2000). If the fitted CCCQ measurement model fails to accurately reproduce the observed covariance matrix (Diamantopoulos & Siguaw, 2000) the measurement model implied by the design intention fails to provide an acceptable explanation for the observed covariance matrix. Lack of measurement model fit necessarily means that the CCCQ does not measure the affirmative development coaching performance construct as intended. Lack of measurement model fit would mean that the CCCQ does not provide a construct valid measure of the affirmative development coaching performance construct. The opposite is not true, however. If the covariance matrix derived from the Λ, Ψ and Φ estimates closely agrees with the observed covariance matrix it does not necessarily mean that the relationships hypothesised by the measurement model must have produced the observed covariance matrix. It only means it could have. Good measurement model fit would therefore not warrant the conclusion that the CCCQ definitely measures the coach performance construct as intended. A high degree of fit between the observed and estimated covariance matrices would only mean that the processes portrayed in the measurement model provide one plausible explanation for the observed covariance matrix.

It should in addition be noted that this type of design has further weaknesses as reported by Kerlinger and Lee (2000) who warn that caution should be taken when interpreting results. The three weak points include the inability to manipulate the independent variables as earlier noted, the lack of power to randomise and the risk of improper interpretation.

3.4 STATISTICAL HYPOTHESES

The nature of the statistical hypotheses that are tested depend on the statistical analysis technique that will be used to analyse the data gathered via the chosen research design. The logic underlying the chosen research design points to structural equation modelling. The proposed CCCQ measurement model has several exogenous latent variables as well as exogenous observed variables with various paths hypothesised between the latent competencies and the indicator variables. Such a scenario requires the use of structural equation modelling to conduct confirmatory factor analysis.

The statistical hypotheses are formulated according to the notation system associated with LISREL (Diamantopoulos & Siguaw, 2000). In estimating the hypothesised model's fit the extent to which the model is consistent with the obtained empirical data will be tested. In order to investigate hypothesised model's fit an exact fit null hypothesis and a close fit null hypothesis will be tested (Diamantopoulos & Siguaw, 2000).

The overarching substantive research hypothesis is that the CCCQ provides a construct valid and reliable measure of affirmative development coaching performance as defined by the instrument, amongst South African managers. The overarching substantive research hypothesis implies a specific measurement model (equation 1). If the substantive hypothesis is interpreted to mean that the hypothesised measurement model accurately reflects the measurement model in the parameter, the error attributable to approximation is put at 0 and the exact fit null hypothesis can be formulated as:

H_{01}: RMSEA=0

H_{a1}: RMSEA>0

If the substantive hypothesis is interpreted to mean that the hypothesised measurement model only approximately reflects the measurement model in the

parameter, the error attributable to approximation is said to be equal to or less than .05 and the close fit null hypothesis can be formulated as:

H_{02}: RMSEA≤.05

H_{a2}: RMSEA>.05

If the close fit null hypothesis would not be rejected, or alternatively if the measurement model would at least demonstrate reasonable model fit, the following null hypotheses would be tested with regards to the freed elements in $\boldsymbol{\Lambda}$:

H_{0i}: λ_{jk} =0; i =3, 4,..., 84[10]; j=1, 2....84; k=1, 2.....17

H_{ai}: λ_{jk} > 0; i =3, 4,..., 84; j=1, 2...84; k=1, 2.....17

If the close fit null hypothesis would not be rejected, or alternatively if the measurement model would at least demonstrate reasonable model fit, the following null hypotheses would be tested with regards to the freed elements in $\boldsymbol{\Theta_{86}}$:

H_{0i}: $\Theta_{\delta jj}$ =0; i =85, 86,..., 166; j=1, 2.....82

H_{ai}: $\Theta_{\delta jj}$ > 0; i =85, 4,..., 166; j=1, 2.....82

If the close fit null hypothesis would not be rejected, or alternatively if the measurement model would at least demonstrate reasonable model fit, the following null hypotheses would be tested with regards to the freed elements in $\boldsymbol{\Phi}$:

H_{0i}: ϕ_{jk} =0; i =167, 168,..., 302; j=1, 2.....17; k=1, 2.....17

H_{ai}: ϕ_{jk} > 0; i =167, 168,..., 302; j=1, 2.....17; k=1, 2.....17

[10] The hypotheses formulated with regards to $\boldsymbol{\Lambda}$ assume the use of 82 individual items

3.5 MEASURING INSTRUMENTS: CHIKAMPA COACHING COMPETENCY QUESTIONNAIRE

The Chikampa Coaching Competency Questionnaire is rooted in the fundamental assumption that an effective affirmative development coach needs to serve as a leader for the coachee to realise the coaching outcome latent variables discussed earlier. The LBI 2 constitutes the leadership questionnaire that arguably provides the most extensive assessment of leadership competencies available in the market. The CCCQ is consequently an adaptation of the LBI-2 developed by Spangenberg and Theron (2011a). The affirmative development coaching competencies measured by the CCCQ and their constitutive definitions are shown in Table 2.8. The CCCQ measures affirmative development coaching performance in terms of seventeen coaching competencies. Three of the LBI-2 leadership dimensions were not regarded as relevant for the assessment of coaching competence (*F*acilitating interdepartmental co-ordination, nfluencing across external boundaries & *O*ptimising process and structures). The CCCQ contains 82 items. The LBI-2 has reported Cronbach alpha values between .774 and .902 for the 17 subscales adapted for inclusion in the CCCQ.

Table 3.1.

Reliabiliy analysis statistics for the LBI-2.

Reliability analysis statistics for the LBI-2 sub-scales	Cronbach alpha	Scale mean	Scale variance	Scale length
Monitoring the external environment	.799	16,129	7,648	4
Monitoring internal environment	.818	15,672	7,459	4
Developing a challenging vision	.831	15,701	8,467	4
Conceptualising strategy	.819	15,913	7,915	4
Developing performance plans	.858	16,285	7,968	4
Leader self-discovery	.828	19,889	12,734	5
Leader personal growth	.774	16,052	7,918	4
Empowering followers	.885	27,565	22,076	7
Articulating vision	.874	15,452	9,488	4
Inspiring and motivating followers	.875	15,703	9,016	4

Building trust and demonstrate integrity	.902	32,680	27,616	8
Demonstrate decisiveness, hardiness	.815	16,275	8,087	4
Acting entrepreneurial	.838	23,778	15,712	6
Showing concern for others	.895	23,963	17,929	6
Displaying sound interpersonal skills	.884	23,708	18,845	6
Reviewing performance	.866	15,931	9,260	4
Acknowledging,Celebration performance	.888	16,137	9,972	4

(Spangenberg & Theron,2011b)

3.6 RESEARCH PARTICIPANTS

The units of analysis for this study were managers acting as affirmative development coaches. The units of observation are the managers serving as affirmative development coaches, their followers for whom they have acted as coaches, their peers and their superiors. The unit of analysis target population comprised of all managers acting as affirmative development coaches in South Africa. The unit of observation target population comprises the unit of analysis target population, their followers for whom they have acted as coaches, their peers and their superiors. Given the 360˚ intended usage of the CCCQ the ideal is to draw a representative sample from the unit of observation target population. This is clearly an ideal that would be difficult to attain practically.

For the purpose of this study the unit of observation sampling population was defined as managers at an alcoholic beverages producer serving as coaches to one or more of their followers. A substantial sampling gap is thereby implied. The unit of observation target population was restricted to affirmative development coaches and coachees only. The unit of observation target population moreover comprises all South African affirmative development coaches. The substantial sampling gap limits the generalisability of the study results.

3.7 SAMPLING

The extent to which results can or may be generalised to the sampling population is a function of the number of observations in the chosen sample and the representativeness of the sample, while the power of inferential statistics tests also depends on sample size (Elmes, Kantowitz & Roediger, 1999; De Goede & Theron, 2010).

Sample sizes of 200 observations or more are appears to be satisfactory for most SEM applications (Kelloway, 1998; MacCallum *et al*., 1996 as cited in Smuts, 2010). Three issues are relevant when deciding on the appropriate sample size for a study that intends using SEM. The first consideration is the ratio of number of observations to the number of parameters to be estimated. A situation in which more freed model parameters have to be estimated than there are observations in the sample would not be regarded as acceptable. Elaborate measurement models contain more variables, have more freed parameters that have to be estimated and consequently require larger sample sizes. Bentler and Chou (cited in Kelloway, 1998, p. 20) recommend that the ratio of sample size to number of parameter estimated should fall between 5:1 and 10:1. On the other hand Jackson (as cited in Park, 2003) advices 10: 1 or even better 20:1. The proposed measurement model (Equation 1) and the proposed procedure for operationalising the latent variables would in terms of the Bentler and Chou (cited in Kelloway, 1998) guideline require a sample of 1500 - 3000 research participants to provide a convincing test of the structural model (300 freed parameters).

The statistical power associated with the test of the hypothesis of close fit (H_0: RMSEA ≤ .05) against the alternative hypothesis of mediocre fit (H_a: RMSEA > .05) is a second consideration to take into account when deciding on the appropriate sample size (Smuts, 2010). Statistical power in the SEM context refers to the probability of rejecting the null hypothesis of close fit (H_0: RMSEA ≤ .05) when in fact it should be rejected (i.e., the model fit actually is mediocre, (H_a: RMSEA > .05). Too high statistical power would mean that any attempt to obtain formal empirical proof

for the validity of the model would be futile. Even a small deviation from close fit would result in a rejection of the close fit null hypothesis. Conversely, however, too low power would mean that even if the model fails to fit closely the close fit null hypothesis would still not be rejected. Not rejecting the close fit under conditions of low power does not provide very convincing evidence on the validity of the model. Power tables were compiled by MacCallum, Browne and Sugawara (1996). These tables can be used to derive sample size estimates for the test of close fit, given the effect sizes assumed above, a significance level (α) of 0,05, a power level of 0,80 and degrees of freedom (v) of (½[(p+q][p+q+1]-t)=6806.2-300=3403-300= 3103. The MacCallum *et al*. (1996) table, however, only makes provision for degrees of freedom up to 100. Syntax developed by Preacher & Coffman (2006) and available at http://www.quantpsy.org/rmsea/rmsea.htm was utilised to determine the required sample size for the test of close fit. For this purpose a significance level of .05 was specified, statistical power of .80, 3103 degrees of freedom, RMSEA was set to .05 under H_0 and RMSEA was set to .08 under H_a. The Preacher and Coffman (2006) software indicated that a sample of 19 is required to ensure statistical power of .80 when testing the close fit null hypothesis.

The third consideration to take into account when deciding on the appropriate sample size is practical and logistical considerations like cost, availability of suitable respondents and the willingness of the employer to commit large numbers of employees to the research. The latter consideration prevents any attempt to draw a sample of 1500 respondents for the purpose of this study.

The only way of escaping from the impasse created by the incompatibility of the foregoing considerations is to utilise a different approach to the operationalisation of the latent coaching competencies. Rather than using the individual items to represent the latent variables item parcels will be formed. This will reduce the number of parameters that have to be estimated from 300 to 204 and the degrees of freedom to 391. In terms of the Bentler and Chou (cited in Kelloway, 1998) guideline a sample of 1020 is now required. The Preacher and Coffman (2006) software now

indicates that a sample of 57 is required to ensure statistical power of .80 when testing the close fit null hypothesis.

Taking all the above considerations into account, it was suggested that a sample of 200 – 250 units of observation should be selected by means of a non-probability convenience sampling procedure.

An alcoholic beverages producer was finally identified as a participating organisation by the researcher after several approaches to various companies based on personal contacts did not yield desired results. Detailed information about the research proposal and procedures were in the initial contact (see Appendix C). A letter of agreement to participate was provided by the company (see Appendix D). After the approval from the ethics committee of the University of Stellenbosch the researcher commenced with data collection. Managers at this company (alcoholic beverages producer) as well as their subordinates, peers and superiors were invited to participate in the research via e-mail to complete the self rater and other-rater version of the survey questionnaire (see Appendix E). The URL linked to the web survey using an online survey tool created by the University of Stellenbosch was sent. The Survey consisted of eight pages including the completion events page. Participants were instructed to read the consent information and to give their consent before beginning (see Appendix A & B).

Based on a trial conducted earlier on, the estimated time for completing the survey was 15-20 minutes. Two weeks after sending the initial invitations reminders were sent out (see Appendix F).

The survey data was received via the internet without any personal identifiers of the respondents. The received data was stored anonymously in a password protected file in the researcher personal computer.

From the 2398 selected respondents only 492 entered and completed the survey (Response rate of 20.5%). After cleaning data the sample was reduced to 398[11]. Demographic information of the respondents included gender, age, education, years of service, peromnes job level and relationship to the candidate in the case of the other rater version of the survey.Tables 3.2 and 3.3 shows the sample composition by demographic characteristics.

Table 3.2

Demographic Information: Gender, Education, peromnes Job levels and Relationship to the candidate.

Demographic	Category	Frequency	%
Gender	Male	233	58.4
	Female	166	41.6
Education	Matric	160	40.1
	Bachelor's Degree	70	17.5
	Honours Degree	21	5.3
	Master's Degree	16	4.0
	PHD	1	.3
	Others	131	32.8
Peromnes Job levels	Top Management	3	.8
	Senior Management	31	7.8
	Middle Management	164	41.1
	Junior Management	144	36.1
	Semi-Skilled	53	13.3
Relationship to Candidate	Superior	43	10.8
	Peer/ Colleague	49	12.3
	Coachee/Follower	140	35.1

Table 3.3

Demographic Information:Age and Tenure

Demographic	Mean	Median	Mode	Std. Deviation	Variance	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
Age	39.53	39.00	39	9.826	96.554	.179	.127	-.178	.253
Tenure	17.75	7.00	5	124.125	15407.009	16.049	.151	258.697	.300

[11] Initially after cleaning data the sample size was 399, however after treating for missing value it came to 398 as reported above.

3.8 MISSING VALUES

Missing values can potentially present a problem that will have to be solved before the composite indicator variables can be calculated and the data analysed (Burger, 2012). Due to the fact that the CCCQ was administered via the web-based Survey systems, reduced the likelihood of missing values because responses to all items are treated as mandatory by the system. Unable to respond responses were however treated as missing values. Calculating the composite indicator variables without appropriately treating the problem of missing values can result in seemingly adequate but in reality deficient indicator variables (Burger, 2012). The method used to impute missing values was dependant on the number of missing values as well as the nature of the data, especially whether the data follows a multivariate normality (Smuts, 2010).

This study considerd the following options in treating the problem of missing values:

- List-wise deletion
- Pair-wise deletion
- Imputation by matching
- Multiple imputations
- Full information maximum likelihood

List-wise deletion requires the deletion of complete cases where there is missing values for any of the variables (Smuts, 2010). List-wise deletion can result in a severe reduction of the effective sample size. Pair-wise deletion focuses on deleting cases only for analysis on variables where values are missing (Dunbar-Isaacson, 2006). Imputation by matching imputes values from other cases with similar observed values on a set of matching variables (Smuts, 2010). A minimisation criterion is applied on a set of matching variables (Jöreskog & Sörbom in Dunbar-Isaacson, 2006). Imputation does not take place for a case if the minimisation

criterion is not satisfied or if no observation exists that has complete data on the set of matching variables (Enders *et al*., in Dunbar-Isaacson, 2006).

The multiple imputation method conducts several imputations for each missing value (Smuts, 2010). Each imputation creates a completed data set, which could be analysed separately in order to obtain multiple estimates of the parameters of the model (Davey *et al*., Raghunatha and Schafer in Dunbar-Isaacson as cited by Smuts, 2010). In LISREL missing values for each case are substituted with the average of the values imputed in each of the data sets (Du Toit & Du Toit, 2001). Plausible values are therefore delivered whilst also reflecting the uncertainty in the estimates. Multiple imputation assumes that data is missing at random and that the observed data follows an underlying multivariate normal distribution (Du Toit & Du Toit, 2001). The procedure may, however, be regarded as permissible if the univariate distributions are not severely skewed, if the item responses are measured on at least a five point scale and not more than 30% of te item responses are missing (Mels, 2007).

Full information maximum likelihood (FIML) utilises a repetitive approach, the expectation-maximisation (EM) algorithm, which computes a case-wise likelihood function using only the variables that are observed for specific cases. Estimates of missing values are obtained based on the incomplete observed data to maximise the observed data likelihood (Enders & Bandalos in Dunbar-Isaacson, 2006 as cited in Smuts, 2010). FIML directly returns a covariance matrix calculated from the imputed data. Further item analysis, dimensionality analysis and the calculation of item parcels is therefore not possible. FIML also assumes that data is missing at random and that the observed data follows an underlying multivariate normal distribution (Du Toit & Du Toit, 2001).

The foregoing considerations was used to decide on the appropriate approach to treat the problem of missing values once the data has been collected and the nature and extent of the missing values problem is known (Smuts, 2010).

3.9 DATA ANALYSIS

The success with which the indicator variables comprising the CCCQ represent the latent variables comprising the affirmative development coaching competency framework was evaluated empirically via item analysis, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA).

3.9.1 ITEM ANALYSIS

Item analysis or scale reliability analysis assesses the consistency between items in a particular subscale (van der Bank, 2007). *Good* items will have high internal consistency and weak items will be inconsistent with the rest of the items. Item analysis was performed to determine how well items on each subscale represent the content of any particular underlying factor. Item statistics were calculated with the purpose of detecting poor items. Poor items are items that fail to discriminate between different states of the latent variable they are meant to reflect and items that do not in conjunction with colleagues reflect a common latent variable (Moyo, 2009).

Item analysis was performed on the data before and after the treatment of missing values to assess the impact of the chosen procedure on the quality of item level measurements (Smuts, 2010). SPSS version 20 (SPSS, 2013) was used to perform the item analyses.

3.9.2 EXPLORATORY FACTOR ANALYSIS

Exploratory factor analysis (EFA) was used to examine the unidimensionality assumption with regards to each of the seventeen subscales. The objective of the EFA analysis is to evaluate the assumption that a single underlying coaching competency factor can satisfactorily account for the variance shared by the items in a subscale. The objective of the analysis was to confirm the unidimensionality of each subscale and to remove items with inadequate factor loading and/or split

heterogeneous subscales into two or more homogenous subsets of items if necessary. To examine the unidimensionality assumption and the assumption that the target latent variable explains a substantial proportion of the variance observed in each item, exploratory factor analyses was performed on each of the subscales (Smuts, 2010). Principal axis factor analysis was used as extraction technique (Tabachnick & Fidell, 2001) and, in the case of factor fission, the extracted solution be subject to oblique rotation (Tabachnick & Fidell, 2001). Principal axis factoring (PAF) is preferred over principal component factor analysis (PCA) as the former only analyses common variance shared between the items comprising a subscale whereas PCA analyses all the variance (Tabachnick & Fidell, 2001). Oblique rotation, although slightly more difficult to interpret than orthogonal rotation, makes provision for the possibility that, if factor fission would occur, the extracted factors could be correlated. SPSS version 20 (SPSS, 2013) was used to perform the item analyses.

3.9.3 STRUCTURAL EQUATION MODELLING

Structural equation modelling is a multivariate statistical analysis tool that enables researchers to examine measurement and structural hypotheses as explanations for correlation and test both direct and indirect impacts among constructs (Hair, Anderson, Tatham & Black, 1995). For this reason Structural equation modelling was used to find the best model to explain the interrelationship among the variables**.** Latent and measured variables are the two types of variables found in structural equation modelling (Park, 2007). A latent variable is a hypothesised and unobservable concept that can only be approximated by observable or measured variables (Hair et al., 1995), while a measured variable refers to a variable that can be observed directly and is measurable (Burnette & Williams, 2005 as cited in Park, 2007). Structural equation modelling is the appropriate statistical analysis technique for this study because it enables the implementation of the logic underpinning the research design via confirmatory factor analysis.

3. 9.3.1 Variable type

The appropriate moment matrix to analyse and the appropriate estimation technique to use to estimate the freed measurement model parameters depend on the measurement level on which the indicator variables are measured. The assumption is made that the item parcel indicator variables are continuance variables, measured on an interval level (Jöreskog & Sörbom, 1996; 1996; Mels, 2003 in Smuts, 2010). The covariance matrix must be analysed with maximum likelihood estimation provided the multivariate normality assumption is satisfied (Du Toit & du Toit, 2001; Mels, 2003, in Smuts, 2010).

3. 9.1.2 Multivariate normality

The default method of estimation when fitting measurement models to continuous data assumes multivariate normality (Baez & Taylor, 2011). The maximum likelihood estimation technique that LISREL uses by default to obtain estimates for the freed model parameters assumes that the indicator variables follow a multivariate normal distribution (Smuts, 2009). The null hypothesis that this assumption is satisfied was consequently tested in PRELIS. Since the null hypothesis of multivariate normality was rejected, normalisation was attempted (Jöreskog & Sörbom, 1996). The success of the attempt at normalising the data was evaluated by testing the null hypothesis that the normalised indicator variable distribution follows a multivariate normal distribution (Burger, 2012). Since this attempt was not successful, robust maximum likelihood estimation was used (Mels, 2003).

3.9.3.3 Confirmatory factor analysis

Confirmatory factor analysis (CFA) was used to evaluate the degree to which the design intention underpinning the development of the CCCQ succeeded. LISREL 8.8 was used to perform a confirmatory factor analysis to determine the fit of the CCCQ measurement model as depicted in Figure 3.1 and expressed as Equation 2.

$$\mathbf{X} = \Lambda\xi + \delta \quad \text{----------(2)}$$

Where:

- $\mathbf{X}$ is a 1x34 column vector of CCCQ item parcels[12]
- Λ is a 34x17 matrix of factor loading describing the slope of the regression of X_i on ξ_j.
- $\boldsymbol{\xi}$ is a 1x17 column vector of latent coaching competencies ξ_j.
- $\boldsymbol{\delta}$ is a 1x34 column vector of measurement error terms ζ_i.

In terms of the design intention of the CCCQ the measurement error terms are assumed to be uncorrelated whereas the seventeen latent coaching competencies are assumed to correlate less than unity. The full specification of the CCCQ measurement is therefore given by Equation 1 and the claim that:

- the variance-covariance matrix $\boldsymbol{\Theta_\delta}$ is a 34x34 diagonal matrix in which only the diagonal measurement error variance terms are freed to be estimated but all off-diagonal terms are fixed to zero; and that
- the variance-covariance matrix $\boldsymbol{\Phi}$ is a 17x17 symmetric matrix in which all lower off-diagonal covariance terms are freed to be estimated and the main diagonal variance terms are fixed to unity.

The covariance matrix were analysed when fitting the measurement model. Maximum likelihood estimation was to be used if the multivariate normality assumption was satisfied (before or after normalisation). Since normalisation failed to achieve multivariate normality in the observed data robust maximum likelihood estimation was used to estimate the freed measurement model parameters.

[12] Equation 2 assumes that the measurement model is fitted using item parcels as indicator variables formed from the individual CCCQ items by taking the mean of even and uneven numbered items.

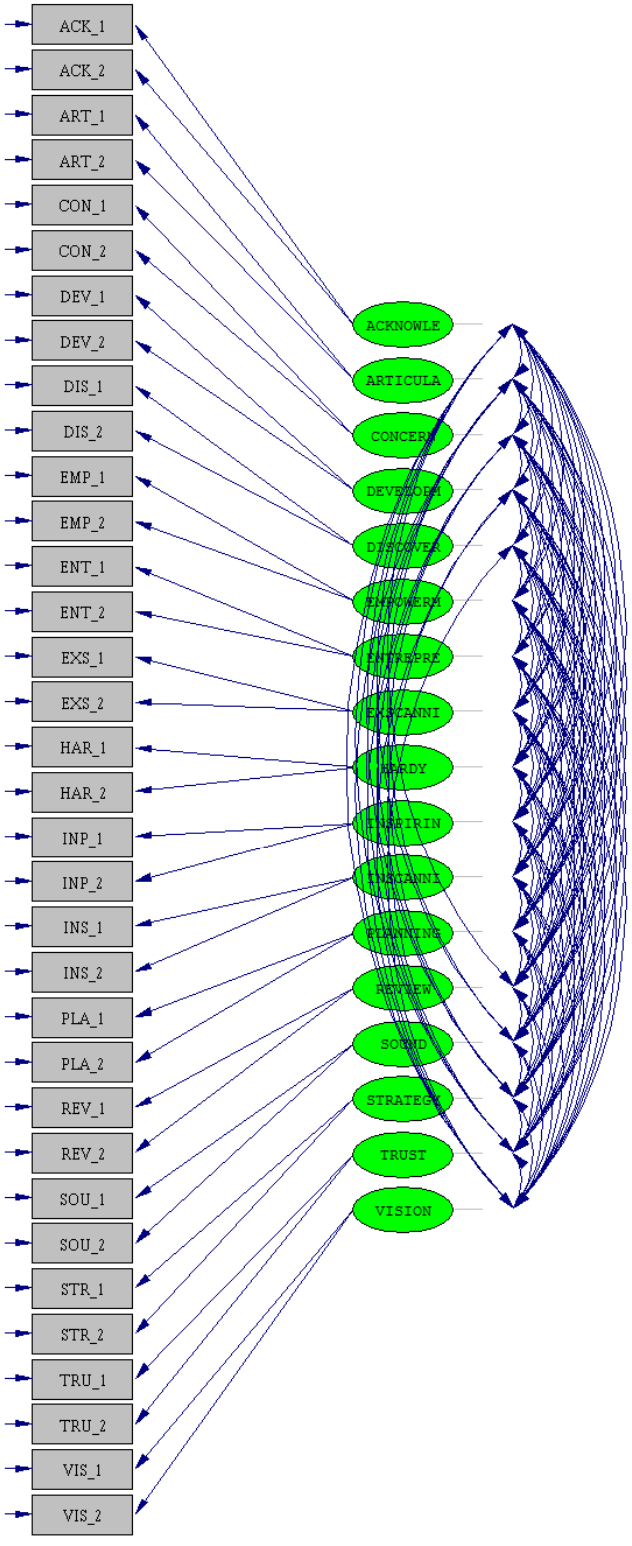

Figure 3.1 CCCQ measurement model

The measurement hypothesis being evaluated is that the measurement model provides a valid account of the process that produced the observed covariance matrix (Hair *et al*., 2006). If the measurement hypothesis would be interpreted to mean that the measurement model provides a perfect account of the manner in which the latent variables manifest themselves in the indicator variables, the measurement hypothesis translates into the following exact fit null hypothesis

H_{01}:RMSEA=0
H_{a1}:RMSEA> 0

If the measurement hypothesis would be interpreted to mean that the measurement model only provides an approximate description of the process that produced the observed covariance matrix, the measurement hypothesis translates into the following close fit null hypothesis:

H_{02}:RMSEA≤.05
H_{a2}:RMSEA >.05

If the close fit null hypothesis would not be rejected, or alternatively if the measurement model would at least demonstrate reasonable model fit, the following null hypotheses would be tested with regards to the freed elements in $\boldsymbol{\Lambda}$:

H_{0i}: λ_{jk} =0; i =3, 4,..., 36[13]; j=1, 2....34; k=1, 2.....17
H_{ai}: λ_{jk} > 0; i =3, 4,..., 36; j=1, 2...34; k=1, 2.....17

If the close fit null hypothesis would not be rejected, or alternatively if the measurement model would at least demonstrate reasonable model fit, the following null hypotheses would be tested with regards to the freed elements in $\boldsymbol{\Theta_{\delta}}$:

H_{0i}: $\Theta_{\delta jj}$ =0; i =37, 38,..., 70; j=1, 2.....17
H_{ai}: $\Theta_{\delta jj}$ > 0; i =37, 38,..., 70; j=1, 2.....17

[13] The hypotheses formulated with regards to $\boldsymbol{\Lambda}$ assume the use of two item parcels per latent coaching competency.

If the close fit null hypothesis would not be rejected, or alternatively if the measurement model would at least demonstrate reasonable model fit, the following null hypotheses would be tested with regards to the freed elements in Φ:

H_{0i}: $\phi_{jk} = 0$; i =71, 72,..., 206; j=1, 2.....17; k=1, 2.....17

H_{ai}: $\phi_{jk} > 0$; i =71, 72,..., 206; j=1, 2.....17; k=1, 2.....17

3.9.3.4 Interpretation of measurement model fit and parameter estimates

Measurement model fit was interpreted by testing H_{01} and H_{02} and by inspecting the full array of indices provided by LISREL (Diamantopoulos & Siguaw, 2000). Further consideration was also given to the magnitude and distribution of the standardised residuals and the magnitude of model modification indices calculated for Λ^{X} and Θ_{δ}. Large modification index values indicate measurement model parameters that, if set free, would statistically significantly improve the fit of the model. Large numbers of large and significant modification index values comment negatively on the fit of the model in as far as it suggests that numerous possibilities exist to improve the fit of the model proposed by the researcher. Inspection of the model modification indices for the aforementioned matrices here serve the sole purpose of commenting on the model fit (Smuts, 2010).

If close measurement model is obtained or if at least reasonable measurement model fit is obtained, the significance of the estimated factor loadings is determined by testing H_{0i}: $\lambda_{jk} = 0$; i =3, 4,..., 36; j=1, 2....34; k=1, 2.....17. The magnitude of the factor loading estimates are considered acceptable if the completely standardised factor loading estimates are equal to or greater than .71 (Hair *et al.*, 2006 in Smuts, 2010). Satisfaction of this criterion would imply that at least 50% of the variance in the indicator variables can be explained by the latent variables they were assigned to represent.

If close measurement model is obtained or if at least reasonable measurement model fit is obtained, the significance of the estimated measurement error variances

will be determined by testing H_{0i}: $\Theta_{\delta jj}$ =0; i =37, 38,..., 70; j=1, 2.....17. The magnitude of the measurement error variance estimates are considered acceptable if the completely standardised variance estimates are equal to or smaller than .50.

If close measurement model is obtained or if at least reasonable measurement model fit is obtained, the significance of the estimated inter-latent competency correlations are determined by testing H_{0i}: ϕ_{jk} =0; i =71, 72,..., 206; j=1, 2.....17; k=1, 2.....17. The magnitude of the inter-latent competency correlations estimates are considered acceptable if the ϕ_{jk} estimates are not excessively large. Interpretation of the inter-latent competency correlations estimates should, however, go beyond the magnitude of the sample estimates. The discriminant validity of the CCCQ needs to be examined.

3. 9.3.5 Discriminant validity

Discriminant validity refers to the extent to which the seventeen latent coaching competencies comprising the affirmative development coaching performance construct may be considered to be truly distinct from each other in the manner in which the CCCQ measures them (Hair et al., 2006). Claiming that the CCCQ displays discriminant validity would mean that the seventeen latent coaching competencies as measured by the instrument are separate, qualitatively distinct latent variables.

Two procedures were used to examine the discriminant validity of the CCCQ. The first procedure compared the average variance-extracted proportions[14] for any two latent coaching competencies with the square of the correlation estimate between these two constructs (Farrell, 2010; Hair et al., 2006). The variance-extracted estimates should be greater than the squared correlation estimate, indicating that a

[14] The average variance extracted is defined as the proportion of variance in the indicator variables that is due to the latent variable being measured rather than to measurement error. The average variance extracted is calculated as $p_v = (\Sigma\lambda^2)/[\Sigma\lambda^2 + \Sigma(\theta_\delta)]$ (Diamantopoulos, A., & Siguaw, 2000, p. 91)

latent coaching competency explains its item measures better than it explains another construct, and thereby providing support for discriminant validity[15].

The second procedure involved calculating the 95% confidence interval estimate for each sample estimate in $\mathbf{\Phi}$. The null hypothesis H_{0i}: $\rho=1$ is thereby tested against the alternative hypotheses H_{ai}: $\rho<1$ of a non-perfect correlation (Mels, 2010). If the latent variables of interest are indeed distinct, H_{0i} should be rejected.

3.10 EVALUATION OF RESEARCH ETHICS

The purpose of reflecting on potential ethical risks associated with the research as outlined in this thesis is to protect the dignity, rights, safety and well-being of the research participants involved in this study. Empirical behavioural research requires the active or passive involvement of people. This invariably brings with it the risk that the dignity, rights, safety and well-being of the research participants might be compromised. The critical question is whether this risk can be justified in terms of the purpose of the research. The development and validation of the CCCQ has a benevolent purpose as argued in the introduction of this thesis. The critical question is therefore whether the price that research participants have to pay can be justified in terms of the benefits that accrue to society (Standard Operating Procedure, 2012). The argument presented below taken in conjunction with the argument presented in the introduction of this thesis suggests that research participants were not expected to make sacrifices for some trivial, inconsequential research objective.

The research participant has the right to voluntary decide whether he/she wishes to accept an invitation to participate in research. To make an informed decision on whether he/she wishes to participate in the research the participant needs to be informed on the objective and purpose of the research, what participation in the research will involve, how the research results will be disseminated and used, who the researchers are, what their affiliation is, where they can make further inquiries

[15] The average variance extracted should exceed at least .50 so that the latent variable being measured by the indicators account for more of the variance in the indicators than measurement error.

about the research if they wish to do so, what their rights as participants are and where they can obtain more information on their research rights (Standard Operating Procedure, 2012). The information provided to potential research participants needs to be provided in a vernacular that is accessible to educational level of the participants (Standard Operating Procedure, 2012).

In Annexure 12 of the Ethical Rules of Conduct for Practitioners Registered under the Health Professions Act (Act no. 56 of 1974) (Republic of South Africa, 2006) it is required of a psychologist doing research to enter into an agreement with participants on the nature of the research, the participants responsibilities as well as those of the researcher. The agreement in terms of which the research participant provides informed consent should meet the following requirements according to Annexure 12 (Republic of South Africa, 2006, p. 42):

> 89. (1) A psychologist shall use language that is reasonably understandable to the research participant concerned in obtaining his or her informed consent.
> (2) Informed consent referred to in subrule (1) shall be appropriately documented, and in obtaining such consent the psychologist shall –
> (a) inform the participant of the nature of the research;
> (b) inform the participant that he or she is free to participate or decline to participate in or to withdraw from the research;
> (c) explain the foreseeable consequences of declining or withdrawing;
> (d) inform the participant of significant factors that may be expected to influence his or her willingness to participate (such as risks, discomfort, adverse effects or exceptions to the requirement of confidentiality);
> (e) explain any other matters about which the participant enquires;
> (f) when conducting research with a research participant such as a student or subordinate, take special care to protect such participant from the adverse consequences of declining or withdrawing from participation;
> (g) when research participation is a course requirement or opportunity for extra credit, give a participant the choice of equitable alternative activities; and
> (h) in the case of a person who is legally incapable of giving informed consent, nevertheless –
> (i) provide an appropriate explanation;
> (ii) obtain the participants assent; and

> (iii) obtain appropriate permission fro m a person legally authorized to give such permission.

In terms of obtaining informed consent as above the participants were duly informed of the nature of the study, with the choice of freely participating in the study or not. Participants were furnished with the required information as stated above in points (a) to (g) to make an informed decision as to whether they wish to participate in the research. Informed consent formulations were prepared and integrated as preambles in the self-rater and other-rater versions of the CCCQ (see Appendix A & B). Participating in this study did not disadvantage the respondents in any other way than requiring them to allocate some time and effort to the completion of the questionnaire.

Annexure 12 of the Ethical Rules of Conduct for Practitioners Registered under the Health Professions Act (Act no. 56 of 1974) (Republic of South Africa, 2006, p.41) requires psychological researchers to obtain institutional permission from the organisation from which research participants will be solicited:

> A psychologist shall –
> (a) obtain written approval from the host institution or organisation concerned prior to conducting research;
> (b) provide the host institution or organisation with accurate information about his or her research proposals; and
> (c) conduct the research in accordance with the research protocol approved by the institution or organisation concerned.

Informed institutional permission for the research was obtained from an alcoholic beverages producing company. A copy of the research proposal accompanied the application for institutional permission addressed to management of the participating company.

The information collected via the survey questionnaire from coaches (self-rater) and coachees (other-raters) was treated as anonymous information. The identities of coaches/coachees completing the survey questionnaire need not to be known. The data collected was treated as confidential. Results on the psychometric properties of the questionnaire were only presented in aggregate form to management. Feedback

was not given to participants because the study did not in any way aim at evaluating individual coaches. The objective of the research was to evaluate the success with which the CCCQ measures affirmative development coaching competencies. Therefore only feedback on the psychometric results of the study was provided to company (Alcoholic beverages producer) as a participating organisation.

The study did not involve the assessment of critical latent variables where the possibility of unusually high or low scores could signal serious threats to the well-being of research participants seemed a reasonable prospect. The likelihood of contingency measures being required was therefore small.

An application for ethical clearance of the proposed research study was submitted to the Research Ethics Committee Human Research (Humanities) of Stellenbosch University via the Departmental Ethics Screening Committee of the Department of Industrial Psychology.

CHAPTER 4

RESEARCH RESULTS

4.1 INTRODUCTION

The purpose of chapter 4 is to present and discuss the statistical results of the various analyses performed. This chapter will start off by discussing the item analysis executed to determine the psychometric integrity of the indicator variables meant to represent the various latent dimensions, followed by an evaluation of the extent to which the data satisfied the statistical data assumptions relevant to the data analysis techniques utilised. The fit of the measurement model is subsequently evaluated.

4.2 MISSING VALUES

Treating missing values is the process of dealing with data sets with incomplete responses. Missing values presented a problem that had to be addressed before the data could be analysed. Table 4.1 depicts the distribution of missing values across items.

Table 4.1

Distribution of missing values across items

ACK1	ACK2	ACK3	ACK4	ART1	ART2	ART3
8	5	9	13	8	7	8
ART4	CON1	CON2	CON3	CON4	CON5	CON6
4	6	8	13	13	12	9
DEV1	DEV2	DEV3	DEV4	DIS1	DIS2	DIS3
11	20	6	10	7	13	10
DIS4	DIS5	EMP1	EMP2	EMP3	EMP4	EMP5
13	12	11	7	9	6	8
EMP6	EMP7	ENT1	ENT2	ENT3	ENT4	ENT5
9	8	13	11	11	14	7
ENT6	EXS1	EXS2	EXS3	EXS4	HAR1	HAR2
10	9	18	15	11	7	6
HAR3	HAR4	INP1	INP2	INP3	INP4	INS1
14	9	7	7	5	9	5
INS2	INS3	INS4	PLA1	PLA2	PLA3	PLA4
16	7	14	5	11	8	12

REV1	REV2	REV3	REV4	SOU1	SOU2	SOU3
4	10	8	4	10	7	11
SOU4	SOU5	SOU6	STR1	STR2	STR3	STR4
19	5	18	12	13	5	12
TRU1	TRU2	TRU3	TRU4	TRU5	TRU6	TRU7
2	13	5	14	5	16	11
TRU8	VIS1	VIS2	VIS3	VIS4		
7	2	11	8	16		

Multiple imputation (MI) was used as the method to solve the problem of missing values. The multiple imputation method conducts several imputations for each missing value. Each imputation creates a completed data set, which could be analysed separately in order to obtain multiple estimates of the parameters of the model (Raghunatha and Schafer as cited in Dunbar-Isaacson, 2006). In LISREL missing values for each case are substituted with the average of the values imputed in each of the data sets (Du Toit & Du Toit, 2001). Plausible values are therefore delivered whilst also reflecting the uncertainty in the estimates. The advantage of the MI procedure is that all cases are retained in the imputed data set (Du Toit & Du Toit, 2001). This further implies that the imputed data set is afterwards available for the calculation of item parcels (Du Toit & Du Toit, 2001; Mels, 2003).

4.3 ITEM ANALYSIS

Item analysis via the SPSS reliability procedure allows one to detect and remove those items not contributing to a valid and reliable description of the latent dimension in question. The rationale behind performing an item analysis is that item analysis can be very informative when a scale is unreliable or fails to show expected levels of validity (Burger, 2012). It can also help explain why a scale is reliable or unreliable as well as suggest ways of improvement. Furthermore, the reliability and validity of a scale can generally be improved by removing bad items. Bad items are items that do not reflect the latent dimension that the items have been tasked to reflect, that are not sensitive to relative small differences on the latent dimension and/or that do not respond in unison with other items assigned to a specific subscale (Burger, 2012).

The intention of the CCCQ is to reflect one dimensional sets of items that would explain variance in each of the 17 latent variables of the coaching domain. In

essence respondents should respond to the items with behaviour that is primarily an expression of the underlying coaching dimension that the item intends to measure. In a unidimensional coaching domain it is expected that moderate inter-item correlations should occur in each sub-scale. Descriptive item statistics were calculated to identify how well the items reflect the content of the underlying coaching dimension. Item statistics were used to identify and delete poor items.
Item statistics include the item-total correlation, the squared multiple correlation, difference in scale reliability when the item is deleted, difference in scale variance when the item is deleted, the inter-item correlations, the item mean and the item standard deviation (Murphy & Davidshofer; 2005).

According to Taylor (2005), the item-total correlation is the correlation of the item with the sum on all the items in a specific scale excluding the item itself. A low item-total correlation implies that the item is not related to the construct being measured by the majority of the other items comprising the scale. A high item-total does not necessarily imply the opposite. High item-total correlation could imply that all items in a sub-scale measure the same construct. This construct however is not necessarily unidimensional or the intended construct.

The squared multiple correlation is another item statistic that describes the psychometric qualities of an item. This statistic refers to the squared multiple correlation when regressing each item on a weighted linear composite of the remainder of the items of the specific sub-scale. A low squared multiple correlation would suggest that variance in the item is not adequately explained by the common latent variable underlying the majority of the items (Murphy & Davidshofer; 2005). A weighted composite of subscale items that explains a substantial amount of variance in the item is indicated by high squared multiple correlations. This high correlation suggests that that specific item successfully reflects a common underlying latent variable.

The reliability coefficient of the sub-scale when an item is removed can be used to evaluate whether an item has the same underlying meaning as the rest of the scale (Taylor; 2005). When the reliability of the scale improves as an item is removed, it is

an indication that the item lowers the overall reliability of the scale and is therefore not a good indicator of the construct being measured by the scale (Myburg, 2013).

The extent to which the sub-scale variance changes, is another item statistic that reflects whether an item succeeds in measuring the underlying performance domain. When the sub-scale variance increases or when the subscale variance decreases only marginally at the removal of an item, it is an indication of a poor item.
Item analysis was therofore performed on the items of the CCCQ. Item analyses were done on all the scales after the multiple imputation procedure.

4.3.1 SUMMARY OF ITEM ANALYSIS FINDINGS FOR EACH SCALE

Table 4.2 represents a summary of the item analysis results for each of the latent variable scales. The coefficient of internal consistency (Cronbach's alpha) for all 17 sub-scales was found to be satisfactory (> .80).
Table 4.2

Reliability results of the CCCQ scales

Subscale	Sample Size	Mean	Number of items	Variance	Standard Deviation	Cronbach Alpha
EXS	398	14.55025	4	13.835	3.719543	.826
INS	398	14.53015	4	15.348	3.917647	.858
VIS	398	14.70603	4	16.480	4.059571	.878
STR	398	14.85176	4	15.280	3.908994	.866
PLA	398	15.54271	4	14.727	3.837628	.880
DIS	398	18.93970	5	24.792	4.979189	.893
DEV	398	14.58794	4	17.124	4.138175	.880
EMP	398	26.99749	7	43.166	6.570102	.915
ART	398	15.04271	4	16.318	4.039563	.891
INP	398	15.39196	4	15.574	3.946383	.899
TRU	398	30.94975	8	54.662	7.393406	.916
HAR	398	15.36683	4	14.888	3.858467	.876
ENT	398	21.64824	6	32.964	5.741438	.885
CON	398	23.41960	6	33.821	5.815580	.926
SOU	398	22.46231	6	35.247	5.936892	.921
REV	398	15.55779	4	15.678	3.959547	.892
ACK	398	15.62563	4	18.487	4.299616	.914

4.3.1.1 Item analysis: Monitoring the external environment scale

The *monitoring external environment sub*scale comprised 4 items. The results for the item analysis for this scale are depicted in Table 4.3. For reliability the Cronbach alpha coefficient was calculated. *Monitoring the external environment* subscale obtained a Cronbach's alpha of .826 indicating high internal consistency of the items comprising this subscale. The reported Cronbach alpha falls above the critical cut-off value of .80 set for this study. None of the items in this scale had extreme low or extreme high means (on a 5 point scale). None of the items displayed small standard deviations that set them apart from the typical distributions observed for the majority of the items. It can therefore be concluded that all the items were sufficiently sensitive.

Table 4.3
Item analysis results for monitoring the external environment subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.826	.826	4

Item Statistics

	Mean	Std. Deviation	N
EXS1	3.49749	1.146122	398
EXS2	3.45226	1.160423	398
EXS3	3.71608	1.149874	398

Inter-Item Correlation Matrix

	EXS1	EXS2	EXS3	EXS4
EXS1	1.000	.554	.503	.426
EXS2	.554	1.000	.568	.501
EXS3	.503	.568	1.000	.699
EXS4	.426	.501	.699	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
EXS1	11.05276	8.614	.581	.361	.811
EXS2	11.09799	8.179	.649	.431	.781
EXS3	10.83417	7.846	.724	.569	.746
EXS4	10.66583	8.299	.650	.506	.780

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
14.55025	13.835	3.719543	4

The inter-item correlation matrix for the *monitoring the external environment* scale indicates that no items in this subscale show themselves as questionable in that they all tend to correlate moderately (r_{ij}>.30) with each other. Usually an item with a value of less than .3 is considered problematic (Field, 2005). Further evidence of a lack of problematic items in this scale is obtained from the item total statistics. The scale variance reduces substantially when each item is deleted from the scale. All the corrected item total correlations were acceptably large indicating that the correlation between each item and the total score calculated from the remaining items was satisfactory. The corrected item-total correlation is the correlation between each item and the total score. In addition, the squared multiple correlations were all sufficiently large and the results revealed that none of the items, if deleted, would increase the current Cronbach alpha. None of the items were therefore deleted.

4.3.1.2 Item analysis: Monitoring the Internal environment sub scale

The results for the item analysis for *monitoring the internal environment* sub scale are depicted in Table 4.4.

Table 4.4
Item analysis results for monitoring the internal environment subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.858	.859.	4

Item Statistics			
	Mean	Std. Deviation	N
INS1	3.54523	1.188405	398
INS2	3.59548	1.150919	398
INS3	3.74121	1.153621	398
INS4	3.64824	1.184231	398

Inter-Item Correlation Matrix

	INS1	INS2	INS3	INS4
INS1	1.000	.526	.474	.462
INS2	.526	1.000	.697	.710
INS3	.474	.697	1.000	.750
INS4	.462	.710	.750	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
INS1	10.98492	9.894	.541	.303	.885
INS2	10.93467	8.797	.766	.596	.793
INS3	10.78894	8.817	.759	.622	.796
INS4	10.88191	8.659	.759	.633	.795

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
14.53015	15.348	3.917647	4

None of the (4) items in the *monitoring the internal environment* subscale had extreme low or extreme high means. None of the items displayed small standard deviations that set them apart from the typical distributions observed for the majority of the items. It can therefore be concluded that all the items were sufficiently sensitive. The Cronbach alpha for this scale is satisfactorily high (.858).

The inter-item correlation matrix for *monitoring the internal environment* subscale indicates that no items in this subscale show themselves as questionable in that they all tend to correlate moderately (r_{ij}>.30) with each other. However, item total statistics has shown that item INS1 is a problematic item. INS1 does have somewhat lower squared multiple correlations (.303) and the Cronbach alpha of the scale is positively affected when item INS1 is deleted from the scale. When INS1 is deleted the Cronbach alpha for this scale increases to .885. The relative magnitude of the squared multiple correlation and the increase in alpha affected by the removal of this item (.885 from .858) justified the deletion of this item. However, the small number of items in this subscale (4) argued against the deletion of item INS1. It was therefore decided to retain all the items in the subscale.

4.3.1.3 Item analysis: Developing a challenging coachee vision sub scale

The *developing a challenging coachee vision* sub scale comprised of 4 items. Table 4.5 presents results for item analysis for the the developing a challenging coachee

vision subscale. The *Developing a challenging coachee vision sub scale* obtained a Cronbach's alpha of .878. Inspection of the item means and item standard deviations revealed the absence of extreme means and small standard deviations. The mean ranged from 3.58040 to 3.73116 (on a 5-point scale) and the standard deviation ranged from 1.209203 to 1.168686. The inter-item correlation matrix for *developing a challenging coachee vision* subscale indicates that no items in this subscale show themselves as questionable in that they all tend to correlate moderately (r_{ij}>.30) with each other. All the corrected item total correlations were acceptably large indicating that the correlation between each item and the total score calculated from the remaining items was satisfactory and that the items were reflecting the same underlying factor. In addition, the squared multiple correlations were all sufficiently large. Results of item analysis for this subscale further revealed that none of the items if deleted would increase the current Cronbach alpha. The results for this subscale did not raise any concerns and as such all the items of the subscale were retained.

Table 4.5
Item analysis results for the developing a challenging coachee vision subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.878	.879	4

Item Statistics

	Mean	Std. Deviation	N
VIS1	3.71859	1.209203	398
VIS2	3.58040	1.152073	398
VIS3	3.67588	1.212018	398
VIS4	3.73116	1.168686	398

Inter-Item Correlation Matrix

	VIS1	VIS2	VIS3	VIS4
VIS1	1.000	.595	.635	.551
VIS2	.595	1.000	.712	.700
VIS3	.635	.712	1.000	.673
VIS4	.551	.700	.673	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
VIS1	10.98744	9.942	.666	.453	.872

VIS2	11.12563	9.621	.774	.611	.830
VIS3	11.03015	9.253	.781	.612	.826
VIS4	10.97487	9.768	.732	.558	.846

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
14.70603	16.480	4.059571	4

4.3.1.4 Item analysis: Conceptualising strategy subscale

The *conceptualising strategy* subscale comprised of 4 items. Item analysis was performed on the *conceptualising strategy* subscale. Results are depicted in Table 4.6.

Table 4.6
Item analysis results for Conceptualising strategy subscale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.866	.865	4

Item Statistics			
	Mean	Std. Deviation	N
STR1	3.55779	1.140254	398
STR2	3.58040	1.238475	398
STR3	3.76131	1.135997	398
STR4	3.95226	1.111077	398

Inter-Item Correlation Matrix				
	STR1	STR2	STR3	STR4
STR1	1.000	.639	.511	.560
STR2	.639	1.000	.663	.701
STR3	.511	.663	1.000	.626
STR4	.560	.701	.626	1.000

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
STR1	11.29397	9.432	.649	.438	.855
STR2	11.27136	8.148	.792	.628	.796
STR3	11.09045	9.221	.691	.495	.838
STR4	10.89950	9.118	.734	.551	.822

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items

14.85176	15.280	3.908994	4

Table 4.6 reveals a highly satisfactory coefficient alpha value of .866 that exceeds the reliability coefficient critical cut-off value of .80 set for this study. All the items in the *conceptualising strategy* subscale had means towards the middle range of the scale. None of the items had small standard deviations that set them apart from the typical distributions observed for the majority of the items. It can therefore be concluded that all the items were sufficiently sensitive. The inter-item correlation matrix *for conceptualising strategy* subscale indicates that no items in this subscale show themselves as questionable in that they all tend to correlate moderately (r_{ij}>.30) with each other. Scale variance reduces substantially when each item is deleted from the scale. All the corrected item total correlations were satisfactorily large indicating that the correlation between each item and the total score calculated from the remaining items was satisfactory and that the items were reflecting the same underlying factor. In addition, the squared multiple correlations were all acceptably large. Results of item analysis for this subscale further revealed that none of the items if deleted would increase the current Cronbach alpha. The results for this subscale did not raise any concerns and as such all the items of the subscale were retained.

4.3.1.5 Item analysis: Developing coachee performance plans sub scale

The *developing coachee performance plans scale* comprised 4 items. The results for the item analysis for this scale are depicted in Table 4.7. The *developing coachee performance plans* scale obtained a satisfactory Cronbach's alpha of .880 which in this case falls above .80 reflecting high internal consistency of the items comprising this subscale. None of the items in this scale had extreme low or extreme high means (on a 5 point scale). None of the items displayed small standard deviations that set them apart from the typical distributions observed for the majority of the items. It can therefore be concluded that all the items were sufficiently sensitive. The inter-item correlation matrix *for developing coachee performance plans subscale* indicates that no items in this subscale show themselves as questionable in that they all tend to correlate moderately (r_{ij}>.30) with each other. All the corrected item-total correlations were acceptably large indicating that the correlation between each item

and the total score calculated from the remaining items was satisfactory and that the items were reflecting the same underlying factor. In addition, the squared multiple correlations were all sufficiently large. Results of item analysis for this subscale further revealed that none of the items if deleted would increase the current Cronbach alpha. The results for this subscale did not raise any concerns and as such all the items of the subscale were retained.

Table 4.7

Item analysis results for the developing coachee performance plans subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.880	.881	4

Item Statistics

	Mean	Std. Deviation	N
PLA1	4.03266	1.058224	398
PLA2	3.54774	1.221752	398
PLA3	4.00503	1.088050	398
PLA4	3.95729	1.102178	398

Inter-Item Correlation Matrix

	PLA1	PLA2	PLA3	PLA4
PLA1	1.000	.596	.647	.651
PLA2	.596	1.000	.604	.683
PLA3	.647	.604	1.000	.716
PLA4	.651	.683	.716	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
PLA1	11.51005	9.057	.715	.514	.855
PLA2	11.99497	8.247	.711	.517	.860
PLA3	11.53769	8.728	.749	.579	.842
PLA4	11.58543	8.435	.793	.634	.825

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
15.54271	14.727	3.837628	4

4.3.1.6 Item analysis: Coach self-discovery, reflection and self awareness sub scale

The *coach self-discovery, reflection and self awareness* subscale comprised of 5 items. Results obtained for the item analysis that was performed on the *coach self-discovery, reflection and self awareness* subscale are depicted in Table 4.8.

Table 4.8

Item analysis results for the Coach self-discovery, reflection and self awareness sub scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.893	.893	5

Item Statistics

	Mean	Std. Deviation	N
DIS1	4.17337	1.116668	398
DIS2	3.59296	1.245708	398
DIS3	3.56784	1.168077	398
DIS4	3.72362	1.259321	398
DIS5	3.88191	1.154828	398

Inter-Item Correlation Matrix

	DIS1	DIS2	DIS3	DIS4	DIS5
DIS1	1.000	.594	.542	.675	.573
DIS2	.594	1.000	.632	.710	.634
DIS3	.542	.632	1.000	.600	.627
DIS4	.675	.710	.600	1.000	.660
DIS5	.573	.634	.627	.660	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
DIS1	14.76633	17.101	.698	.506	.878
DIS2	15.34673	15.698	.764	.594	.864
DIS3	15.37186	16.718	.702	.505	.877
DIS4	15.21608	15.394	.791	.640	.857
DIS5	15.05779	16.548	.735	.546	.870

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
18.93970	24.792	4.979189	5

The Cronbach Alpha for this scale is satisfactorily high (.893). All the items in the *coach self-discovery, reflection and self awareness* subscale had means towards the middle range of the scale. None of the items had small standard deviations that set them apart from the typical distributions observed for the majority of the items. It can therefore be concluded that all the items were sufficiently sensitive. The inter-item correlation matrix *for the coach self-discovery,reflection and self awareness* subscale indicates that no items in this subscale show themselves as questionable in that they all tend to correlate moderately (r_{ij}>.30) with each other. The absence of problematic items in this scale can also be seen from the item-total statistics. The scale variance reduces substantially when each item is deleted from the scale. All the corrected item-total correlations were acceptably large indicating that the correlation between each item and the total score calculated from the remaining items was satisfactory and that the items were reflecting the same underlying factor. In addition, the squared multiple correlations were all sufficiently large. Results of item analysis for this subscale further revealed that none of the items if deleted would increase the current Cronbach alpha. The results for this subscale did not raise any concerns. All the items of the subscale were retained.

4.3.1.7 Item analysis: Coach personal growth and development subscale

The *coach personal growth and development* sub scale comprised of 4 items. Table 4.9 presents results for item analysis for the *coach personal growth and development* sub scale. The *coach personal growth and development* sub scale obtained a Cronbach's alpha of .880. Inspection of the item means and item standard deviations revealed the absence of extreme means and small standard deviations. The mean ranged from 3.29648 to 3.94724 (on a 5-point scale) and the standard deviation ranged from 1.131072 to 1.254729. It can therefore be concluded that all the items were sufficiently sensitive. The inter-item correlation matrix *for the coach personal growth and development* subscale indicates that no items in this subscale show themselves as questionable in that they all tend to correlate moderately (r_{ij}>.30) with each other. All the corrected item-total correlations were acceptably large indicating that the correlation between each item and the total score calculated from the remaining items was satisfactorily and that

the items were reflecting the same underlying factor. In addition, the squared multiple correlations were all sufficiently large. Results of item analysis for this subscale further revealed that none of the items if deleted would increase the current Cronbach alpha. The results for this subscale did not raise any concerns and as such all the items of the subscale were retained.

Table 4.9

Item analysis results for the coach personal growth and development subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.880	.880	4

Item Statistics

	Mean	Std. Deviation	N
DEV1	3.59799	1.216675	398
DEV2	3.29648	1.254729	398
DEV3	3.74623	1.222552	398
DEV4	3.94724	1.131072	398

Inter-Item Correlation Matrix

	DEV1	DEV2	DEV3	DEV4
DEV1	1.000	.613	.670	.561
DEV2	.613	1.000	.727	.579
DEV3	.670	.727	1.000	.728
DEV4	.561	.579	.728	1.000

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
14.58794	17.124	4.138175	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
DEV1	10.98995	10.237	.695	.490	.863
DEV2	11.29146	9.804	.731	.560	.849
DEV3	10.84171	9.393	.832	.700	.808
DEV4	10.64070	10.644	.705	.542	.859

4.3.1.8 Item analysis: Empowering the coachee subscale

The *empowering the coachee* subscale comprised of 7 items. Results obtained for the item analysis that was performed on the *empowering the coachee* subscale are depicted in Table 4.10.

Table 4.10

Item analysis results for the Empowering the coachee subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.915	.915	7

Item Statistics

	Mean	Std. Deviation	N
EMP1	3.81407	1.261962	398
EMP2	4.00000	1.174884	398
EMP3	3.63568	1.146864	398
EMP4	3.90452	1.142682	398
EMP5	3.70603	1.134090	398
EMP6	4.05276	1.055025	398
EMP7	3.88442	1.156172	398

Inter-Item Correlation Matrix

	EMP1	EMP2	EMP3	EMP4	EMP5	EMP6	EMP7
EMP1	1.000	.749	.630	.662	.539	.569	.591
EMP2	.749	1.000	.574	.660	.518	.571	.595
EMP3	.630	.574	1.000	.652	.564	.545	.591
EMP4	.662	.660	.652	1.000	.558	.633	.678
EMP5	.539	.518	.564	.558	1.000	.501	.566
EMP6	.569	.571	.545	.633	.501	1.000	.761
EMP7	.591	.595	.591	.678	.566	.761	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
EMP1	23.18342	30.835	.766	.645	.899
EMP2	22.99749	31.831	.751	.623	.900
EMP3	23.36181	32.418	.722	.537	.903
EMP4	23.09296	31.707	.789	.628	.896
EMP5	23.29146	33.361	.650	.433	.911
EMP6	22.94472	33.221	.726	.615	.903
EMP7	23.11307	31.788	.770	.668	.898

Scale Statistics

Mean	Variance	Std. Deviation	N of Items

26.99749	43.166	6.570102	7

This subscale had a satisfactory high reliability coefficient of .915. All the items in the *empowering the coachee* subscale had means towards the middle range of the scale. None of the items had small standard deviations that set them apart from the typical distributions observed for the majority of the items. It can therefore be concluded that all the items were sufficiently sensitive. The inter-item correlation matrix *for* the *Empowering the coachee* subscale indicates that no items in this subscale are problematic in that they all tend to correlate moderately (r_{ij}>.30) with each other. The absence of a problematic item in this scale can also be seen from the item total statistics. All the corrected item total correlations were acceptably large indicating that the correlation between each item and the total score calculated from the remaining items was satisfactory and that the items were reflecting the same underlying factor. In addition, the squared multiple correlations were all acceptably large. Results of item analysis for this subscale further revealed that none of the items if deleted would increase the current Cronbach alpha. The results for this subscale did not raise any concerns. All the items of the subscale were retained.

4.3.1.9 Item analysis: Articulating the vision to the coachee subscale

None of the items in the *articulating the vision* subscale as shown in Table 4.11 had extreme low or extreme high means. None of the items displayed small standard deviations that set them apart from the typical distributions observed for the majority of the items. It can therefore be concluded that all the items were sufficiently sensitive. No items in this subscale show themselves as questionable items in that they all tends to correlate moderately (r_{ij}>.30) with each other. The absence of problematic items in this scale can also be seen from the item total statistics. All the corrected item-total correlations were acceptably large indicating that the correlation between each item and the total score calculated from the remaining items was satisfactory and that the items were reflecting the same underlying factor. In addition, the squared multiple correlations were all sufficiently large. Results of item analysis for this subscale further revealed that none of the items if deleted would

increase the current Cronbach alpha (.891). The results for this subscale did not raise any concerns. All the items of the subscale were retained.

Table 4.11

Item analysis results for the Articulating the vision to the coachee subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.891	.891	4

Item Statistics

	Mean	Std. Deviation	N
ART1	3.78392	1.165647	398
ART2	3.64573	1.209792	398
ART3	3.74121	1.151436	398
ART4	3.87186	1.125013	398

Inter-Item Correlation Matrix

	ART1	ART2	ART3	ART4
ART1	1.000	.637	.615	.622
ART2	.637	1.000	.717	.729
ART3	.615	.717	1.000	.711
ART4	.622	.729	.711	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ART1	11.25879	9.880	.693	.481	.884
ART2	11.39698	9.076	.793	.635	.847
ART3	11.30151	9.501	.774	.607	.855
ART4	11.17085	9.593	.783	.622	.851

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
15.04271	16.318	4.039563	4

4.3.1.10 Item analysis: Inspiring and motivating the coachee subscale

The Inspiring and motivating the coachee subscale comprised of 4 items. Results obtained for the item analysis that was performed on the *inspiring and motivating the coachee subscale* are depicted in Table 4.12.

Table 4.12

Item analysis results for the inspiring and motivating the coachee subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.899	.899	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
INP1	11.49497	9.440	.751	.565	.878
INP2	11.66080	8.718	.785	.619	.866
INP3	11.46734	8.789	.807	.653	.857
INP4	11.55276	9.276	.758	.577	.876

Item Statistics

	Mean	Std. Deviation	N
INP1	3.89698	1.077333	398
INP2	3.73116	1.179414	398
INP3	3.92462	1.144188	398
INP4	3.83920	1.101531	398

Inter-Item Correlation Matrix

	INP1	INP2	INP3	INP4
INP1	1.000	.678	.693	.650
INP2	.678	1.000	.735	.676
INP3	.693	.735	1.000	.708
INP4	.650	.676	.708	1.000

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
15.39196	15.574	3.946383	4

The Cronbach alpha for the current subscale is .847. This falls above the critical cut-off value of .80 set for this study. All the items in the *inspiring and motivating the coachee* subscale had means towards the middle range of the scale. None of the items had small standard deviations that set them apart from the typical distributions observed for the majority of the items. It can therefore be concluded that all the items were sufficiently sensitive. The inter-item correlation matrix *for* the *inspiring and motivating the coachee* subscale indicates that no items in this subscale are problematic in that they all tend to correlate moderately (r_{ij}>.30) with each other. The absence of problematic items in this scale can also be seen from the item-total statistics. The scale variance reduces substantially when each item is deleted from

the scale. All the corrected item total correlations were sufficiently large indicating that the correlation between each item and the total score calculated from the remaining items was satisfactorily and that the items were reflecting the same underlying factor. In addition, the squared multiple correlations were all satisfactorily large. Results of item analysis for this subscale further revealed that none of the items if deleted would increase the current Cronbach alpha. The Cronbach alpha decreases when each item is deleted from the scale, indicating that the items tend to respond in unison to changes in the level of the latent variable being measured and the deletion of any item will negatively affect the internal consistency of this subscale. Based on the basket of available evidence it was decided to retain all the items in the *inspiring and motivating the coachee* subscale.

4.3.1.11 Item analysis: Building trust and demonstrating integrity subscale

The *building trust and demonstrating integrity subscale* comprised 4 items. The results for the item analysis for this scale are depicted in Table 4.13. The *building trust and demonstrating integrity* subscale obtained a satisfactorily high Cronbach's alpha of .916 indicating high internal consistency of the items comprising this sub-scale. The reported Cronbach alpha falls comfortably above the critical cut-off value of .80 set for this study. None of the items in this scale had extreme low or extreme high means (on a 5 point scale). None of the items displayed small standard deviations that set them apart from the typical distributions observed for the majority of the items. It can therefore be concluded that all the items were sufficiently sensitive. The inter-item correlation matrix for the *building trust and demonstrating integrity* subscale indicates that no items in this subscale are problematic in that they all tend to correlate moderately (r_{ij}>.30) with each other. The absence of problematic items in this scale can also be seen from the item-total statistics. The scale variance reduces substantially when each item is deleted from the scale. All the corrected item-total correlations were satisfactorily large indicating that the correlation between each item and the total score calculated from the remaining items was satisfactorily and that the items were reflecting the same underlying factor. In addition, the squared multiple correlations were all sufficiently large. Results of item analysis for this subscale further revealed that none of the items if deleted would increase the

current Cronbach alpha. The Cronbach alpha decreases when each item is deleted from the scale, indicating that the items tend to respond in unison to changes in the level of the latent variable being measured and the deletion of any item will negatively affect the internal consistency of this subscale. Based on the basket of available evidence it was decided to retain all the items in *the building trust and demonstrating integrity* subscale.

Table 4.13

Item analysis results for the building trust and demonstrating integrity subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.916	.916	8

Item Statistics

	Mean	Std. Deviation	N
TRU1	4.04774	1.219172	398
TRU2	3.58040	1.209666	398
TRU3	3.84171	1.156547	398
TRU4	3.87688	1.143338	398
TRU5	3.74121	1.129348	398
TRU6	4.01256	1.121057	398
TRU7	3.74623	1.159094	398
TRU8	4.10302	1.175716	398

Inter-Item Correlation Matrix

	TRU1	TRU2	TRU3	TRU4	TRU5	TRU6	TRU7	TRU8
TRU1	1.000	.594	.634	.635	.583	.398	.568	.666
TRU2	.594	1.000	.649	.627	.545	.331	.531	.585
TRU3	.634	.649	1.000	.677	.690	.433	.673	.681
TRU4	.635	.627	.677	1.000	.711	.443	.634	.632
TRU5	.583	.545	.690	.711	1.000	.466	.621	.608
TRU6	.398	.331	.433	.443	.466	1.000	.442	.444
TRU7	.568	.531	.673	.634	.621	.442	1.000	.637
TRU8	.666	.585	.681	.632	.608	.444	.637	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
TRU1	26.90201	41.655	.732	.558	.904
TRU2	27.36935	42.354	.689	.517	.908
TRU3	27.10804	41.351	.805	.665	.898
TRU4	27.07286	41.710	.789	.642	.900
TRU5	27.20854	42.231	.760	.611	.902

TRU6	26.93719	45.661	.511	.280	.921
TRU7	27.20352	42.228	.736	.558	.904
TRU8	26.84673	41.636	.767	.604	.901

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
30.94975	54.662	7.393406	8

4.3.1.12 Item analysis: Demonstrating decisiveness and hardiness subscale

The *demonstrating decisiveness and hardiness* subscale comprised of 4 items. Results obtained for the item analysis that was performed on the *demonstrating decisiveness and hardiness* subscale are depicted in Table 4.14.

Table 4.14

Item analysis results for Demonstrating decisiveness and hardiness subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.876	.877	4

Item Statistics

	Mean	Std. Deviation	N
HAR1	3.78392	1.152609	398
HAR2	3.87437	1.087736	398
HAR3	3.88945	1.147921	398
HAR4	3.81910	1.130051	398

Inter-Item Correlation Matrix

	HAR1	HAR2	HAR3	HAR4
HAR1	1.000	.655	.597	.631
HAR2	.655	1.000	.679	.654
HAR3	.597	.679	1.000	.621
HAR4	.631	.654	.621	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
HAR1	11.58291	8.692	.716	.518	.848
HAR2	11.49246	8.759	.768	.592	.828
HAR3	11.47739	8.683	.722	.532	.846

HAR4	11.54774	8.747	.728	.530	.843

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
15.36683	14.888	3.858467	4

This subscale had a satisfactorily high reliability coefficient of .876. All the items in the *demonstrating decisiveness and hardiness* subscale had means towards the middle range of the scale. None of the items had small standard deviations that set them apart from the typical distributions observed for the majority of the items. It can therefore be concluded that all the items were sufficiently sensitive. The inter-item correlation matrix for the *demonstrating decisiveness and hardiness* subscale indicates that no items in this subscale are problematic in that they all tend to correlate moderately (r_{ij}>.30) with each other. The absence of a problematic item in this scale can also be seen from the item-total statistics. All the corrected item total correlations were pleasingly large indicating that the correlation between each item and the total score calculated from the remaining items was satisfactorily and that the items were reflecting the same underlying factor. In addition, the squared multiple correlations were sufficiently large. Results of item analysis for this subscale further revealed that none of the items if deleted would increase the current Cronbach alpha. The results for this subscale did not raise any concerns. All the items of the subscale were retained.

4.3.1.13 Item analysis: Acting entrepreneurial subscale

The *acting entrepreneurial* subscale comprised of 6 items. Results obtained for the item analysis that was performed on the *acting entrepreneurial* subscale are depicted in Table 4.15. None of the items in the *acting entrepreneurial* subscale had extreme low or extreme high means. None of the items displayed small standard deviations that set them apart from the typical distributions observed for the majority of the items. It can therefore be concluded that all the items were sufficiently sensitive. The Cronbach alpha for this scale is satisfactorily high (.885).

The inter-item correlation matrix for the *acting entrepreneurial* subscale indicates that no items in this subscale show themselves as questionable in that they all tend to correlate moderately (r_{ij}>.30) with each other, though ENT2 tends to correlate lower with the other items. The item-total statistics have further shown that ENT2 is a problematic item. ENT2 has a substantially lower squared multiple correlation (.279.) than the rest of the items of the subscale. The Cronbach alpha of the scale is positively affected when item ENT2 is deleted from the scale. When ENT2 is deleted the Cronbach alpha for this scale increases to .894. A smaller squared multiple correlation and the increase in alpha affected by the removal of this item (.894 from .885) justified the deletion of this item. However the minimal increase in the Cronabach alpha, the satisfactory current level of the reliability coefficient and the small number of items in this subscale argued against the deletion of this item. It was therefore decided to retain all the items in the subscale.

Table 4.15

Item analysis results for theaActing entrepreneurial subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.885	.885	6

Item Statistics

	Mean	Std. Deviation	N
ENT1	3.26382	1.266999	398
ENT2	3.60553	1.186689	398
ENT3	3.58794	1.215374	398
ENT4	3.57286	1.240974	398
ENT5	3.76884	1.147480	398
ENT6	3.84925	1.145525	398

Inter-Item Correlation Matrix

	ENT1	ENT2	ENT3	ENT4	ENT5	ENT6
ENT1	1.000	.322	.558	.583	.570	.552
ENT2	.322	1.000	.462	.469	.429	.468
ENT3	.558	.462	1.000	.755	.616	.675
ENT4	.583	.469	.755	1.000	.652	.651
ENT5	.570	.429	.616	.652	1.000	.681
ENT6	.552	.468	.675	.651	.681	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ENT1	18.38442	23.577	.632	.427	.876

ENT2	18.04271	25.436	.511	.279	.894
ENT3	18.06030	22.561	.773	.641	.852
ENT4	18.07538	22.226	.786	.652	.850
ENT5	17.87940	23.456	.737	.566	.859
ENT6	17.79899	23.259	.760	.595	.855

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
21.64824	32.964	5.741438	6

4.3.1.14 Item analysis: Showing concern for the coachee subscale

The *showing concern for the coachee* subscale comprised of 6 items. Results obtained for the item analysis that was performed on the *showing concern for the coachee* subscale are depicted in Table 4.16.

Table 4.16

Item analysis results for Showing concern for the coachee subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.926	.926	6

Item Statistics

	Mean	Std. Deviation	N
CON1	3.82663	1.134570	398
CON2	4.00754	1.096109	398
CON3	3.89950	1.168413	398
CON4	3.78894	1.194310	398
CON5	4.17085	1.083866	398
CON6	3.72613	1.125778	398

Inter-Item Correlation Matrix

	CON1	CON2	CON3	CON4	CON5	CON6
CON1	1.000	.700	.631	.676	.671	.649
CON2	.700	1.000	.687	.721	.716	.639
CON3	.631	.687	1.000	.765	.684	.622
CON4	.676	.721	.765	1.000	.705	.663
CON5	.671	.716	.684	.705	1.000	.619
CON6	.649	.639	.622	.663	.619	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
CON1	19.59296	23.980	.770	.602	.915
CON2	19.41206	23.956	.807	.657	.910

CON3	19.52010	23.520	.789	.648	.912
CON4	19.63065	22.934	.827	.698	.907
CON5	19.24874	24.228	.789	.629	.912
CON6	19.69347	24.389	.734	.543	.919

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
23.41960	33.821	5.815580	6

This subscale had a satisfactory high reliability coefficient of .926. All the items in the *showing concern for the coachee* subscale had means towards the middle range of the scale. None of the items had small standard deviations that set them apart from the typical distributions observed for the majority of the items. It can therefore be concluded that all the items were sufficiently sensitive. The inter-item correlation matrix *for* the *showing concern for the coachee* subscale indicates that no items in this subscale are problematic in that they all tend to correlate moderately (r_{ij}>.30) with each other. The absence of problematic items in this scale can also be seen from the item-total statistics. The scale variance reduces substantially when each item is deleted from the scale. All the corrected item total correlations were satisfactorily large indicating that the correlation between each item and the total score calculated from the remaining items was satisfactorily and that the items were reflecting the same underlying factor. In addition, the squared multiple correlations were all sufficiently large. Results of item analysis for this subscale further revealed that none of the items if deleted would increase the current Cronbach alpha. The Cronbach alpha decreases when each item is deleted from the scale, indicating that the items tend to respond in unison to changes in the level of the latent variable being measured and the deletion of any item will negatively affect the internal consistency of this subscale. Based on the basket of available evidence it was decided to retain all the items in the the *showing concern for the coachee* subscale.

4.3.1.15 Item analysis: Displaying sound interpersonal skills subscale

The *displaying sound interpersonal skills subscale* comprised 6 items. The results for the item analysis for this scale are depicted in Table 4.17. The *displaying sound interpersonal skills* subscale obtained a satisfactorily high Cronbach's alpha of .921. None of the items in this scale had extreme low or extreme high means (on a 5 point

scale). None of the items displayed small standard deviations that set them apart from the typical distributions observed for the majority of the items. It can therefore be concluded that all the items were sufficiently sensitive. The inter-item correlation matrix fo*r* the *displaying sound interpersonal skills* subscale indicates that no items in this subscale are problematic in that they all tend to correlate moderately (r_{ij}>.30) with each other. The absence of a problematic item in this scale can also be seen from the item total statistics. All the corrected item-total correlations were acceptably large indicating that the correlation between each item and the total score calculated from the remaining items was satisfactory and that the items were reflecting the same underlying factor. In addition, the squared multiple correlations were all acceptably large. Results of item analysis for this subscale further revealed that none of the items if deleted would increase the current Cronbach alpha. The Cronbach alpha decreases when each item is deleted from the scale, indicating that the items tend to respond in unison to changes in the level of the latent variable being measured and the deletion of any item will negatively affect the internal consistency of this subscale. Based on the basket of available evidence it was decided to retain all the items in the *displaying sound interpersonal skills* subscale.

Table 4.17

Item analysis results for the Displaying sound interpersonal skills subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.921	.922	6

Item Statistics

	Mean	Std. Deviation	N
SOU1	3.74121	1.127115	398
SOU2	3.89447	1.124008	398
SOU3	3.67839	1.140986	398
SOU4	3.57789	1.248763	398
SOU5	3.88442	1.149618	398
SOU6	3.68593	1.218809	398

Inter-Item Correlation Matrix

	SOU1	SOU2	SOU3	SOU4	SOU5	SOU6
SOU1	1.000	.704	.630	.579	.636	.612
SOU2	.704	1.000	.710	.605	.755	.645
SOU3	.630	.710	1.000	.707	.722	.706
SOU4	.579	.605	.707	1.000	.612	.601

SOU5	.636	.755	.722	.612	1.000	.707
SOU6	.612	.645	.706	.601	.707	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SOU1	18.72111	25.612	.733	.560	.912
SOU2	18.56784	24.961	.803	.679	.903
SOU3	18.78392	24.628	.823	.688	.900
SOU4	18.88442	24.757	.719	.544	.915
SOU5	18.57789	24.693	.808	.679	.902
SOU6	18.77638	24.537	.764	.601	.908

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
22.46231	35.247	5.936892	6

4.3.1.16 Item analysis: *Reviewing performance* subscale

The *reviewing performance subscale* comprised 4 items. The results for the item analysis for this scale are depicted in Table 4.18. The *reviewing performance* subscale obtained a satisfactorily high Cronbach's alpha of .892. None of the items in this scale had extreme low or extreme high means (on a 5 point scale). None of the items displayed small standard deviations that set them apart from the typical distributions observed for the majority of the items. It can therefore be concluded that all the items were sufficiently sensitive. The inter-item correlation matrix for the *reviewing performance* subscale indicates that no items in this subscale are problematic in that they all tend to correlate moderately (r_{ij}>.30) with each other. The absence of problematic items in this scale can also be seen from the item-total statistics. All the corrected item-total correlations were acceptably large indicating that the correlation between each item and the total score calculated from the remaining items was satisfactory and that the items were reflecting the same underlying factor. In addition, the squared multiple correlations were all acceptably large. Results of item analysis for this subscale further revealed that none of the items if deleted would increase the current Cronbach alpha. The Cronbach alpha decreases when each item is deleted from the scale, indicating that the items tend to respond in unison to changes in the level of the latent variable being measured and the deletion of any item will negatively affect the internal consistency of this

subscale. Based on the basket of available evidence it was decided to retain all the items in the *reviewing performance* subscale.

Table 4.18

Item analysis results for the reviewing performance subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.892	.892	4

Item Statistics

	Mean	Std. Deviation	N
REV1	3.87940	1.175110	398
REV2	3.87186	1.142785	398
REV3	3.97487	1.069086	398
REV4	3.83166	1.163813	398

Inter-Item Correlation Matrix

	REV1	REV2	REV3	REV4
REV1	1.000	.697	.659	.703
REV2	.697	1.000	.616	.702
REV3	.659	.616	1.000	.671
REV4	.703	.702	.671	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
REV1	11.67839	8.843	.780	.610	.855
REV2	11.68593	9.128	.759	.585	.863
REV3	11.58291	9.705	.725	.531	.875
REV4	11.72613	8.864	.788	.621	.852

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
15.55779	15.678	3.959547	4

4.3.1.17 Item analysis: Acknowledging and celebrating performance subscale

The *acknowledging and celebrating performance* subscale comprised of 4 items. Results obtained for the item analysis that was performed on the *acknowledging and celebrating performance* subscale are depicted in Table 4.19.

Table 4.19

Item analysis results for the Acknowledging and celebrating performance subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.914	.914	4

Item Statistics

	Mean	Std. Deviation	N
ACK1	4.00000	1.172738	398
ACK2	3.84422	1.177392	398
ACK3	3.78392	1.271086	398
ACK4	3.99749	1.201382	398

Inter-Item Correlation Matrix

	ACK1	ACK2	ACK3	ACK4
ACK1	1.000	.704	.686	.779
ACK2	.704	1.000	.711	.730
ACK3	.686	.711	1.000	.749
ACK4	.779	.730	.749	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ACK1	11.62563	10.925	.798	.655	.890
ACK2	11.78141	10.962	.787	.620	.893
ACK3	11.84171	10.411	.788	.627	.894
ACK4	11.62814	10.496	.841	.713	.874

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
15.62563	18.487	4.299616	4

This subscale had a satisfactorily high reliability coefficient of .914. All the items in the *acknowledging and celebrating performance* subscale had means towards the middle range of the scale. None of the items had small standard deviations that set them apart from the typical distributions observed for the majority of the items. It can therefore be concluded that all the items were sufficiently sensitive. The inter-item correlation matrix for the *acknowledging and celebrating performance* subscale indicates that no items in this subscale are problematic in that they all tend to correlate moderately (r_{ij}>.30) with each other. The absence of problematic items in this scale can also be seen from the item-total statistics. All the corrected item-total correlations were acceptably large indicating that the correlation between each item

and the total score calculated from the remaining items was satisfactory and that the items were reflecting the same underlying factor. In addition, the squared multiple correlations were all acceptably large. Results of item analysis for this subscale further revealed that none of the items if deleted would increase the current Cronbach alpha. The results for this subscale did not raise any concerns. All the items of the subscale were retained.

4.3.2 SUMMARY OF ITEM ANALYSIS RESULTS

The purpose of performing item analysis on the variours sub-cales of the CCCQ was to evaluate the success with which the items of the subscales represent the various latent coaching dimensions measured by the CCCQ. In the design and development of this instrument the intention was to construct essentially one dimensional sets of items to reflect variance in each of the seventeen latent coaching dimensions. The items were meant to function as relatively homogenous stimulus sets to which respondents react with behaviour that is a relatively uncontaminated expression primarily of the performance construct as it applies to the focal employee. The purpose with the item analysis was to gather evidence on the extent to which this intention succeeded. Item statistics were calculated for the items in each subscale. These statistics included the item-total correlations, the squared multiple correlations, the inter item correlations and the Cronbach alpha coefficients. To the extent that the intention succeeded the item-total correlations, the squared multiple correlations, the inter item correlations should be moderately high and the Cronbach alpha coefficients should exceed .80. The results of the item analysis performed on the various scales used to operationalise the latent coaching dimension indicated that generally the design intention as described above did succeed. The item analysis results can generally be considered satisfactory. Two items from two subscales namely *monitoring the internal environment* as well as the *acting entrepreneurial* were identified as somewhat problematic but both were not deleted from the CCCQ due to the small number of items in these two subscales. Therefore no items were deleted from the instrument.

4.4 DIMENSIONALITY ANALYSIS

The intention of the CCCQ was to construct effectively one-dimensional sets of items that would reflect variance in the 17 latent dimensions of the coaching construct. The design intention was that a response to an indicator variable should be an expression of a specific underlying coaching variable. The latent first-order coaching dimension that is reflected in the indicator variables is assumed to be unidimensional. The manner in which the 17 latent coaching dimensions were conceptualised does not make provision for any further division of the coaching dimensions into more specific coaching behaviours. To evaluate the assumption that variance in the responses to the set of items comprising each subscale was to a sufficient degree brought about by a single underlying factor, principal axis factoring analysis with oblique rotation was performed on each of the 17 subscales. This process allows the evaluation of the success with which each indicator variable along with the rest of the items in the subscale measures the performance dimension it professes to measure. Again a similar logic than that underpinning the item analysis applies here. If the design intention succeeded to develop a set of items that successfully reflect a specific latent coaching dimension and this latent coaching dimension is a unidimensional construct, the extraction of a single factor and having each item load reasonably high on the single factor should allow the accurate reproduction of the observed inter-item correlation matrix. The extraction of a single factor and having each item load reasonably high on the single factor that allows the accurate reproduction of the observed inter-item correlation matrix does not, however, necessarily mean that the target latent coaching dimension carrying a specific constitutive definition has been successfully measured. The extraction of a single factor, along with adequate loadings on the factor will, however, mean that the hypothesis that items in the specific subscale all successfully measure the target latent coaching dimension as constitutively defined has survived the opportunity to be falsified.

Allen and Yen (1979) describe factor analysis as referring to a family of multivariate statistical procedures that seeks to condense a large number of observed variables (in this case items) into highly correlated groups that measure a single underlying construct. In the context of this research, the observed variables are the extent of

agreement with specific behavioural statements. Byrne (2001) discusses a factor-analytic model as primarily focused on how, and the extent to which, values on the observed variables are generated by underlying latent variables or factors. The factor loading pattern and the parameters characterising the regression paths from the factors to the observed variables (i.e., factor loadings) are therefore of primary interest in this instance. Factor loading is described as the slope of the regression of an observed variable on the underlying factor that it represents (Allen & Yen, 1979). Byrne (2001) further indicates that although inter-factor relations are of interest, any regression structure amongst them is not considered in the factor-analytic model. In essence this approach assumes that each variable is a linear combination of some number of common factors and a unique factor. According to Stanek (1995, p. 9) as cited in Moyo (2009), this can be presented as follows:

$Z_j = [\Sigma_k a_{jk} s_k) + a_j u s_j u]$

Where:

z - standardised variable,

a - factor loading

s - common factor or factor score

j - index for variables,

k - index for factors, and

u - denotes the unique portion

Spangenberg and Theron (2004) are of the view that factor analysis performed on a correlation or covariance matrix might not be the most effective procedure for determining the dimensionality of a subscale. There is a possible danger in extracting artefact factors reflecting differences in item difficulty value, kurtosis or variance only. Schepers (1992) as cited in Moyo (2009) stresses the need to calculate the descriptive statistics for the items of each subscale to determine the possibility of multiple factors appearing as an artefact of differential item characteristics like skewness. Descriptive statistics were consequently calculated for the items of each subscale to examine the possibility that the failure to corroborate the unidimensionality assumption, where it occurred, was due to differential item characteristics.

The Statistical Package for the Social Sciences (SPSS) 20.0 was used to perform a series of 17 exploratory factor analyses on the items comprising the subscales of the CCCQ. Table 4.20 is a summary of the results of the factor analyses.

Table 4.20

Factor matrix for the CCCQ

Subscale	Determinant	KMO	Bartlett X^2	% Variance explained	No. of factors extracted
EXS	.214	.760	608.441*	54.885	1
INS	.132	.803	798.550*	62.192	1
VIS	.121	.828	834.096*	64.860	1
STR	.146	.818	760.699*	62.278	1
PLA	.120	.829	838.545*	65.212	1
DIS	.063	.876	1091.832*	62.684	1
DEV	.112	.811	865.551*	65.319	1
EMP	.011	.904	1761.031*	60.770	1
ART	.100	.841	910.223*	67.508	1
INP	.089	.847	954.838*	69.103	1
TRU	.008	.935	1921.092*	58.623	1
HAR	.134	.833	794.425*	64.039	1
ENT	.040	.889	1265.214*	57.696	1
CON	.014	.921	1691.406*	67.764	1
SOU	.015	.906	1651.511*	66.433	1
REV	.101	.841	905.815*	67.580	1
ACK	.062	.846	1100.640*	72.755	1

*p < .01

4.4.1 EVALUATING THE FACTOR ANALYSABILITY OF THE INTER-ITEM CORRELATION MATRIX

In evaluating the factor analysability of the inter-item correlation matrix the question is considered whether it is meaningful to search for one or more common factors underlying the observed inter-item correlation matrix. The concern here is not really that the correlation matrices are not factor analysable but rather whether a single factor can satisfactorily explain the observed correlation matrix. Statistics evaluating the factor analysability of the correlation matrices will therefore be interpreted as comments on the unidimensionality assumption. When the factor analysability statistics suggest that the search for common factors would be fruitless this comments negatively on the unidimensionality assumption. The Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test were used to examine the factor analysability of the observed inter-item correlation matrices. The KMO measure of sampling

adequacy is an index that represents the ratio of the sum of the squared inter-item correlations and the squared inter-item correlations plus the sum of the squared partial inter-item correlation coefficients (Sricharoena & Buchenrieder; 2005). The measure varies between 0 and 1 with values closer to 1.00 are considered to be better. A value of 1 will be the result when items reflect one or more common underlying factors so that when these factors are statistically controlled, the partial correlations between items will approach zero. The correlation matrix is considered factor analysable when KMO approaches unity (but at least >.6). In the case of the CCCQ, KMO values ranges between .935 and .760 (Table 4.20). This indicates that all the correlation matrices are factor analysable.

The Bartlett test of sphericity was used to test the null hypothesis that the inter-item correlation matrix is an identity matrix in the parameter. An identity matrix is one in which all items only correlate with themselves and not with each other (i.e. all the diagonal elements are 1 and all off diagonal elements are 0). In the case of all 17 subscales, the stated null hypothesis could be rejected which means that the correlation matrices are all factor analysable[16].

Taken together, these results (i.e., KMO, Bartlett's test of sphericity and the magnitude and significance of the inter-item correlations) suggest that it would be meaningful to conduct factor analysis on the 17 inter-item correlation matrices. Moreover the unidimensionality assumption survived the opportunity to be refuted.

4.4.2 FACTOR EXTRACTION METHOD

Each one of the 17 CCCQ subscales were consequently factor analysed using principal axis factor analysis. Several extraction methods have been developed to extract factors from an inter-item correlation matrix. These include amongst others,

[16] To be factor analyzable the observed inter-item correlation matrix has to contain numerous sizable (r_{ij} > 0,30) and statistically significant (p<.05) correlations. This requirement seems to have been met by all 17 observed inter-item correlation matrices (see Appendix).

unweighted least squares, generalised least squares, maximum likelihood, principal axis factoring, principal component analysis and image factoring which are all compatible with SPSS software. According to Costello and Osborne (2005) detailed information on the relative strengths and weaknesses of these techniques are scarce and often only available in obscure references. However comprehensive presentations of the various possible extraction techniques are available in Nunnally (1978) and in Tabachnick and Fidell (2001). In terms of factor extraction, an important decision has to be made between principle component analysis and factor analysis. Factor analysis was chosen for this research because it seeks the least number of factors which can account for the common variance shared by the observed variables. The objective of the dimensionality analysis is to evaluate the assumption that a single underlying personality factor can satisfactorily account for the variance shared by the items in a subscale.

Principal component analysis is an alternative method. This method does not differentiate between common and unique variance as it endeavours to determine factors which account for total (unique and common) variance in a subset of variables (Fabrigar, Wegener, MacCallum & Strahan, 1999). In comparison to principle component analysis, factor analysis better serves the research objective of evaluating whether the items comprising each subscale of the CCCQ only reflect a single underlying coaching factor. The principal axis factoring method was specifically chosen since it generally provides a factor decomposition that is easily interpretable (Costello & Osborne, 2005**;** Fabrigar, Wegener, MacCallum & Strahan, 1999)**.**

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4.4.3 DECISION ON THE NUMBERS OF FACTORS TO EXTRACT

A general assumption in the analysis of the observed inter-item correlation matrix would be that observed correlation matrix can be perfectly explained by extracting as many factors as there are variables being analysed (Myburgh, 2013). The more

factors that are extracted, the better the fit between the observed and reproduced correlation matrices, but the less parsimonious the factor structure becomes (Tabachnick & Fidell, 2001). Therefore an important question to decide on is the number of factors to extract that will be meaningful for interpretation. The retained factors should therefore account for the covariance between the items in any particular scale. Decision on the number of factors to be extracted should be guided by theory (Fabrigar et al., 1999). The eigenvalue-greater-than-one criterion and the scree test were used in this study to determine the number of factors to extract (Fabrigar et al., 1999).

4.4.3.1 Eigenvalue-greater-than-one criterion

This method is known also as the Kaiser criterion (Kaiser, 1960). Eigenvalue or latent root refers to the amount of variance accounted for by a factor and is the sum of the squared factor loadings of the observed variables in a column, that is, the sum of the variances for each variable (Hardy & Bryman, 2004). Taylor (2005) presents the criterion of eigenvalues greater than 1 as being attributable to Guttman (1954), adapted by Kaiser in 1960. Computing eigenvalues for the correlation matrix is one of the approaches often used to determine the number of factors to extract. This criterion ignores factors that have eigenvalues less than 1 as they are viewed as contributing little to the explanation of variances in the variables and may be ignored as redundant. According to this criterion, only factors with eigenvalues greater than 1 are retained. However Taylor (2005) cautions that the cut-off point at 1 should be seen as somewhat arbitrary. The problem is that there could be factors which fall close to either side of this value and therefore they would account for almost exactly the same amount of variance. Nonetheless only those that fall above the cut-off would be retained. For example, according to this criterion, a factor with an eigenvalue of 1.01 would be retained as a major common factor whereas one with an eigenvalue of .99 could be rejected although the difference between these two is insignificant. This problem would apply to any critical eigenvalue cut-off. Hence this is one of the reasons for using multiple procedures for determining the number of factors to be extracted. To remedy this shortcoming Hardy and Bryman (2004) suggest that it would be worthwhile extracting both more and fewer factors than the

number suggested by the eigenvalue-greater-than-one rule to assess whether these factors, when rotated, are meaningful. To reiterate this viewpoint, these scholars acknowledge that while the Kaiser criterion is the default in SPSS and most of the computer programs, it is not recommended that it should be used as the sole cut-off criterion for estimating the number of factors underlying the observed correlation matrix.

4.4.3.2 Scree test

A scree test is an examination of the graph of plotted eigenvalues associated with each of the factors by looking for a "break" between the factors with relatively large eigenvalues and those with small eigenvalues (Cattell, 1966). According to Taylor (2005) the word scree derives its meaning from the rubble at the bottom of a cliff. In this context, it refers to the factors that could be discarded after a substantial drop in the eigenvalues. Taylor (2005) contends that the number of factors to be extracted is shown by the number of factors before the drop or break in the scree plot. Hence, the factors that appear before the break (or elbow) are assumed to be meaningful and are retained for rotation; and those appearing after the break (elbow) are assumed to be unimportant and are not retained. This method has been criticised by scholars like Hayton and Scarpello (2004) as cited in Moyo (2009) who view it as laden with subjectivity and ambiguity, especially where there are either no clear breaks or two or more apparent breaks, as well as in situations where breaks are less likely in particular with smaller sample sizes and when the ratio of variables to factors is low.

4.4.4. ROTATION OF EXTRACTED FACTORS

Once the number of factors to be extracted has been identified, they are then rotated, if more than a single factor has been extracted, to extract meaning from them (Moyo, 2009). According to Powell and Peng (1989) rotation is the process of re-orientating factors in order to make factor loadings more interpretable. As is the case with the extraction methods, there are a variety of choices. Varimax, quartimax and aquamax are orthogonal methods of rotation while oblique methods of rotation consists of direct oblimin, quartimin and promax (Costello & Osborne, 2005;

Tabachnick & Fidell, 2001). For this study, it was expected that exploratory factor analysis performed on each subscale of the CCCQ would result in the extraction of one factor underlying each coaching subscale. Under these expectations, the rotation of the extracted factor structure would not be required or meaningful. Nonetheless in the event of factor fission, even though such an event may be considered unlikely, it makes sense to make provision for the possibility that the extracted factors might be correlated. For the purpose of this study an oblique rotation method was therefore utilised to aid in interpretation and reporting in the case of factor fission.

4.4.5 DIFFERENTIAL SKEWNESS

Differential item skewness could result in the extraction of artefact factors reflecting differences in skewness (Schepers, 1992 as cited in Moyo, 2009). A skewness statistic was therefore calculated for each item and its significance evaluated. All the items followed a statistically significantly ($p<.05$) negatively skewed and leptokurtic distribution (See Appendix G). Due to the absence of positively skewed items and the consistency in distributional form across items this did, however, not result in the emergence of artefact factors.

4.4.6 DISCUSSION OF THE DIMENSIONALITY OF THE INDIVIDUAL SCALES OF THE CCCQ

Principal axis factor analysis with oblique rotation was used on the subscales of the CCCQ to determine unidimensionality. The eigenvalue-greater-than-one rule combined with the scree plot was used to determine the number of factors to be extracted. A summary of results obtained for each subscale are presented below.

4.4.6.1 Expolatory factor analysis: Monitoring the External Environment subscale

Investigating the unidimensionality assumption that the 4 items comprising the *monitoring the external environment* subscale all reflect a single underlying coaching

factor suggests that a single factor is required to satisfactorily explain the observed correlations between the 4 items of this subscale and that all items have satisfactory loadings on the extracted factor (>.50). Only one factor has eigenvalues greater than one. The scree plot also suggests the extraction of a single factor. The resultant factor structure is shown in Table 4.21.

Table 4.21

Factor structure for the monitoring the external environment subscale

Factor Matrix

	Factor 1
EX1	.639
EX2	.720
EX3	.844
EX4	.746

There are 3 (50.0%) non-redundant residuals with absolute values greater than .05 implying that the solution provides a somewhat tenuous explanation for the observed inter-item correlation matrix. The unidimensionality assumption is therefore corroborated for the *monitoring the external environment* subscale. 54.885% of the total subscale variance can be explained by the extracted factor.

4.4.6.2 Exploratory factor analysis: Monitoring the internal environment subscale

One factor was extracted, since only one factor obtained an eigenvalue greater than 1. The scree plot also suggested that a single factor should be extracted. The factor matrix indicated that all the items loaded on one factor satisfactory as all factor loadings were larger than .50. The resultant factor structure is shown in Table 4.22.

Table 4.22

Factor structure for the monitoring the internal environment subscale

Factor Matrix	
	Factor 1
INS1	.575
INS2	.844
INS3	.848
INS4	.852

None (0%) of the non-redundant residuals obtained absolute values greater than .05. The extracted factor solution therefore provided a highly credibly explanation for the observed inter-item correlation matrix. The unidimensionality assumption is therefore corroborated for this subscale. 62.192% of the total subscale variance can be explained by the extracted factor.

4.4.6.3 Exploratory factor analysis: Developing a challenging coachee vision subscale

Investigating the unidimensionality assumption that the 4 items comprising the *developing a challenging coachee vision* subscale all reflect a single underlying coaching factor suggests that a single factor is required to satisfactorily explain the observed correlations between the 4 items of this subscale and that all items have satisfactory loadings on the extracted factor (>.50). Only one factor has eigenvalues greater than one. The scree plot also suggests the extraction of a single factor. The resultant factor structure is shown in Table 4.23.

Table 4.23

Factor structure for the developing a challenging coachee vision subscale

Factor Matrix	
	Factor 1
VIS1	.713
VIS2	.849

VIS3	.855
VIS4	.797

There are no (0%) non-redundant residuals with absolute values greater than .05 implying that the solution provides a highly credible explanation for the observed inter-item correlation matrix. The unidimensionality assumption is therefore corroborated for the *developing a challenging coachee vision* subscale. 64.860% of the total subscale variance can be explained by the extracted factor.

4.4.6.4 Exploratory factor analysis: Conceptualising strategy subscale

One factor was extracted, since only one factor obtained an eigenvalue greater than 1. The scree plot also suggested that a single factor should be extracted. The factor matrix indicated that all the 4 items loaded on one factor satisfactory as all factor loadings were larger than .50. The resultant factor structure is shown in Table 4.24.

Table 4.24

Factor structure for the conceptualising strategy subscale

Factor Matrix	
	Factor 1
STR1	.701
STR2	.885
STR3	.753
STR4	.806

None (0%) of non-redundant residuals had absolute values greater than .05 implying that the solution provides a highly credible explanation for the observed inter-item correlation matrix. The unidimensionality assumption is therefore corroborated for the *conceptualising strategy* subscale. 62.278% of the total subscale variance can be explained by the extracted factor.

4.4.6.5 Developing coachee performance plans subscale

One factor was extracted, since only one factor obtained an eigenvalue greater than 1. The scree plot also suggested that a single factor should be extracted. The factor matrix indicated that all the 4 items loaded on one factor satisfactory as all factor loadings were larger than .50. The resultant factor structure is shown in Table 4.25.

Table 4.25

Factor structure for the developing coachee performance plans subscale

Factor Matrix	
	Factor 1
PLA1	.771
PLA2	.766
PLA3	.818
PLA4	.871

There are no (0%) non-redundant residuals with absolute values greater than .05 implying that the solution provides a relatively credible explanation for the observed inter-item correlation matrix. The unidimensionality assumption is therefore corroborated for the *developing coachee performance plans* subscale. 65.212% of the total subscale variance can be explained by the extracted factor.

4.4.6.6 Exploratory factor analysis: Coach self-discovery, reflection and self awareness subscale

One factor was extracted, since only one factor obtained an eigenvalue greater than 1. The scree plot also suggested that a single factor should be extracted. The factor matrix indicated that all the 5 items loaded on one factor satisfactory as all factor loadings were larger than .50. The resultant factor structure is shown in Table 4.26.

Table 4.26

Factor structure for the coach self-discovery, reflection and self awareness subscale

Factor Matrix	
	Factor 1
DIS1	.744
DIS2	.820
DIS3	.749
DIS4	.853
DIS5	.786

There are no (0%) nonredundant residuals with absolute values greater than .05 implying that the solution provides a very credible explanation for the observed inter-item correlation matrix. The unidimensionality assumption is therefore corroborated for the *developing coachee performance plans* subscale. 62.684 % of the total subscale variance can be explained by the extracted factor.

4.4.6.7 Exploratory factor analysis: Coach personal growth and development subscale

Evaluating the unidimensionality assumption that the 4 items comprising the *coach personal growth and development subscale* all reflect a single underlying coaching factor suggests that a single factor is required to satisfactorily explain the observed correlations between the 4 items of this subscale and that all items have satisfactory loadings on the extracted factor (>.50). Only one factor has eigenvalues greater than one. The scree plot also suggests the extraction of a single factor.The resultant factor structure is shown in Table 4.27.

Table 4.27

Factor structure for the coach personal growth and development subscale

Factor Matrix	
	Factor 1
DEV1	.743
DEV2	.789
DEV3	.926

DEV4	.762

There are no (0%) non-redundant residuals with absolute values greater than .05 implying that the solution provides a very credible explanation for the observed inter-item correlation matrix. The unidimensionality assumption is therefore corroborated for the *coach personal growth and development* subscale. 65.319% of the total subscale variance can be explained by the extracted factor.

4.4.6.8 Exploratory factor analysis: Empowering the coachee subscale

The unidimensionality assumption that the 7 items comprising the *empowering the coachee* subscale all reflect a single underlying coaching factor was confirmed with the extraction of a single factor with an eigenvalue greater than one. All items have satisfactory loadings on the single factor (>0.5). Residuals were computed between observed and reproduced correlations. There are 3 (14.0%) non-redundant residuals with absolute values greater than .05. This is an indication that the factor solution provides a satisfactory explanation for the observed inter-item correlation matrix. The extracted factor explains 60.770% of the sub-scale variance.

Table 4.28

Factor structure for the empowering the coachee subscale

Factor Matrix	
	Factor 1
EMP1	.806
EMP2	.789
EMP3	.757
EMP4	.833
EMP5	.681
EMP6	.767
EMP7	.815

4.4.6.9 Exploratory factor analysis: Articulating the vision to the coachee subscale

One factor was extracted, since only one factor obtained an eigenvalue greater than 1. The scree plot also suggested that a single factor should be extracted. The factor matrix indicated that all the 4 items loaded on one factor satisfactorily as all factor loadings were larger than .50. The resultant factor structure is shown in Table 4.29. There are no (0%) non-redundant residuals with absolute values greater than .05 implying that the solution provides a highly credible explanation for the observed inter-item correlation matrix. The unidimensionality assumption is therefore corroborated for the *articulating the vision to the coachee* subscale. 67.508 % of the total subscale variance can be explained by the extracted factor.

Table 4.29

Factor structure for the articulating the vision to the coachee subscale

Factor Matrix	
	Factor 1
ART1	.737
ART2	.860
ART3	.836
ART4	.848

4.4.6.10 Exploratory factor analysis: Inspiring and motivating the coachee subscale

The unidimensionality assumption that the 4 items comprising the *inspiring and motivating the coachee* subscale all reflect a single underlying coaching factor was confirmed with the extraction of a single factor with an eigenvalue greater than one. All items have satisfactory loadings on the single factor (>0.5). Residuals were computed between observed and reproduced correlations. There are no (0%) non-redundant residuals with absolute values greater than .05. This is an indication that the factor solution provides a satisfactory explanation for the observed inter-item correlation matrix. The extracted factor explains 69.103% of the sub-scale variance.

Table 4.30

Factor structure for the inspiring and motivating the coachee subscale

Factor Matrix	
	Factor 1
INP1	.801
INP2	.842
INP3	.871
INP4	.809

4.4.6.11 Building trust and demonstrating integrity subscale

One factor was extracted, since only one factor obtained an eigenvalue greater than 1. The scree plot also suggested that a single factor should be extracted. The factor matrix indicated that all the 8 items loaded on one factor satisfactory as all factor loadings were larger than .50. The resultant factor structure is shown in Table 4.31. There is 1 (3.0%) non-redundant residual with absolute values greater than .05 implying that the solution provides a very credible explanation for the observed inter-item correlation matrix. The unidimensionality assumption is therefore corroborated for the *building trust and demonstrating integrity* subscale. 58.623 % of the total subscale variance can be explained by the extracted factor.

Table 4.31

Factor structure for the Building trust and demonstrating integrity subscale

Factor Matrix	
	Factor 1
TRU1	.768
TRU2	.725
TRU3	.848
TRU4	.829
TRU5	.799
TRU6	.534
TRU7	.773
TRU8	.804

4.4.6.12 Exploratory factor analysis: Demonstrating decisiveness and hardiness subscale

Investigating the unidimensionality assumption that the 4 items comprising the *demonstrating decisiveness and hardiness* subscale all reflect a single underlying coaching factor suggests that a single factor is required to satisfactory explain the observed correlations between the 4 items of this subscale and that all items have satisfactory loadings on the extracted factor (>.50). Only one factor has eigenvalues greater than one. The scree plot also suggests the extraction of a single factor.The resultant factor structure is shown in Table 4.32.

Table 4.32

Factor structure for the demonstrating decisiveness and hardiness subscale

Factor Matrix	
	Factor 1
HAR1	.778
HAR2	.843
HAR3	.787
HAR4	.791

There are no (0%) non-redundant residuals with absolute values greater than .05 implying that the solution provides a highly credible explanation for the observed inter-item correlation matrix. The unidimensionality assumption is therefore corroborated for the *demonstrating decisiveness and hardiness* subscale. 64.039% of the total subscale variance can be explained by the extracted factor.

4.4.6.13 Exploratory factor analysis: Acting entrepreneurial subscale

One factor was extracted, since only one factor obtained an eigenvalue greater than 1. The scree plot also suggested that a single factor should be extracted. The factor matrix indicated that all the 5 items loaded on one factor satisfactory as all factor loadings were larger than .50 with item two having the lowest loading. The resultant

factor structure is shown in Table 4.33. There are no (0%) non-redundant residuals with absolute values greater than .05 implying that the solution provides a very credible explanation for the observed inter-item correlation matrix. The unidimensionality assumption is therefore corroborated for the acting *entrepreneurial* subscale. 57.696 % of the total subscale variance can be explained by the extracted factor.

Table 4.33

Factor structure for the Acting entrepreneurial subscale

Factor Matrix	
	Factor 1
ENT1	.679
ENT2	.544
ENT3	.834
ENT4	.848
ENT5	.790
ENT6	.816

4.4.6.14 Exploratory factor analysis: Showing concern for the coachee subscale

Evaluating the unidimensionality assumption that the 6 items comprising the *showing concern for the coachee* subscale all reflect a single underlying coaching factor suggests that a single factor is required to satisfactory explain the observed correlations between the 4 items of this subscale and that all items have satisfactory loadings on the extracted factor (>.50). Only one factor has eigenvalues greater than one. The scree plot also suggests the extraction of a single factor.The resultant factor structure is shown in Table 4.34.

Table 4.34

Factor structure for the showing concern for the coachee subscale

Factor Matrix	
	Factor 1
CON1	.805
CON2	.846
CON3	.826

CON4	.868
CON5	.826
CON6	.765

There are no (0%) non-redundant residuals with absolute values greater than .05 implying that the solution provides an extremely credible explanation for the observed inter-item correlation matrix. The unidimensionality assumption is therefore corroborated for the *showing concern for the coachee* subscale. 67.764% of the total subscale variance can be explained by the extracted factor.

4.4.6.15 Exploratory factor analysis: Displaying sound interpersonal skills subscale

Investigating the unidimensionality assumption that the 6 items comprising the *displaying sound interpersonal skills* subscale all reflect a single underlying coaching factor suggests that a single factor is required to satisfactory explain the observed correlations between the 4 items of this subscale and that all items have satisfactory loadings on the extracted factor (>.50). Only one factor has eigenvalues greater than one. The scree plot also suggests the extraction of a single factor.The resultant factor structure is shown in Table 4.35.

Table 4.35

Factor structure for the Displaying sound interpersonal skills subscale

Factor Matrix	
	Factor 1
SOU1	.768
SOU2	.847
SOU3	.863
SOU4	.751
SOU5	.852
SOU6	.802

There are 2 (13.0%) non-redundant residuals with absolute values greater than .05 implying that the solution provides a relatively credible explanation for the observed inter-item correlation matrix. The unidimensionality assumption is therefore

corroborated for the *displaying sound interpersonal skills* subscale. 66.433% of the total subscale variance can be explained by the extracted factor.

4.4.4.16 Exploratory factor analysis: Reviewing performance subscale

One factor was extracted, since only one factor obtained an eigenvalue greater than 1. The scree plot also suggested that a single factor should be extracted. The factor matrix indicated that all the 4 items satisfactory loaded on one factor as all factor loadings were larger than .50. The resultant factor structure is shown in Table 4.36. There are no (0%) non redundant residuals with absolute values greater than .05 implying that the solution provides a very credible explanation for the observed inter-item correlation matrix. The unidimensionality assumption is therefore corroborated for the *reviewing performance* subscale. 67.580 % of the total subscale variance can be explained by the extracted factor.

Table 4.36

Factor structure for the reviewing performance subscale

Factor Matrix	
	Factor 1
REV1	.842
REV2	.816
REV3	.775
REV4	.852

4.4.6.17 Exploratory factor analysis: Acknowledging and celebrating performance subscale

The unidimensionality assumption that the 4 items comprising the *acknowledging and celebrating performance* subscale all reflect a single underlying coaching factor was investigated. The SPSS version 20 exploratory factor analysis results suggest that a single factor is required to satisfactory explain the observed correlations between the 4 items of this subscale and that all items have satisfactory loadings on the extracted factor (>.50). Only one factor has eigenvalues greater than one. The

scree plot also suggests the extraction of a single factor. The resultant factor structure is shown in Table 4.37.

Table 4.37

Factor structure for the acknowledging and celebrating performance subscale

Factor Matrix	
	Factor 1
ACK1	.847
ACK2	.831
ACK3	.832
ACK4	.899

Residuals were computed between observed and reproduced correlations. There are no (0%) non-redundant residuals with absolute values greater than .05. The single extracted factor explains 72.755% of the variance in the item data of the sub-scale.

4.4.7 SUMMARY OF THE DIMENSIONALITY RESULTS

Items comprising the CCCQ subscales were designed to operate as stimulus sets to which test takers respond with behaviour that is primarily an expression of a specific unidimensional underlying latent variable. Unrestricted principal axis factor analyses with oblique rotation were performed on the various subscales. The objective of the analyses was to evaluate this assumption and to evaluate the success with which each item, along with the rest of the items in the particular subscale, measures the specific latent variable it was designed to reflect. There were no items deleted in the preceding item analyses hence the factor analyses was performed on the same item sets. The decision on how many factors are required to adequately explain the observed correlation matrix was based on the eigenvalue-greater-than-one rule and on the scree test (Tabachnick & Fidell, 2001). Factor loadings of items on the factor they were designated to reflect was considered satisfactory if they were greater than .50. The adequacy of the extracted solution as an explanation of the observed inter-item correlation matrix was evaluated by calculating the percentage of large (> .05) residual correlations. With regard to the results of the dimensionality analyses, all of

the subscales satisfied the unidimensionality assumption as was originally hypothesised. All items in all subscales showed satisfactory loadings on the single extracted factor. All but one of the single-factor factor solutions provided highly credible explanations for the observed inter-item correlation matrix. In the case of the monitoring the external environment the credibility of the single-factor solution was found to be somewhat tenuous.

4.5 EVALUATION OF THE CCCQ MEASUREMENT MODEL

The CCCQ was designed to measure the affirmative development coaching construct as it was constitutively defined in the literature study. Behavioural denotations are used to determine affirmative development coaches' position on each of the latent coaching dimensions. Items in the CCCQ are assumed to elicit an accurate recall in coaches (and in their peers, superior and coaches that rate them) of historical behaviour that denote the measured latent coaching dimension. Specific items were written to reflect coaches standing on specific latent coaching dimensions. The intention to measure the affirmative development coaching construct as it was constitutively defined in terms of 17 correlated latent dimensions taken in conjunction with the intention to have specific items reflect coaches standing on specific latent coaching dimensions implies a specific measurement model. This measurement model was described by Equation 1. Due to sampling limitations the measurement model was simplified by combining items into item parcels so as to reduce the number of measurement model parameters that have to be estimated. The simplified model is described by Equation 2. This study aims to prove the extent to which this premeditated operational design succeeds in providing a valid measure of the affirmative development coaching construct as it was constitutively defined in the literature study by fitting the measurement model defined in Equation 2.

4.5.1 VARIABLE TYPE

The focus of this study was on the development and psychometric evaluation of the CCCQ when used to assess managers acting as affirmative development coaches. The CCCQ was developed by purposefully generating items to reflect each of the 17 latent coaching dimensions comprising the affirmative development coaching domain. The aim is to evaluate whether this design intentions of the CCCQ succeeded. The ideal approach therefore would have been to fit a measurement model in which the individual items serve as indicator variables of the latent affirmative development coaching dimensions. Due to the relatively small sample in relation to the number of items involved in the CCCQ, fitting the measurement CCCQ model with individual items would have meant estimating more parameters than there are observations in the data set. Taking the above mentioned into consideration, item parcels (containing between 2 and 3 items in each sub-scale; though one had 4 items) were created. Two item parcels were therefore formed for each subscale by calculating the mean score on the odd numbered items and the mean on the even numbered items of each scale. Apart from making the fitting of the model on the current data set a feasible exercise and simplifying the logistics of fitting the model, the creation of two linear composite indicator variables for each latent variable has the added advantage of creating more reliable indicator variable (Nunnally, 1978). The composite indicator variables were treated as continuous variables. The analysis of the co-variance matrix instead of the polychoric correlation matrix via maximum likelihood (or robust maximum likelihood) estimation was therefore regarded as permissible (Jöreskog & Sörbom, 1996a; 1996b; Mels, 2003).

4.5.2 UNIVARIATE AND MULTIVARIATE NORMALITY

The default method used to estimate model parameters when fitting a measurement model to continuous data is maximum likelihood estimation (Moyo, 2009). This method of estimation, however, assumes that the data follows a multivariate normal distribution. This is also true for generalised least squares (GLS) and full information maximum likelihood (FIML) as possible alternative estimation methods for structural equation modeling with continuous data (Mels, 2003). The inappropriate analysis of

continuous non-normal variables in structural equation models can result in incorrect standard errors and chi-square estimates (Du Toit & Du Toit, 2001; Mels, 2003). The univariate and multivariate normality of the composite indicator variables were consequently evaluated via PRELIS (Jöreskog & Sörbom, 1996b). The null hypothesis of univariate normality had to be rejected ($p<.05$) in the case of all of the 34 composite indicator variables. The results for the tests of univariate normality are shown in Table 4.38.

Table 4.38

Tests of univariate normality for item parcels

Variable	Skewness		Kurtosis		Skewness & Kurtosis	
	z-Score	P-Value	z-Score	P-Value	Chi-Squar	P-Value
ACK_1	-7.476	0.000	1.500	0.134	58.145	0.000
ACK_2	-7.303	0.000	1.274	0.203	54.963	0.000
ART_1	-6.481	0.000	1.156	1.156	43.342	0.000
ART_2	-6.537	0.000	0.392	0.695	42.890	0.000
CON_1	-7.991	0.000	2.722	0.006	71.271	0.000
CON_2	-7.115	0.000	1.836	0.066	54.000	0.000
DEV_1	-6.039	0.000	-0.252	0.801	36.539	0.000
DEV_2	-5.671	0.000	-0.357	0.721	32.289	0.000
DIS_1	-7.884	0.000	2.946	0.003	70.835	0.000
DIS_2	-6.352	0.000	-0.115	0.908	40.364	0.000
EMP_1	-6.660	0.000	1.173	0.241	45.731	0.000
EMP_2	-7.794	0.000	2.332	0.020	66.179	0.000
ENT_1	-4.828	0.000	-1.443	0.149	25.393	0.000
ENT_2	-5.551	0.000	0.364	0.716	30.951	0.000
EXS_1	-5.006	0.000	-0.098	0.922	25.066	0.000
EXS_2	-5.269	0.000	0.186	0.853	27.794	0.000
HAR_1	-6.810	0.000	1.386	0.166	48.303	0.000
HAR_2	-6.691	0.000	1.493	0.135	47.002	0.000
INP_1	-7.735	0.000	2.427	0.015	65.722	0.000
INP_2	-7.053	0.000	1.581	0.114	52.243	0.000
INS_1	-5.262	0.000	-0.110	0.913	27.704	0.000
INS_2	-5.421	0.000	-0.391	0.696	29.535	0.000
PLA_1	-7.820	0.000	2.809	0.005	69.038	0.000
PLA_2	-5.865	0.000	-0.082	0.935	34.407	0.000
REV_1	-7.427	0.000	2.105	0.035	59.591	0.000
REV_2	-6.374	0.000	0.642	0.521	41.041	0.000
SOU_1	-7.020	0.000	1.824	0.068	52.601	0.000
SOU_2	-6.266	0.000	0.951	0.342	40.166	0.000
STR_1	-5.327	0.000	-0.029	0.977	28.375	0.000
STR_2	-6.372	0.000	0.192	0.848	40.636	0.000
TRU_1	-7.452	0.000	2.225	0.026	60.488	0.000
TRU_2	-7.262	0.000	2.106	0.035	57.177	0.000
VIS_1	-6.269	0.000	0.204	0.839	39.345	0.000
VIS_2	-5.625	0.000	-0.472	0.637	31.860	0.000

Table 4.39 below shows the results of the test of multivariate normality. The null hypothesis that the data follows a multivariate normal distribution also had to be rejected (χ^2= 4031.574; p <.05).

Table 4.39

Test of multivariate normality for item parcels

Skewness			**Kurtosis**			**Skewness & Kurtosis**	
Value	**Z-Score**	**P-Value**	**Value**	**Z-Score**	**P-Value**	**Chi Squar**	**P-Value**
246.900	57.153	0.000	1617.436	27.660	0.000	4031.574	0.000

The item parcel indicator variable distribution was normalised through PRELIS (Jöreskog & Sörbom, 1996a). Results as shown in Table 4.40 indicate that the normalisation procedure failed to remedy the multivariate normality problem (p<.05) even though it succeeded in improving the multivariate symmetry and kurtosis of the indicator variable distribution. Since normalisation did not have the desired effect and the data still did not meet the multivariate normality assumption even after a normalisation procedure, the use of an alternative method more suited to the data was considered. The robust maximum likelihood estimation technique was therefore used for the evaluation of the measurement model as that is the suggested technique for fitting measurement models of continuous data not fulfilling the multivariate normality assumption. Since the normalisation had the effect of reducing the deviation of the observed indicator distribution from the theoretical multivariate normal distribution the normalisaed data set was used in the subsequent analyses (Van Heerden, 2013).

Table 4.40

Test of multivariate normality after normalisation

Skewness			**Kurtosis**			**Skewness & Kurtosis**	
Value	**Z-Score**	**P-Value**	**Value**	**Z-Score**	**P-Value**	**Chi-Squar**	**P-Value**
202.665	42.097	0.000	1498.912	23.747	0.000	2336.060	0.000

4.5.3 ASSESSING OVERALL GOODNESS-OF-FIT OF THE CCCQ MEASUREMENT MODEL

Chapter 3 presented a measurement model that illustrates the design of the CCCQ (Equation 1). The original CCCQ measurement model was subsequently revised in response to the sample size limitations. The reduced model was expressed as Equation 2. This model illustrates how item parcels of subscales should load on their underlying latent coaching dimension. The confirmatory factor model was fitted by analysing the covariance matrix calculated from the CCCQ item parcel data set containing 398 observations. Structural equation modeling (LISREL 8.8) was used to test the hypothesis that the measurement model explains the observed covariance matrix.

A final solution of parameter estimates for the CCCQ measurement model was produced through robust maximum likelihood estimation after ten iterations.

A visual representation of the fitted measurement model is provided in Figure 4.1, while a full array of fit statistics calculated by LISREL to assess the absolute and comparative fit of the measurement model are shown in Table 4.41. The purpose of this section is to assess the goodness of fit of the measurement model. According to Bollen and Long (1993), Schumaker and Lomax (1996), Diamantopoulos and Siguaw (2000), Thompson and Daniel (1996) and Thompson (1997) a final decision should not be based on any single indicator of fit. Rather it is proposed that an integrative judgment on the model fit should be made by taking all the fit indices into consideration.

For evaluating model fit this study therefore employed various goodness fit indices as recommended by Bollen (1989). The full range of fit indices as shown below in Table 4.41 have been combined with information on the magnitude and distribution of the standardised residuals, evaluation of the number of large modification indices calculated for the factor loading matrix (Λ^{X}) and the measurement error variance matrix (Θ_{δ}). Judgment on the measurement model fit was therefore obtained by

integrating this basket of evidence. According to Byrne (1998) assessment of model adequacy must be based on multiple criteria that take into account theoretical, statistical, and practical considerations. In determining the adequancy of the model and thereby the success with which the CCCQ measures the 17 latent coaching dimensions in the manner it was designed to do the multiple criteria as suggested by Byrne above will be taken into consideration. Byrne further points to the dangers of not doing so which could lead to one or more of the following:

- An incomplete picture of goodness of fit;
- Selection of indices based on value not on theory;
- Difficulty for others to cross validate the results due to some undesirable characteristics of the reported fit indices (e.g., sensitivity to sample size).

The interpretation of the magnitude and significance of the factor loading estimates, the magnitude and significance of the error variance estimates and the proportion variance explained in the indicator variables by the latent variable(s) they were meant to represent was conditional on not rejecting the null hypothesis of close fit (H_{02}).

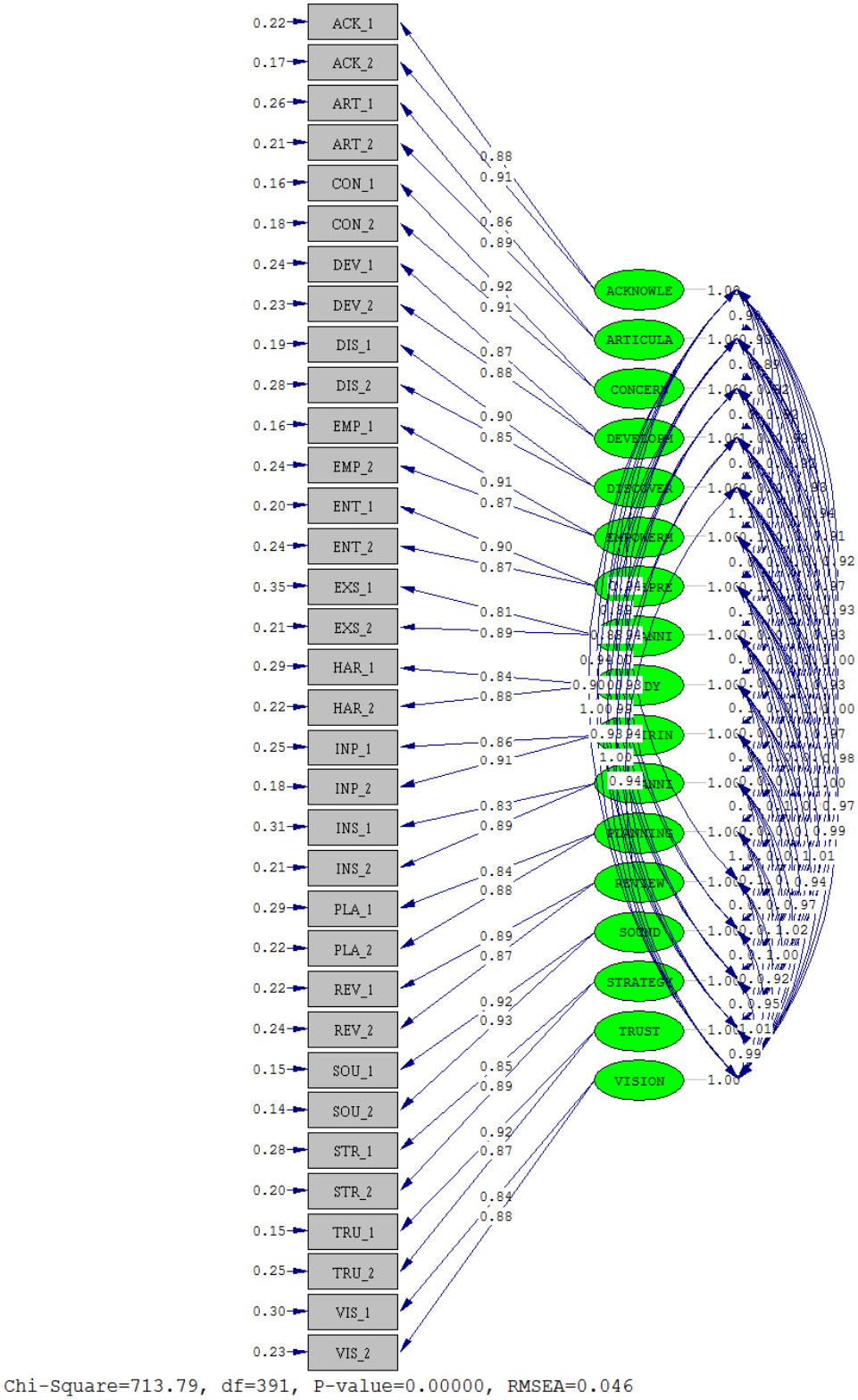

Figure 4.1 Representation of the fitted CCCQ measurement model

Table 4.41

Fit statistics for the CCCQ measurement model

Goodness of Fit Statistics

Degrees of Freedom = 391
Minimum Fit Function Chi-Square = 950.875 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 957.238 (P = 0.0)
Satorra-Bentler Scaled Chi-Square = 713.785 (P = 0.0)
Chi-Square Corrected for Non-Normality = 13452445539769.280 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 322.785
90 Percent Confidence Interval for NCP = (251.774 ; 401.625
Minimum Fit Function Value = 2.395
Population Discrepancy Function Value (F0) = 0.813
90 Percent Confidence Interval for F0 = (0.634 ; 1.012)
Root Mean Square Error of Approximation (RMSEA) = 0.0456
90 Percent Confidence Interval for RMSEA = (0.0403 ; 0.0509)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.914

Expected Cross-Validation Index (ECVI) = 2.826
90 Percent Confidence Interval for ECVI = (2.647 ; 3.024)
ECVI for Saturated Model = 2.997
ECVI for Independence Model = 311.875

Chi-Square for Independence Model with 561 Degrees of Freedom = 123746.283
Independence AIC = 123814.283
Model AIC = 1121.785
Saturated AIC = 1190.000
Independence CAIC = 123983.822
Model CAIC = 2139.021
Saturated CAIC = 4156.939

Normed Fit Index (NFI) = 0.994
Non-Normed Fit Index (NNFI) = 0.996
Parsimony Normed Fit Index (PNFI) = 0.693
Comparative Fit Index (CFI) = 0.997
Incremental Fit Index (IFI) = 0.997
Relative Fit Index (RFI) = 0.992

Critical N (CN) = 256.280
Root Mean Square Residual (RMR) = 0.0187
Standardised RMR = 0.0175
Goodness of Fit Index (GFI) = 0.876
Adjusted Goodness of Fit Index (AGFI) = 0.811
Parsimony Goodness of Fit Index (PGFI) = 0.576

4.5.3.1 Model fit indices interpretation

Table 4.41 indicates that this model achieved a Satorra-Bentler scaled chi-square value of 713.785 with 391 degrees of freedom (calculated as ½k(k+1)-t, where k is the number of observed variables and t is the number of parameters to be estimated) reflecting a statistically significant result ($p<.01$), indicating that the model is not adequate (Kaplan, 2000).

This means that the null hypothesis of model exact fit is therefore rejected (H_{01}: RMSEA=0). This rejection implies that the first-order measurement model is unable to reproduce the observed covariance matrix in the sample to such a degree of accuracy that the difference between the observed sample covariance matrix and the reproduced sample covariance matrix can be explained in terms of sampling error only. Kaplan (2000, p. 84) is of the view that the "chi-square statistic is sensitive to departures from multivariate normality (particularly excessive kurtosis), sample size and also assumes that the model fits perfectly in the population". Hence suggesting that "instead of regarding χ^2 as a test statistic, one should regard it as a goodness (or badness) of fit measure in the sense that large χ^2-values correspond to bad fit and small values to good fit". In support of the latter view Spangenberg and Theron (2005) comment that the null hypothesis of exact model fit is rather unrealistic. Brown and Cudeck (1993, p. 137), as cited in Spangenberg and Theron (2005) argue that:

> In applications of the analysis of co-variance structures in the social sciences it is implausible that any model that we use is anything more than an approximation to reality. Since a null hypothesis that a model fits exactly in some population is known a priori to be false, it seems pointless even to try to test whether it is true.

Diamantopoulos and Siguaw (2000) suggest that instead of testing whether the model is correct, or fits the population co-variance matrix exactly, one should possibly assess the degree of lack of fit of the model which in this case was done through the estimated non-centrality parameter. Theron and Spangenberg (2005) argue that treating the chi-square statistic as a descriptive badness-of-fit measure by

expressing the minimum fit function chi-square estimate in terms of the degrees of freedom (χ²⁄df=2.43), suggests that the measurement model demonstrates acceptable fit to the data. According to Kelloway (1998) values for the normed chi-square statistic between 2 and 5 are regarded as indicative of good fit. On the other hand values less than 2 have been interpreted as indicating over-fitting. When viewed from these perspectives the model can be seen to fit the data well. Guidelines indicating good fit should be interpreted with caution as the researcher's personal modeling experience play a role. Relying on normed chi-square should also be done with caution (Kelloway, 1998).

Diamantopoulos and Siguaw (2000) argue that if it were *a priori* assumed that the first- order measurement model only approximates the processes that operated in reality to create the observed co-variance matrix, the χ^2 test statistic would follow a non-central χ^2 distribution with a non-centrality parameter, λ. The estimated λ value (322.785) reflects the estimated discrepancy between the observed (Σ) and the estimated population co-variance (Σ^) matrices.

The first-order measurement model was fitted by minimising a fit function that compares the observed sample covariance matrix (S) to the reproduced sample covariance matrix (S^) derived from the model parameter estimates (Jöreskog & Sörbom, 1993; Spangenberg & Theron, 2005). Model fit is reflected by the extent to which the minimum fit function value (2.395) approaches zero. The estimated population discrepancy function value (*F0*) reflects the extent to which the observed population covariance matrix (Σ) is estimated to differ from the reproduced population covariance (Σ^) resulting from the parameters minimising the selected discrepancy function fitting the model on Σ (Brown & Cudeck, 1993). The F0 -value for this model is a low .813 with confidence interval limits of .634 and 1.012. Exact model fit would reflect a F0–value of zero because the observed population covariance matrix Σ would then have been equal to the estimated population covariance matrix (Σ^).

The second fit measure to consider is the root mean square error of approximation (RMSEA) which also like the non-centrality parameter (NCP) focuses on the discrepancy between the observed population covariance matrix and the estimated population covariance matrix implied by the model per degree of freedom (Diamantopoulos & Siguaw, 2000). Values under .05 are indications of good model fit, values above .05 but less than .08 indicate a reasonable fit. Values greater than .08 but smaller than .1 indicate a mediocre model fit, where values greater than .1 indicate a poor fit (Brown & Cudeck, 1993; Diamantopoulos & Siguaw, 2000). According to Diamantopoulos and Siguaw (2000) RMSEA is one of the most informative fit indices. It is calculated as follows: $(F0/df)^{½}$, where *F0* is the population discrepancy function value and *df* represents the degrees of freedom. A value of zero in this case would indicate the absence of discrepancy and would entail a perfect model fit (Mulaik & Millsap, 2000). In the case of the CCCQ results, the RMSEA value of .0456 signifies a very good fit of the measurement model. The 90 percent confidence interval for RMSEA (.0403 - .0509) also indicates a good fit in that the upper limit of the confidence interval only fractionally exceeds the critical cutoff value of .05. The fact that the confidence interval includes the critical cut off value of .05 implies that the null hypothesis of close fit will not be rejected. LISREL explicitly tests close fit in the parameter by testing H_{02}: RMSEA ≤ .05 against H_{a2}: RMSEA > .05. The probability of observing a sample RMSEA value of .0456 under H_{02} is sufficiently larger (.914) than the critical p-value of .05. This means that H_{02} is not rejected (p > .05).

While both the non-centrality parameter (NCP) and the RMSEA focus on error due to approximation (i.e., the discrepancy between Σ and Σ(θ)), Byrne (1998) and Spangenberg and Theron (2005) describe the expected cross-validation index (ECVI) as focusing on overall error (i.e., the difference between the reproduced sample co-variance matrix (Sˆ) derived from fitting the model on the sample at hand and the expected co-variance matrix that would be obtained in an independent sample of the same size from the same population). This means that it therefore focuses on the difference between Sˆ and Σ). Given its (ECVI) purpose, Diamantopoulos and Siguaw (2000) indicate that it is a useful indicator of a model's overall fit. The model ECVI (2.826) is smaller than the value for the independence or null model (311.875) and the ECVI value associated with the saturated model

(2.997). This finding comments positively on the measurement model fit as it suggests that the fitted model seems to have a better chance of being replicated in a cross-validation sample than the (more complex) saturated model or the (less complex) independence model. This assumption is based on Kelloway's (1998) suggestion that smaller values on this index indicate a more parsimonious fit.

According to Kelloway (1998) the assessment of parsimonius fit is based on the recognition that one can always obtain a better fitting model by estimating more parameters. Spangenberg and Theron (2005) are of the view that in evaluating for parsimonious fit, model fit could always be improved by adding more paths to the model and estimating more parameters until a perfect fit is achieved in the form of a saturated or just-identified model with no degrees of freedom. Davidson (2000) also shares this view. He argues that, as a general rule, increasing the parameters in a model will serve to increase its fit to the observed data. However, these scholars are also not oblivious of the fact that the objective of model building is to achieve satisfactory fit with as few model parameters as possible. The purpose of this study is however to achieve satisfactory fit with the least amount of model parameters.

An assessment of the values of the Akaike information criterion (AIC=1121.785) presented in Table 4.41 suggests that the fitted measurement model provides a more parsimonious fit than both the independent/null model (123814.283) and the saturated model (1190.000) since smaller values on these indices indicate a more parsimonious model (Kelloway, 1998; Spangenberg & Theron, 2005). The values for consistent Akaike information criterion (CAIC=2139.021), likewise suggest that the fitted measurement model provides a more parsimonious fit than both the independent/null model (123983.822) and the saturated model (4156.939). Small values suggest a parsimonious fit although there is no consensus regarding precisely how small values should be (Moyo, 2009).

A number of indices of comparative fit will be considered. These include the normed fit index (NFI), the non-normed fit index (NNFI), the incremental fit index (IFI) and the comparative fit index (CFI).

According to Hoyle (1995) the normed fit index (NFI) represents the portion of total covariance among observed variables explained by a target model when using the null model as a baseline model. The NFI ranges from 0 to 1 with values exceeding .90 indicating a good fit (Kelloway, 1998). In this study the NFI of .994 indicate that the model is 99% better fitting than the null model. Although the NFI is widely used it may underestimate the fit of the model in small samples (Kelloway, 1998). However with the NFI of 0.994 this concern may be irrelevant.

The non-normed fit index (NNFI) uses a similar logic as the NFI but adjust the normed fit index for the number of degrees of freedom in the model (Kelloway, 1998). The adjustment may result in numbers above 0 to 1 range (Oehley, 2007). Higher values of the NFFI indicate a better fitting model and it is common to apply the .90 rule as indicating a good fit to the data (Kelloway, 1998). For this study (NNFI=.996) indicating good fit (NFFI > .90).

The incremental fit index (IFI) includes the scaling factor, so that the IFI ranges between 0 and 1. The comparative fit index (CFI) is based on non centrality χ^2, with the same range. In both instances indices larger than .90 indicate a good fit to the data. In this study all the two indices had a value of .997 indicating a good fit to the data.

All the indices of comparative fit statistics reported by LISREL as shown in Table 4.41 suggest good model fit relative to that of the independent model. According to Diamantopoulos and Siguaw (2000) the NNFI and CFI indices ought to be relied upon for fit assessment. If stronger emphasis were placed on these two indices, it would still suggest that the model fits the data quite well.

The critical sample size statistic (CN) reflects the size of the sample that would have made the obtained minimum fit function χ^2 statistic just statistically significant at the .05 significance level. The estimated CN value (256.280) falls substantially above the recommended threshold value of 200 suggested by Diamantopoulos and Siguaw (2000) which is regarded as indicative of the model providing adequate representation of the data. According to Spangenberg and Theron (2005) the proposed threshold should be used with caution.

The root mean square residual **(**RMR=.0187), which represents the average value of the residual matrix (S-Sˆ), and the standardised RMR, which represents the fitted residual divided by their estimated standard errors, (.0175) indicate good model fit. According to Diamantopoulos and Siguaw (2000) values less than .05 on the latter index are regarded as indicative of a model that fits the data well. According to Diamantopoulos and Siguaw (2000) problems could be encountered in interpreting the fitted residual (and, therefore, the RMR statistic) in that their magnitude varies with the unit of measurement and the latter can vary from variable to variable. This problem could be avoided by concentrating on the standardised residuals. Each standardised residual could then be interpreted as standard normal deviate and considered “large” if it is greater than 2.58 in absolute value.

According to Diamantopoulos and Siguaw the goodness-of-fit index (GFI) is an indication of the relative amount of variances and covariances explained by the model (Diamantopoulos & Siguaw, 2000). The adjusted goodness-of-fit index (AGFI) and the parsimony goodness-of-fit index (PGFI) illustrate the degree to which the reproduced sample covariance matrix recovered the observed sample covariance matrix (Diamantopoulos & Siguaw, 2000). The AGFI adjusts the GFI for the degrees of freedom in the model while the PGFI uses model complexity to make adjustments (Diamantopoulos & Siguaw, 2000; Jöreskog & Sörbom, 1993; Kelloway, 1998). These two measures should be between 1 and 0. Values greater than .90 indicate that the model fits the data well. These two values (AGFI=.811) and (GFI=.649) portray reasonable model fit. Guidelines for the interpretation of GFI and AGFI are based on experience and should therefore be done with caution (Kelloway, 1998). Values for the PGFI tends to be conservative, therefore the GFI is generally

considered the most reliable measure of absolute fit (Diamantopoulos & Siguaw, 2000).

Integrated results from a full array of the above mentioned fit statistics seem to reflect a good fitting measurement model that clearly outperforms the independent model and the saturated model.

4.5.3.2 Examination of residuals

Figure 4.2 shows the shape and distribution of the standardised residuals. Standardised residuals can be interpreted as standard normal deviates (Myburgh, 2013). A standardised residual with an absolute value greater than 2.58 would be interpreted as large at a 1% significance level (Diamantopoulos & Siguaw, 2000). Large standardised residuals are an indication of covariance (or the lack of covariance) between indicator variables that the model fails to explain. Large positive residuals reflect a model that underestimates the covariance terms between specific observed variables. The model can therefore be improved by adding paths to the model. Large negative residuals on the other hand are an indication that the model over-estimates the covariance between specific observed variables. To rectify this problem, paths associated with the indicator variables can be removed (Diamantapoulos & Siguaw, 2000; Kelloway, 1998). Figure 4.2 shows that the smallest standardised residual was -7.113. There were no large positive standardised resiuals. The existence of 4 large negative residuals indicates that 4 out of the 595 observed variance and covariance terms in the observed co-variance matrix (S) (0.67%) (4/595)*100) are poorly estimated by the derived model parameter estimates. The small percentage of unique variance and covariance terms that are poorly estimated by the fitted measurement model implies good model fit

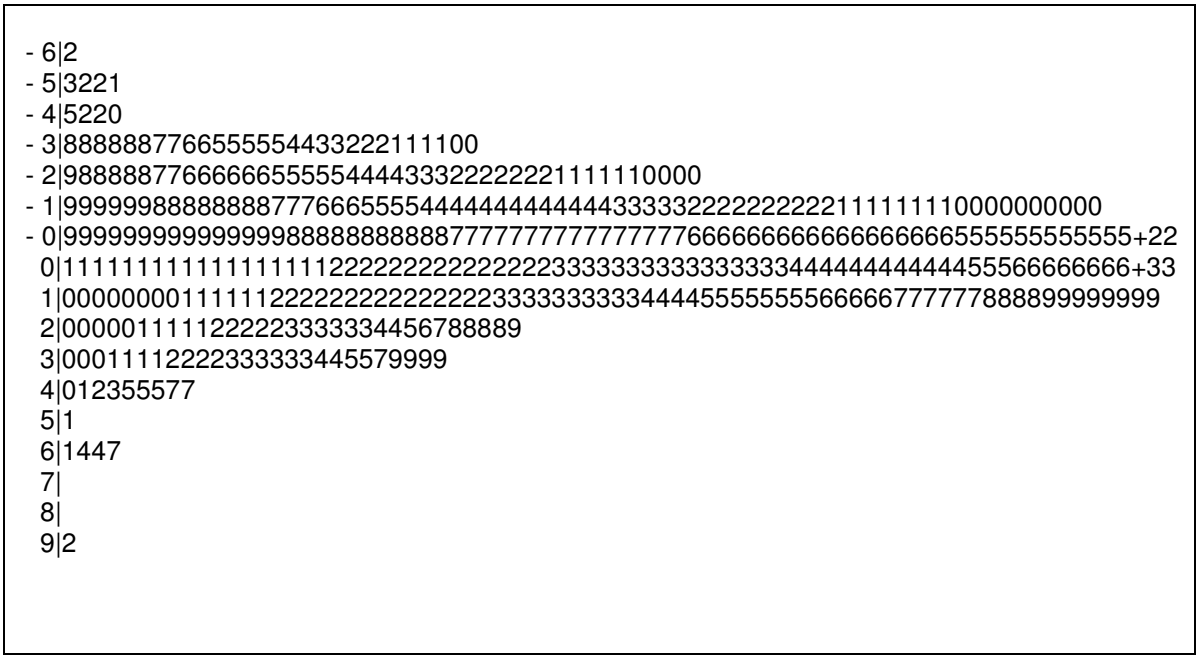

Figure 4.2. Stem and leaf plot of the standardised residuals

4.5.3.3 Model modification indices

According to Brekler (1990) a *priori* theoretical models frequently do not provide an adequate fit to the data, hence the suggestion that when this happens, the original model could be modified to improve its fit through any of the following options

- Changing factor loadings (λ) from fixed to free or vice versa;
- Allowing for or constraining correlations among measurement errors (δ); and
- Allowing for or constraining correlations among the exogenous latent variables (ξ).

Despite the suggested measures that could be used to improve on the model fit, Breckler (1990) caution that there is no guarantee that the process will lead to the population model and that it is not clear as to which paths when added to the model would statistically significantly improve the parsimonious fit of the model. Breckler (1990) and Cudeck and Browne (1983) suggest that when model modification is explored, the results should be interpreted with circumspection and that the model should be subjected to cross-validation whenever possible.

LISREL calculates the modification indices and estimates the decrease that should be found in the (normal theory) χ^2 statistic when the current fixed parameters are set free and the model is re-estimated. Chi-square values exceeding 6.6349 indicate parameters that would statistically significantly improve the fit of the model when they are freed ($p<.01$). Modification indices calculated for the factor loading matrix ($\boldsymbol{\Lambda^x}$) identify 0 additional paths that will have a statistically significant positive impact on model fit. Therefore 0 out of 544 possible additions to $\Lambda_{\mathbf{x}}$ will result into an improved model fit ($p<.01$). The lack of large modification index values obtained for $\boldsymbol{\Lambda^x}$ comments extremely favourably on the fit of the model. Modification indices calculated for the theta-delta matrix ($\boldsymbol{\Theta_\delta}$) reveal 48 covariance terms that will have a statistically significant positive impact on model fit. Therefore allowing for 48 out of 595 possible covariance terms in $\boldsymbol{\Theta_\delta}$ to be freed (8.067%) will result into an improved model fit ($p<.01$). The small percentage of large modification index values obtained for $\boldsymbol{\Theta_\delta}$ also comments favourably on the fit of the model.

4.5.4 EVALUATION OF THE CCCQ FACTOR MODEL

The unstandardised factor loading matrix (**X**) reflects the slope of the regression of the unstandardised item parcels X_j on the unstandardised latent coaching dimensions ξ_i. The unstandardised factor loading matrix (Table 4.42) was used to determine the statistical significance of the first-order factor loadings hypothesised by the proposed measurement model represented by Equation 1. Inspection of Table 4.42 indicates that all the freed first-order factor loadings are statistically significant ($p<.05$). All 34 null hypotheses H_{0i}: $\lambda_{jk}=0$; i =3, 4,..., 36; j=1, 2....34; k=1, 2.....17 can therefore be rejected in favour of Ha1: $\lambda_{jk} \neq 0$; i =3, 4,..., 36; j=1, 2....34; k=1, 2.....17. All item parcels therefore statistically significantly ($p<.05$) reflect the coaching performance dimension they were intended to measure.

Table 4.42
Unstandardised factor loading matrix

	ACKNOWLE	ARTICULA	CONCERN	DEVELOPM	DISCOVER	EMPOWERM
ACK_1	0.990* (0.039) 25.361					
ACK_2	1.010 (0.036) 27.768					
ART_1		0.896 (0.038) 23.330				
ART_2		0.966 (0.036) 26.570				
CON_1			0.909 (0.034) 26.960			
CON_2			0.914 (0.035) 26.045			
DEV_1				0.973 (0.039) 24.956		
DEV_2				0.930 (0.038) 24.631		
DIS_1					0.876 (0.035) 25.297	
DIS_2					0.981 (0.041) 24.017	
EMP_1						0.890 (0.035) 25.596
EMP_2						0.848 (0.035) 24.040
ENT_1	- -	- -	- -	- -	- -	- -
ENT_2	- -	- -	- -	- -	- -	- -
EXS_1	- -	- -	- -	- -	- -	- -
EXS_2	- -	- -	- -	- -	- -	- -
HAR_1	- -	- -	- -	- -	- -	- -
HAR_2	- -	- -	- -	- -	- -	- -
INP_1	- -	- -	- -	- -	- -	- -
INP_2	- -	- -	- -	- -	- -	- -
INS_1	- -	- -	- -	- -	- -	- -
INS_2	- -	- -	- -	- -	- -	- -
PLA_1	- -	- -	- -	- -	- -	- -
PLA_2	- -	- -	- -	- -	- -	- -
REV_1	- -	- -	- -	- -	- -	- -
REV_2	- -	- -	- -	- -	- -	- -
SOU_1	- -	- -	- -	- -	- -	- -
SOU_2	- -	- -	- -	- -	- -	- -
STR_1	- -	- -	- -	- -	- -	- -
STR_2	- -	- -	- -	- -	- -	- -
TRU_1	- -	- -	- -	- -	- -	- -

TRU_2	- -	- -	- -	- -	- -	- -
VIS_1	- -	- -	- -	- -	- -	- -
VIS_2	- -	- -	- -	- -	- -	- -
	ENTREPRE	**EXSCANN**	**HARDY**	**INSPIRIN**	**INSCANNI**	**PLANNING**
ACK_1	- -	- -	- -	- -	- -	- -
ACK_2	- -	- -	- -	- -	- -	- -
ART_1	- -	- -	- -	- -	- -	- -
ART_2	- -	- -	- -	- -	- -	- -
CON_1	- -	- -	- -	- -	- -	- -
CON_2	- -	- -	- -	- -	- -	- -
DEV_1	- -	- -	- -	- -	- -	- -
DEV_2	- -	- -	- -	- -	- -	- -
DIS_1	- -	- -	- -	- -	- -	- -
DIS_2	- -	- -	- -	- -	- -	- -
EMP_1	- -	- -	- -	- -	- -	- -
EMP_2	- -	- -	- -	- -	- -	- -
ENT_1	0.920 (0.038) 24.078					
ENT_2	0.861 (0.036) 23.777					
EXS_1		0.802 (0.039) 20.342				
EXS_2		0.882 (0.036) 24.309				
HAR_1			0.866 (0.038) 23.043			
HAR_2			0.889 (0.036) 24.669			
INP_1				0.882 (0.037) 23.839		
INP_2				0.946 (0.036) 26.025		
INS_1					0.837 (0.040) 21.075	
INS_2					0.957 (0.038) 25.295	
PLA_1						0.819 (0.038) 21.834
PLA_2						0.943 (0.039) 24.491
REV_1	- -	- -	- -	- -	- -	- -
REV_2	- -	- -	- -	- -	- -	- -
SOU_1	- -	- -	- -	- -	- -	- -
SOU_2	- -	- -	- -	- -	- -	- -
STR_1	- -	- -	- -	- -	- -	- -
STR_2	- -	- -	- -	- -	- -	- -
TRU_1	- -	- -	- -	- -	- -	- -
TRU_2	- -	- -	- -	- -	- -	- -

VIS_1	- -	- -	- -	- -	- -	- -
VIS_2	- -	- -	- -	- -	- -	- -
	REVIEW	**SOUND**	**STRATEGY**	**TRUST**	**VISION**	
ACK_1	- -	- -	- -	- -	- -	- -
ACK_2	- -	- -	- -	- -	- -	- -
ART_1	- -	- -	- -	- -	- -	- -
ART_2	- -	- -	- -	- -	- -	- -
CON_1	- -	- -	- -	- -	- -	- -
CON_2	- -	- -	- -	- -	- -	- -
DEV_1	- -	- -	- -	- -	- -	- -
DEV_2	- -	- -	- -	- -	- -	- -
DIS_1	- -	- -	- -	- -	- -	- -
DIS_2	- -	- -	- -	- -	- -	- -
EMP_1	- -	- -	- -	- -	- -	- -
EMP_2	- -	- -	- -	- -	- -	- -
ENT_1	- -	- -	- -	- -	- -	- -
ENT_2	- -	- -	- -	- -	- -	- -
EXS_1	- -	- -	- -	- -	- -	- -
EXS_2	- -	- -	- -	- -	- -	- -
HAR_1	- -	- -	- -	- -	- -	- -
HAR_2	- -	- -	- -	- -	- -	- -
INP_1	- -	- -	- -	- -	- -	- -
INP_2	- -	- -	- -	- -	- -	- -
INS_1	- -	- -	- -	- -	- -	- -
INS_2	- -	- -	- -	- -	- -	- -
PLA_1	- -	- -	- -	- -	- -	- -
PLA_2	- -	- -	- -	- -	- -	- -
REV_1	0.906					
	(0.036)					
	25.110					
REV_2	0.930					
	(0.037)					
	24.843					
SOU_1		0.926				
		(0.034				
		26.927				
SOU_2		0.959				
		(0.034)				
		27.954				
STR_1			0.842			
			(0.037)			
			22.657			
STR_2			0.969			
			(0.035)			
			27.313			
TRU_1				0.912		
				(0.035)		
				26.116		
TRU_2				0.804		
				(0.035)		
				23.059		
VIS_1					0.917	
					(0.040)	
					22.913	
VIS_2					0.941	
					(0.040)	
					23.645	

*The top value represents the unstandardised λ_{ij} estimate, the second value in brackets the standard error of λ_{ij} and the third value the test statistic z.

The completely standardised factor loading matrix (Λ^{X}) reflects the slope of the regression of the standardised item parcels X_j on the standardised latent performance dimensions ξ_i. The completely standardised factor loading matrix (Table 4.43) was used to determine the magnitude of the first-order factor loadings hypothesised by the proposed measurement model represented by Equation 1.

Table 4.43

Completely standardised factor loading matrix

	ACKNOWLE	ARTICULA	CONCERN	DEVELOPM	DISCOVER	EMPOWERM
ACK_1	0.882	- -	- -	- -	- -	- -
ACK_2	0.913	- -	- -	- -	- -	- -
ART_1	- -	0.860	- -	- -	- -	- -
ART_2	- -	0.890	- -	- -	- -	- -
CON_1	- -	- -	0.915	- -	- -	- -
CON_2	- -	- -	0.907	- -	- -	- -
DEV_1	- -	- -	- -	0.873	- -	- -
DEV_2	- -	- -	- -	0.877	- -	- -
DIS_1	- -	- -	- -	- -	0.900	- -
DIS_2	- -	- -	- -	- -	0.847	- -
EMP_1	- -	- -	- -	- -	- -	0.915
EMP_2	- -	- -	- -	- -	- -	0.871
ENT_1	- -	- -	- -	- -	- -	- -
ENT_2	- -	- -	- -	- -	- -	- -
EXS_1	- -	- -	- -	- -	- -	- -
EXS_2	- -	- -	- -	- -	- -	- -
HAR_1	- -	- -	- -	- -	- -	- -
HAR_2	- -	- -	- -	- -	- -	- -
INP_1	- -	- -	- -	- -	- -	- -
INP_2	- -	- -	- -	- -	- -	- -
INS_1	- -	- -	- -	- -	- -	- -
INS_2	- -	- -	- -	- -	- -	- -
PLA_1	- -	- -	- -	- -	- -	- -
PLA_2	- -	- -	- -	- -	- -	- -
REV_1	- -	- -	- -	- -	- -	- -
REV_2	- -	- -	- -	- -	- -	- -
SOU_1	- -	- -	- -	- -	- -	- -

SOU_2	- -	- -	- -	- -	- -	- -
STR_1	- -	- -	- -	- -	- -	- -
STR_2	- -	- -	- -	- -	- -	- -
TRU_1	- -	- -	- -	- -	- -	- -
TRU_2	- -	- -	- -	- -	- -	- -
VIS_1	- -	- -	- -	- -	- -	- -
VIS_2	- -	- -	- -	- -	- -	- -
	ENTREPRE	**EXSCANNI**	**HARDY**	**INSPIRIN**	**INSCANNI**	**PLANNING**
ACK_1	- -	- -	- -	- -	- -	- -
ACK_2	- -	- -	- -	- -	- -	- -
ART_1	- -	- -	- -	- -	- -	- -
ART_2	- -	- -	- -	- -	- -	- -
CON_1	- -	- -	- -	- -	- -	- -
CON_2	- -	- -	- -	- -	- -	- -
DEV_1	- -	- -	- -	- -	- -	- -
DEV_2	- -	- -	- -	- -	- -	- -
DIS_1	- -	- -	- -	- -	- -	- -
DIS_2	- -	- -	- -	- -	- -	- -
EMP_1	- -	- -	- -	- -	- -	- -
EMP_2	- -	- -	- -	- -	- -	- -
ENT_1	0.896	- -	- -	- -	- -	- -
ENT_2	0.872	- -	- -	- -	- -	- -
EXS_1	- -	0.806	- -	- -	- -	- -
EXS_2	- -	0.887	- -	- -	- -	- -
HAR_1	- -	- -	0.842	- -	- -	- -
HAR_2	- -	- -	0.882	- -	- -	- -
INP_1	- -	- -	- -	0.863	- -	- -
INP_2	- -	- -	- -	0.906	- -	- -
INS_1	- -	- -	- -	- -	0.832	- -
INS_2	- -	- -	- -	- -	0.886	- -
PLA_1	- -	- -	- -	- -	- -	0.841
PLA_2	- -	- -	- -	- -	- -	0.884
REV_1	- -	- -	- -	- -	- -	- -
REV_2	- -	- -	- -	- -	- -	- -
SOU_1	- -	- -	- -	- -	- -	- -
SOU_2	- -	- -	- -	- -	- -	- -
STR_1	- -	- -	- -	- -	- -	- -
STR_2	- -	- -	- -	- -	- -	- -
TRU_1	- -	- -	- -	- -	- -	- -
TRU_2	- -	- -	- -	- -	- -	- -

VIS_1	- -	- -	- -	- -	- -	- -
VIS_2	- -	- -	- -	- -	- -	- -
	REVIE	**SOUND**	**STRATEGY**	**TRUST**	**VISION**	
ACK_1	- -	- -	- -	- -	- -	- -
ACK_2	- -	- -	- -	- -	- -	- -
ART_1	- -	- -	- -	- -	- -	- -
ART_2	- -	- -	- -	- -	- -	- -
CON_1	- -	- -	- -	- -	- -	- -
CON_2	- -	- -	- -	- -	- -	- -
DEV_1	- -	- -	- -	- -	- -	- -
DEV_2	- -	- -	- -	- -	- -	- -
DIS_1	- -	- -	- -	- -	- -	- -
DIS_2	- -	- -	- -	- -	- -	- -
EMP_1	- -	- -	- -	- -	- -	- -
EMP_2	- -	- -	- -	- -	- -	- -
ENT_1	- -	- -	- -	- -	- -	- -
ENT_2	- -	- -	- -	- -	- -	- -
EXS_1	- -	- -	- -	- -	- -	- -
EXS_2	- -	- -	- -	- -	- -	- -
HAR_1	- -	- -	- -	- -	- -	- -
HAR_2	- -	- -	- -	- -	- -	- -
INP_1	- -	- -	- -	- -	- -	- -
INP_2	- -	- -	- -	- -	- -	- -
INS_1	- -	- -	- -	- -	- -	- -
INS_2	- -	- -	- -	- -	- -	- -
PLA_1	- -	- -	- -	- -	- -	- -
PLA_2	- -	- -	- -	- -	- -	- -
REV_1	0.886	- -	- -	- -	- -	- -
REV_2	0.874	- -	- -	- -	- -	- -
SOU_1	- -	0.923	- -	- -	- -	- -
SOU_2	- -	0.929	- -	- -	- -	- -
STR_1	- -	- -	0.851	- -	- -	- -
STR_2	- -	- -	0.894	- -	- -	- -
TRU_1	- -	- -	- -	0.921	- -	- -
TRU_2	- -	- -	- -	0.869	- -	- -
VIS_1	- -	- -	- -	- -	0.838	- -
VIS_1	- -	- -	- -	- -	0.880	- -

All the loadings in the factor loading matrix exceed the critical value of .71 suggested by Hair et al. (2006). There are no parcels with loadings lower than this cut-off value. The item parcels therefore generally do represent the latent coaching performance construct that they were designed to reflect acceptably well. The fact that the item parcels all load well on each of the latent performance dimensions they were tasked to represent does not, however, necessarily mean that all the items comprising the parcel also represent the latent variable well. Poor items could be hiding in the item parcel. Although this effect is minimised in this study through the small number of items included in each item parcel this fact nonetheless precludes a really confident verdict on the success with which the individual items comprising the CCCQ performed the task that was assigned to them during the design and development of the instrument.

The squared completely standardised factor loadings indicate the squared multiple correlation when regressing the standardised item parcel on the standardised latent variable it was earmarked to represent. The R^2 values for the item parcels are shown in Table 4.44.

Table 4.44

Squared multiple correlations for item parcels

ACK_1	**ACK_2**	**ART_1**	**ART_2**	**CON_1**	**CON_2**	**DEV_1**	**DEV_2**	**DIS_1**	**DIS_2**
0.778	0.834	0.740	0.791	0.837	0.822	0.762	0.769	0.810	0.718
EMP_1	**EMP_2**	**ENT_1**	**ENT_2**	**EXS_1**	**EXS_2**	**HAR_1**	**HAR_2**	**INP_1**	**INP_2**
0.837	0.759	0.803	0.761	0.650	0.787	0.710	0.777	0.745	0.820
INS_1	**INS_2**	**PLA_1**	**PLA_2**	**REV_1**	**REV_2**	**SOU_1**	**SOU_2**	**STR_1**	**STR_2**
0.693	0.785	0.707	0.782	0.785	0.764	0.851	0.862	0.725	0.799
TRU_1	**TRU_2**	**VIS_1**	**VIS_2**						
0.848	0.755	0.702	0.774						

According to Spangenberg and Theron (2005) the total variance in the i^{th} item parcel (X_i) is the result of the following:

- Variance in the latent variable the item set was meant to reflect (ξ_i)
- Variance due to variance in the other systematic latent effects the item parcel was not designed to reflect, and
- Variance due to random measurement error.

The R^2 values shown in Table 4.44 reflect the proportion of variance in the item parcel that can be explained in terms of the variance in the latent variable it was tasked to reflect. Hair et al.'s (2006) critical factor loading of .71 implies a critical R^2 value of .50. In this case all the 34 item parcels the latent variable of interest explains more than 50% of the variance in the item parcels.

The unstandardised measurement error variances for the item parcels are reflected in Table 4.45 and the completely standardised measurement error variances in Table 4.46. Table 4.45 indicates that all the measurement error variances are statistically significant ($p<.05$). The statistical null hypotheses H_{0i}: $\Theta_{\delta jj} = 0$; i =37, 38,..., 70; j=1, 2.....17 are therefore rejected. Table 4.46 indicates that all the measurement error variances are satisfactorily small. Measurement error variance accounts for between 15.2% and 35% of the variance in the item parcels. In the case of 25 (73.5%) of the 34 item parcels measurement error accounts for less than 25% of the item parcel variance.

Table 4.45

Unstandardised measurement error variances

ACK_1	**ACK_2**	**ART_1**	**ART_2**	**CON_1**	**CON_2**	**DEV_1**	**DEV_2**	**DIS_1**	**DIS_2**
0.279	0.204	0.282	0.246	0.160	0.181	0.295	0.259	0.180	0.378
(0.030)	(0.024	(0.025)	(0.025)	(0.018)	(0.021)	(0.029)	(0.028)	(0.019)	(0.034)
9.213	8.617	11.414	9.980	8.994	8.664	10.038	9.240	9.703	11.258
EMP_1	**EMP_2**	**ENT_1**	**ENT_2**	**EXS_1**	**EXS_2**	**HAR_1**	**HAR_2**	**INP_1**	**INP_2**
0.155	0.228	0.208	0.233	0.347	0.210	0.307	0.226	0.266	0.196
(0.017)	(0.022)	(0.022)	(0.023)	(0.031	(0.026)	(0.028)	(0.023)	(0.027)	(0.024)
9.139	10.124	9.473	10.147	11.018	7.972	11.141	9.754	9.942	8.117
INS_1	**INS_2**	**PLA_1**	**PLA_2**	**REV_1**	**REV_2**	**SOU_1**	**SOU_2**	**STR_1**	**STR_2**
0.311	0.251	0.278	0.247	0.225	0.267	0.149	0.147	0.269	0.236
(0.029)	(0.027)	(0.031)	(0.030)	(0.025)	(0.030)	(0.015)	(0.018)	(0.028)	(0.024)
10.727	9.361	9.036	8.122	8.976	8.772	9.804	8.294	9.583	10.000
TRU_1	**TRU_2**	**VIS_1**	**VIS_2**						
0.149	0.210	0.357	0.259						
(0.020)	(0.020)	(0.035)	(0.032						
7.615	10.516	10.223	8.050						

Table 4.46

Completely standardised measurement error variances

ACK_1	ACK_2	ART_1	ART_2	CON_1	CON_2	DEV_1	DEV_2	DIS_1	DIS_2
0.222	0.166	0.260	0.209	0.163	0.178	0.238	0.231	0.190	0.282
EMP_1	**EMP_2**	**ENT_1**	**ENT_2**	**EXS_1**	**EXS_2**	**HAR_1**	**HAR_2**	**INP_1**	**INP_2**
0.163	0.241	0.197	0.239	0.350	0.213	0.290	0.223	0.255	0.180
INS_1	**INS_2**	**PLA_1**	**PLA_2**	**REV_1**	**REV_2**	**SOU_1**	**SOU_2**	**STR_1**	**STR_2**
0.307	0.215	0.293	0.218	0.215	0.236	0.149	0.138	0.275	0.201
TRU_1	**TRU_2**	**VIS_1**	**VIS_2**						
0.152	0.245	0.298	0.226						

The 17 latent coaching dimensions constituting the affirmative development coaching domain as defined by the CCCQ are expected to correlate. Since the 17 latent coaching dimensions are seen as 17 qualitatively distinct although related dimensions of coaching, they should however, not correlate excessively high with each other. The latent variable inter-correlations are shown in the phi matrix in Table 4.47. All the inter-latent variables are statistically statistically significant ($p<.05$). The statistical null hypotheses H_{0i}: $\phi_{jk} = 0$; i =71, 72,..., 206; j=1, 2.....17; k=1, 2.....17 are therefore rejected. Correlations are considered excessively high in this study if they exceed a value of .90. Judged by this criterion most of the correlations in the phi matrix are excessively high.

Table 4.47

Phi matrix

	ACKNOWLE	ARTICULA	CONCERN	DEVELOPM	DISCOVER	EMPOWERM
ACK	1.000					
ART	0.903	1.000				
	(0.022)					
	41.431					
CON	0.932	0.935	1.000			
	(0.019)	(0.017)				
	48.128	54.587				
DEV	0.885	0.963	0.902	1.000		
	(0.022)	(0.019)	(0.021)			
	40.327	49.592	42.796			
DIS	0.924	0.956	0.999	0.957	1.000	
	(0.021)	(0.019)	(0.012)	(0.017)		
	43.481	49.490	82.301	55.831		
EMP	0.920	0.974	0.959	0.962	1.008	1.000
	(0.018)	(0.015)	(0.014)	(0.016)	(0.013)	
	51.964	64.857	66.455	60.979	76.194	
ENT	0.920	0.945	0.951	1.009	0.965	0.959
	(0.018)	(0.019)	(0.015)	(0.013)	(0.016)	(0.016)

	52.233	49.795	64.754	76.104	60.943	58.486
EXS	0.917	0.985	0.924	1.008	0.953	0.955
	(0.020)	(0.019)	(0.019)	(0.018)	(0.018)	(0.020)
	45.599	52.232	49.144	55.981	53.976	47.820
HAR	0.926	0.968	0.961	0.968	0.997	1.004
	(0.021)	(0.018)	(0.018)	(0.018)	(0.016)	(0.014)
	44.370	54.721	52.263	54.864	62.400	71.405
INSP	0.944	1.000	0.985	0.938	0.971	0.978
	(0.017)	(0.014)	(0.013)	(0.019)	(0.015)	(0.014)
	56.462	69.498	76.700	49.150	65.473	68.494
INSC	0.907	0.967	0.938	0.974	0.946	0.957
	(0.023)	(0.022)	(0.018)	(0.021)	(0.022)	(0.019)
	39.349	44.812	52.845	46.144	42.880	49.851
PLA	0.916	0.970	0.940	0.971	0.983	0.995
	(0.022	(0.017)	(0.019)	(0.017	(0.018)	(0.016)
	41.531	56.809	48.853	56.650	54.513	63.296
REV	0.938	0.934	0.928	0.920	0.956	0.945
	(0.021)	(0.022)	(0.016)	(0.020)	(0.016)	(0.018)
	44.515	41.946	57.880	46.731	58.512	53.781
SOU	0.891	0.936	1.001	0.930	1.011	0.967
	(0.023)	(0.019)	(0.009)	(0.018)	(0.011)	(0.014)
	38.920	48.418	107.639	53.136	89.967	71.393
STR	0.884	1.000	0.925	1.003	0.970	0.984
	(0.022)	(0.016)	(0.018)	(0.017)	(0.018)	(0.014)
	40.382	62.609	51.593	59.430	54.051	72.004
TRUST	0.942	1.001	0.988	0.943	0.981	0.999
	(0.015)	(0.013)	(0.011)	(0.017)	(0.015)	(0.014)
	61.590	78.654	87.542	55.361	63.467	70.784
VIS	0.900	1.001	0.931	1.001	0.943	0.965
	(0.022)	(0.019)	(0.019)	(0.018)	(0.021)	(0.017)
	40.981	52.979	48.536	56.696	45.840	56.399
	ENTREPRE	EXSCANN	HARDY	INSPIRIN	INSCANNI	PLANNING
ENT	1.000					
EXS	0.983	1.000				
	(0.016)					
	61.737					
HAR	0.970	0.961	1.000			
	(0.015)	(0.020)				
	62.954	48.297				
INSP	0.993	0.943	0.960	1.000		
	(0.014)	(0.018)	(0.018)			
	68.588	52.274	53.387			
INSC	0.994	1.029	0.942	0.955	1.000	
	(0.015)	(0.017)	(0.024)	(0.018)		
	64.182	59.484	38.841	54.209		
PLA	0.993	0.975	0.974	0.987	0.961	1.000
	(0.015)	(0.020)	(0.021)	(0.016)	(0.020)	
	66.323	48.213	46.955	59.860	47.052	
REV	0.936	0.921	0.922	0.952	0.919	1.005
	(0.019)	(0.020)	(0.022)	(0.017)	(0.022)	(0.014)
	50.494	46.079	41.494	55.948	41.088	70.315
SOU	0.956	0.948	0.962	0.961	0.929	0.957
	(0.014)	(0.017)	(0.016)	(0.013)	(0.019)	(0.015)
	69.678	56.374	61.807	75.904	48.974	62.667
STRA	0.968	1.012	0.989	0.950	1.000	0.985
	(0.014)	(0.017)	(0.018)	(0.016)	(0.017)	(0.017)
	66.981	59.059	53.841	57.576	59.495	58.190
TRUST	0.943	0.960	0.992	0.990	0.960	0.975
	(0.019)	(0.017)	(0.015)	(0.013)	(0.019)	(0.015)
	49.154	56.575	67.302	75.513	51.597	64.433

VIS	0.993	1.014	0.940	0.970	1.015	0.999
	(0.014)	(0.018)	(0.023)	(0.018)	(0.017)	(0.019)
	68.771	55.109	41.708	52.948	58.672	53.933
	REVIEW	SOUND	STRATEGY	TRUST	VISION	
REV	1.000					
SOU	0.939	1.000				
	(0.015)					
	60.824					
STRA	0.925	0.943	1.000			
	(0.022)	(0.017)				
	42.095	55.596		1.000		
	0.933	0.975	0.970			
TRUST	(0.019)	(0.012)	(0.015)			
	50.282	79.051	66.488			
	0.919	0.945	1.015	0.990		
	(0.022)	(0.018)	(0.015)	(0.018)	1.000	
VIS	42.272	53.759	68.637	56.179		

The top value represents the unstandardised φ_{ij} estimate, the second value in brackets the standard error of φ_{ij} and the third value the test statistic z.

4.5.5 DISCRIMINANT VALIDITY

The excessively high correlations between the latent variables in the phi matrix are in itself very strong evidence of lack of discriminant validity. This substantially increases the possibility that latent coaching competencies might correlate unity in the parameter but correlate less than unity in the statistic because of sampling error. To examine this possibility a 95% confidence interval was calculated for each sample estimate in utilising an Excel macro developed by Scientific Software International (Mels, 2009 as cited in Myburgh, 2013). If any confidence interval includes the value 1 it would imply that the null hypothesis H_0: $\rho=1$ cannot be rejected. Confidence in the claim that the latent coaching dimensions are unique, qualitatively distinct dimensions of the performance construct would thereby be further seriously eroded.

The 95% confidence intervals for the 136 inter-latent variable correlations are shown in Table 4.48. 30 out of the 136 confidence intervals include unity (22.06%). Most intervals include the value (.90) earlier considered to be a critical value for excessively large correlations. The discriminant validity of the CCCQ dimension measures is thereby seriously compromised.

The 17 latent coaching competencies correlate as indicated in Table 4.47. Most of these correlations are considered excessively large. It can moreover with 95% confidence be concluded that 30 of the correlations in the parameter could be equal to 1.

Each latent coaching competency is represented by 2 item parcels. The average variance extracted (AVE14)[17] reflects the average proportion of variance in the indicator variables that is accounted for by the latent variable that the indicator variables were tasked to represent (Diamantopoulos & Siguaw, 2000). Farrell (2010) as cited in Myburgh (2013) argues that the average variance extracted should be greater than .50 and should be greater than the squared correlation between the latent variables. His argument is that the latent variable should account for more variance in the indicators that were tasked to represent the latent variable than measurement variance. Secondly the argument is that the latent variable should account for more variance in the indicator variables that were tasked to reflect than they account for in each other.

Table 4.48

95% confidence interval for sample phi estimate

	ACK	ART	CON	DEV	DIS	EMP	ENT	EXS	HAR	INSP	INS	PLA	REV	SOU	STR	TRU	VIS
ACK	-																
ART	0.850-0.938	-															
CON	0.883-0.961	0.892-0.961	-														
DEV	0.833-0.921	0.900-0.987	0.852-0.936	-													
DIS	0.870-0.956	0.899-0.981	**-1.00-1.00**	0.907-0.980	-												
EMP	0.876-0.949	0.920-0.992	0.920-0.979	0.914-0.983	**1.00-1.210**	-											
ENT	0.876-0.949	0.893-0.972	0.911-0.973	**1.001-1.162**	0.915-0.986	0.913-0.981	-										
EXS	0.868-0.948	0.831-0.999	0.877-0.954	**1.000-1.950**	0.901-0.978	0.894-0.981	0.896 0.997	-									
HAR	0.872-0.958	0.905-0.989	0.905-0.984	0.905-0.989	**0.963-1.00**	**1.000--3.280**	0.921-0.989	0.895-0.986	-								
INSP	0.899-0.969	**1.000-1.000**	0.920-0.997	0.888-0.966	0.921-0.990	0.924-0.994	**0.696-1.000**	0.895-0.969	0.904-0.984	-							
INS	0.850-0.943	0.881-0.991	0.891-0.965	0.877-0.995	0.881-0.976	0.899-0.982	**0.418-1.000**	**1.009-1.093**	0.871-0.974	0.902-0.980	-						
PLA	0.861-0.950	0.910-0.990	0.889-0.968	0.910-0.991	0.870-0.998	**0.148-1.000**	**0.616-1.000**	0.883-0.995	0.877-0.995	0.862-0.999	0.895-0.986	-					
REV	0.881-	0.874-	0.889-	0.870-	0.911-	0.896-	0.886-	0.871-	0.865-	0.905-	0.863-	1.000-	-				

[17] The AVE is defined as the average proportion of the variance that a latent variable is able to explain in the indicator variables that were tasked to represent it (Farrell, 2008). The AVE is calculated as $_v=(^2ij)/(\ (^2_{ij}+_i)$ (Diamantopoulos & Siguaw, 2000, p. 91

	0.968	0.966	0.954	0.951	0.979	0.971	0.964	0.952	0.955	0.976	0.953	3.935					
SOU	0.836-0.928	0.886-0.964	**1.000--1.000**	0.885-0.958	**1.002-1.080**	0.925-0.986	0.918-0.977	0.902-0.973	0.914-0.983	0.925-0.980	0.881-0.958	0.915-0.978	0.902-0.962	-			
STRA	0.833-0.920	**1.000-1.000**	0.881-0.953	**1.000--1.021**	0.904-0.991	0.913-0.997	0.925-0.986	**1.001-1.208**	**0.756-1.000**	0.907-0.973	**1.000-1.000**	0.868-0.998	0.868-0.958	0.898-0.968	-		
TRUST	0.904-0.965	**1.000--1.000**	0.929-0.998	0.898-0.968	0.913-0.996	**1.000-1.000**	0.891-0.970	0.909-0.983	**0.723-1.000**	0.878-0.999	0.900-0.984	0.920-0.992	0.884-0.962	0.936-0.990	0.921-0.989	-	
VIS	0.847-0.935	**1.000--1.000**	0.882-0.960	**1.000--1.000**	0.884-0.972	0.910-0.987	**0.696-1.000**	**1.001-1.186**	0.874-0.972	0.904-0.991	**1.002-1.145**	**1.00-1.00**	0.863-0.953	0.896-0.971	**1.002-1.110**	**0.703-1.000**	-

Only one of the squared inter-latent variable correlations (0.7%) is smaller than both the AVE values associated with the latent variable pair being correlated. The latent variables involved in this pair therefore account for more variance in their indicator variables that were tasked to reflect them than they account for in each other. Three of the squared inter-latent variable correlations (2.21%) are smaller than one of the AVE values associated with one of the latent variables in the pair of variables being correlated. However one hundred and thirty two of the squared inter-latent variable correlations (97.0588%) are larger than both the AVE values associated with the latent variable pairs being correlated. The discriminant validity of the CCCQ dimension measures is thereby seriously compromised.

Table 4.49

Squared sample phi estimates and average variance extracted per latent variable

	ACK	ART	CON	DEV	DIS	EMP	ENT	EXS	HAR	INSP	INS	PLA	REV	SOU	STR	TRU	VIS	AVE
ACK	_																	0.805951
ART	0.815	_																0.765582
CON	0.869	0.874	_															0.829574
DEV	0.783	0.927	0.814	_														0.76553
DIS	0.854	0.914	0.998	0.916	_													0.76393
EMP	0.846	0.949	0.920	0.925	1.016	_												0.797986
ENT	0.846	0.893	0.904	1.018	0.931	0.920	_											0.781913
EXS	0.841	0.970	0.854	1.016	0.908	0.912	0.966	_										0.718416
HAR	0.857	0.937	0.924	0.937	0.994	1.008	0.941	0.924	_									0.743486
INSP	0.891	1.000	0.970	0.880	0.943	0.956	0.986	0.889	0.922	_								0.782566
INS	0.823	0.935	0.880	0.949	0.895	0.916	0.988	1.059	0.887	0.912	_							0.738898
PLA	0.839	0.941	0.884	0.943	0.966	0.990	0.986	0.951	0.949	0.974	0.924	_						0.744466
REV	0.880	0.872	0.861	0.846	0.914	0.893	0.876	0.848	0.850	0.906	0.845	1.010	_					0.774486
SOU	0.794	0.876	1.002	0.865	1.022	0.935	0.914	0.899	0.925	0.924	0.863	0.916	0.882	_				0.856641
STR	0.781	1.000	0.856	1.006	0.941	0.968	0.937	1.024	0.978	0.903	1.000	0.970	0.856	0.889	_			0.761933
TRU	0.887	1.002	0.976	0.889	0.962	0.998	0.889	0.922	0.984	0.980	0.922	0.951	0.870	0.951	0.941	_		0.80154
VIS	0.810	1.002	0.867	1.002	0.889	0.931	0.986	1.028	0.884	0.941	1.030	0.998	0.845	0.893	1.030	0.980	_	0.738084
AVE	0.805951	0.765582	0.829574	0.76553	0.76393	0.797986	0.781913	0.718416	0.743486	0.782566	0.738898	0.744466	0.774486	0.856641	0.761933	0.80154	0.738084	

O AVE <r² for both latent variables O AVE <r² for one of the latent variables O AVE>r² for both latent variables

The finding that some of the 17 latent coaching competencies correlate unity means that they measure the same thing. The finding that some confidence intervals include unity suggests the possibility that the latent variables involved are not qualitatively distinct. The magnitude of the correlations (Table 4.47) and the magnitude of the coefficients of determination (Table 4.49) suggest that many of the latent variables are not qualitatively distinct latent variables. The comparison of the AVE values and the coefficient of determination have a bearing on the question whether the measures of each latent variables successfully captures the distinction that exists in the latent variables. The magnitude of the correlations (Table 4.47) and the magnitude of the coefficients of determination (Table 4.49), however, mean that in many cases there is no distinction between the latent variables been measured. The finding that AVE is generally less than the coefficient of determination therefore reflects the fact that in too many cases there is no unique part of the latent variable to be measured. In some additional cases the measures also do not allow us to successfully discriminate between the unique aspects of the latent variables involved.

The finding on the problematic nature of the discriminant validity stands in sharp contrast to the excellent measurement model fit and the highly satisfactory parameter estimates that were obtained for the freed measurement model parameters. This powerfully attests to the importance of routinely evaluating the discriminant validity of a measuring instrument in a confirmatory factor analysis study.

4.5.6 POWER ASSESSMENT

The close fit null hypothesis was not rejected. The observed population covariance matrix (Σ) could therefore be assumed to closely approximate the reproduced population co-variance (Σ^) matrix derived from the model parameters. The question however is whether the decision not to reject H_{02} was the correct decision. This concern grows when there is a decrease in sample size. A decrease in sample size lowers the statistical power of the analysis. The statistical power of the analysis

refers to the probability to reject H_{02} if H_{02} is false (i.e., to reject the claim that a model fits closely in the parameter when it actually has mediocre fit). Statistical power is the conditional probability of rejecting a false null hypothesis (P[reject H_0: RMSEA≤.05)|H_0 false]). When the decision not to reject the null hypothesis of close fit happens under conditions of low power, uncertainty increases and therefore confidence in the evidence decreases. In such a case it is not clear if the decision was the result of an accurate model or due to insensitivity of the test to distinguish specification errors in the model. The close fit null hypothesis explains that the proposed model closely reflects reality. Not rejecting H_{02}: RMSEA≤.05 indicates a good fit of the model to the extent that the statistical power of the close fit evaluation is reasonably high.

When the chi-square test is applied only Type I errors are explicitly taken into account, thus, a power analysis must be undertaken to also account for the probability of Type II errors (Diamantopoulos & Siguaw, 2000). Diamantopoulos and Siguaw (2000) explain the difference between Type I and Type II error in the context of structural equation modelling as follows:

> When we test a model's fit by, say, the chi-square test, we emphasize the probability of making a **Type I error**, i.e. rejecting a correct model; this probability is captured by the **significance level**, α which is usually set at 0,05. A significant chi-square result indicates that *if* the null hypothesis is true (i.e. the model is correct in the population), then the probability of incorrectly rejecting it is low (i.e. less than five times out of 100 if α=.05). However, another error that can occur is *not* to reject an incorrect model. This type of error is known as **Type II error** and the probability associated with it is denoted as β. The probability of avoiding a Type II error is, therefore, 1-β and it is this probability that indicates the power of our test; thus the power of the test tells us how likely it is that a false null hypothesis (i.e. incorrect model) will be rejected. (p. 93)

The power associated with the test of close fit was estimated. The close fit null hypothesis explains that the model has a close but an imperfect fit in the population. This is calculated by using the value of the RMSEA statistic. When a model has a close fit in the population, the error caused by approximation is set at .05 and the null hypotheses H_{02} is tested against H_{a2} (Diamantopoulos & Siguaw, 2000). A specified value for the parameter needs to be assumed under H_{a2} when determining the test of

the close fit hypothesis. The RMSEA=.08 is a good value to use because RMSEA=.08 is the upper limit of a satisfactory fit.

With information on H_{02} and H_{a2} and given a significance level (α) of .05 and a sample size N, the power of the test becomes a function of the degrees of freedom (v) in the model (v=½[(p][p+1]-t)=595-204=391)[18]. The higher the degrees of freedom, the greater the power of the test (Diamantopoulos & Siguaw, 2000). MacCallum, Browne, and Sugawara (1996) assembled power tables but only makes provision for degrees of feedom ≤ 100 and N ≤ 500. Syntax developed by Preacher and Coffman (2006) in R and available at http://www.quantpsy.org/rmsea/rmsea.htm was utilised to determine the statistical power of the test of close fit. For this purpose a significance level of .05 was specified, a sample size of 398, 391 degrees of freedom, RMSEA was set to .05 under H_0 and RMSEA was set to .08 under H_a. The Preacher and Coffman (2006) software returned a power value of unity. In the case of poor model fit, H_{02}, would therefore have been rejected. This was not the case which bolsters confidence in the decision.

4.5.7 SUMMARY

Chapter four evaluated the psychometric properties of the Chikampa Coaching Competency Questionnaire (CCCQ) to determine the construct validity of the instrument.

The substantive hypothesis tested in this study is that the CCCQ provides a construct valid and reliable measure of affirmative coaching performance as defined by the instrument, amongst South African coaches.

The operational hypothesis implied by the substantive research hypothesis is that the measurement model can closely reproduce the covariances observed between the item parcels formed from the items of the various subscales. The operational

[18] t represents the number of parameters to be estimated in the fitted model and p the number of indicator variables.

hypothesis implied by the substantive research hypothesis further implies that the factor loadings of the item parcels on their coaching performance dimensions are statistically significant, that the measurement error variances related to each parcel are statistically significant but small, that the latent coaching competencies explain large proportions of the variance in the item parcels, that the latent coaching competencies correlate low-moderately with each other, that the 95% confidence interval for the latent coaching competencies correlation do not contain 1 and finally that the average variance extracted (AVE) by the item parcels of each latent coaching competencies is larger than the squared correlations between the latent coaching competencies.

Multiple fit indices were utilised to test model fit. The results reflected a good fit of the model. The null hypothesis of close fit was not rejected. The position that the model shows close fit in the parameter was therefore tenable. The basket of LISREL results were indicative of good model fit in the sample. The majority of the fit statistics indicated good fit and the small percentage of large standardised covariance residuals corroborated this conclusion. The lack of large modification indices calculated for the $\mathbf{\Lambda^x}$ and the small percentage of large modification calculated for the $\mathbf{\Theta_\delta}$ matrices also indicated a good fit. The factor loadings of the item parcels on their designed latent behavioural performance dimension were statistically statistically significant. Results also show that the latent coaching competencies explain large proportion of variance in the item parcel that represents them.

The discriminant validity of the CCCQ was, however, seriously compromised. The latent coaching competencies correlated exessively with each other in the sample. A worrisome finding was that the confidence intervals calculated for the latent coaching competencies correlation contained 1. This finding implies that the unique parts of the latent variables have not been adequately measured. The measures therefore do not permit the successfully discrimination between the unique aspects of the latent variables involved.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 INTRODUCTION

The objective of the research study was to develop and psychometrically evaluate an affirmative development coach competency questionnaire. This chapter provides a summary of the results of this study. The implications of the findings are discussed and recommendations are made for future research.

5.2 SUMMMARY OF PRINCIPAL FINDINGS AND DISCUSSION

The measurement model was fitted to the data by representing each latent coaching competency by means of two item parcels. Item parcels were used for this purpose because of restrictions on the available sample size. The thirty-four item parcels were formed by combining the items comprising each subscale of the CCCQ into two linear composites by taking the mean of the even numbered and the mean of the uneven number items. To reflect on the extent to which it could be justified to combine the individual items into item parcels, item analysis and exploratory factor analysis were performed on each subscale. The purpose of these analyses was, however, not only to examine the justification of the formation of item parcels but also to more generally evaluate the claim that each subscale of the CCCQ provides an internally consistent and essentially uni-dimensional measure of specific latent coaching performance factors that it was intended to measure.

Given the results in Chapter 4, the following conclusions are made with respect to the item analyses, dimensionality analyses, and the fit of the hypothesised measurement model.

5.2.1 ITEM ANALYSIS

The structural design of the CCCQ reflects an intention to construct essentially one-dimensional sets of items that would reflect variance in each of the 17 latent variables collectively comprising the coaching performance domain. The items comprising each subscale are meant to operate as stimulus sets to which respondents react with behaviour that is primarily an expression of a specific underlying coaching factor. If they do so successfully, the items of a subscale should correlate reasonably high and statistically significantly amongst themselves, reasonably large proportions of the variance in an item should be explained by a weighted linear composite of the remaining items, each item should correlate reasonably high with a subscale total score calculated from the remaining items and the coefficient of internal consistency should be reasonably high for each subscale.

In order to determine how well the items of a subscale represent a common underlying factor, various descriptive item statistics were calculated. The purpose with the calculation of these item statistics was to detect the presence of poor items. Poor items are items that fail to discriminate between different states of the latent variable they are meant to reflect and items that do not in conjunction with their subscale peers reflect a common latent variable. Two poor items were identified. One item from the *monitoring the internal environment* subscale and one item from the *acting entrepreneurial* subscale were identified as problematic items but both were not deleted from the CCCQ due to the small number of items in these subscales. Therefore no items were deleted from the instrument. All of the subscales reflect high alpha coefficients above the critical cut off value set for this study of .80.

5.2.2 DIMENSIONALITY ANALYSIS

Principal factor analyses with oblique rotation were performed on each of the 17 subscales of the Chikampa Coaching Competency Questionnaire. The purpose was to evaluate the assumption that each latent coaching performance dimension is a unidimensional construct and to evaluate the degree to which each item measures

the specific coaching competence dimension that it was intended to measure. Factor loadings of each item were used to determine the degree to which the item reflects the underlying coaching dimension.

The eigenvalue-greater-than-unity rule of thumb and the scree plot were used to determine the number of factors to be extracted. All of the 17 subscales passed the uni-dimensionality test. In all of the subscales, 1 factor with eigenvalues greater than one was extracted. All item load reasonably high on the single factor except for loadings of the two items in the *monitoring the internal environment* and *acting entrepreneurial* subscales that were flagged as problematic items in the item analysis. These two items nonetheless also loaded higher on the common underlying factor than the cut-off value of .50.

The extraction of a single factor, having each item load reasonably high on the single factor and accurately reproducing the observed inter-item correlation matrix does not, however, necessarily mean that the target latent coaching competencies carrying a specific constitutive definition has been successfully measured. The extraction of a single factor, along with adequate loadings on the factor does, however, mean that the hypothesis that items in the specific subscale all successfully measure the target latent coaching competencies as constitutively defined has survived the opportunity to be falsified. In this sense then the results obtained for the exploratory factor analysis indicate that the items measuring all of the 17 coaching competencies do satisfactorily measure the behavioural performance dimensions that they intended to measure.

5.2.3 MEASUREMENT MODEL FIT

The CCCQ measurement model fitted the data well. The null hypothesis of close model fit could not be rejected ($p > .05$). The basket of descriptive fit indices indicates a good fitting model. This finding is supported by the small percentage of large standardised covariance residuals and the lack of large modification indices for the $\mathbf{\Lambda_x}$ and the small percentage of statistically significant $\mathbf{\Theta_\delta}$ modification indices.

It can therefore be concluded that the measurement model provides a valid description of the psychological process underlying the CCCQ in that the model with its parameter estimates was able to closely reproduce the observed covariance matrix. The item parcels loaded statistically significantly ($p<.05$) on the latent coaching dimensions they were earmarked to reflect. The magnitude of all factor loadings was satisfactory and exceeded the Hair et al. (2006) critical cut-off value of .71. All the measurement error variances were statistically significant but satisfactorily small. When viewed from this perspective the item parcels provided valid, reliable measures of the latent coaching competencies they were tasked to reflect. Although the measurement model fitted the data closely and the factor loading and measurement error parameter estimatese were highly satisfactory, serious problems with discriminant validity were observed. The CCCQ did not measure the 17 latent coaching competencies as qualitatively distinct latent variables.

5.3 LIMITATIONS

The measurement model was fitted by representing each of the latent coaching competencies by means of two item parcels. Given the objective of the research to psychometrically evaluate the CCCQ as a measure of affirmative development coaching competencies it would, however, have been preferable to fit the measurement model by using the individual items as indicator variables. This was not possible in this study due to the size of the available sample. . In the final analysis the question was whether the CCCQ provides a construct valid measure of the affirmative development behavioural performance coaching construct can only be satisfactorily answered when representing the latent coaching competencies with the individual items of each subscale of the CCCQ.

The connotative meaning of the affirmative development behavioural performance coaching construct lies in the internal structure of the construct as well as in the

manner in which the construct is embedded in a larger nomological network of constructs. Evaluating the construct validity of the CCCQ means evaluating whether the instrument successfully measures the coaching competencies construct as constitutively defined. Evaluating the construct validity of the CCCQ by fitting the measurement model implied by the constitutive definition of the affirmative development coaching construct in conjunction with the design of the instrument only evaluates the construct validity from the perspective of the internal structure of the instrument. Conclusive evidence that the CCCQ measures the affirmative development coaching construct as constitutively defined can only be obtained by also showing that a structural model reflecting the manner in which the 17 latent coaching competencies are embedded in a larger nomological network fits data closely.

An important question that has not been investigated in this study is whether the measurement model underlying the CCCQ is similar in terms of number of latent coaching competencies and model parameter estimates across Black and White South African managers acting as affirmative development coaches. The question is therefore whether the CCCQ measures the same affirmative development coaching construct in these two populations and whether the manner in which the observed responses to items are related to the latent behavioural performance dimensions are the same. The questions can be answered by a series of multi-group SEM analyses in which the measurement model is simultaneously fitted to representative samples from the two populations initially, with all parameters freely estimated. The model is then subsequently simultaneously fitted to representative samples from the two populations with gradually increasing constraints imposed on the equality of the model parameters. The question is whether the model fit statistically significantly deteriorates with increasing equality constraints imposed on the measurement model parameters. If not, it would imply measurement model invariance across the two populations (Bontempo & Mackinnson, 2006 as cited in Moyo, 2009).

The measuring instrument which also had the self rater version[19] run the risk of social desirability. Social desirability according to Van Heerden (2013) refers to the risk that respondents may be tempted to attempt to manipulate the answers in order to create a more favourable impression when completing such instruments. This in turn impacts on the reported levels of the constructs investigated and it influences the results due to respondents attempt to manipulate the answers in order to create a more favourable impression when completing such instrument (Elmes, Kantowitz & Roediger, 2003). The question that begs an answer is whether the reported results pertain to the individuals' actual experiences, or mainly illustrate their perceptions. In other words, the respondents' perceptions may differ from the actual state of being causing them to rate themselves higher (or lower) on the constructs due to a false perception.

Although formal trials were run in which feedback was obtained on aspects like test length, clarity of test instructions and clarity of item wording yet feedback from respondents suggested that the difficulty level of the language might have been too high for the intended target population especially among the coachees.

Although the above noted limitations are important and must be taken into account, the researcher is nevertheless convinced that this study will contribute to a better understanding of the psychometric properties of the CCCQ as a valuable affirmative development coaching competency assessment tool in South Africa.

5.4 RECOMMENDATIONS FOR FUTURE STUDY

This study aimed at developing and validating a coach competency questionnaire based on the partial affirmative development coaching competency model. The aim was to evaluate the CCCQ psychometrically as a measure of affirmative development coaching competencies. The aim is to evaluate whether the design intentions of the CCCQ succeeded. The design intention was that each item would

[19] The CCCQ had two versions-the self rater were managers acting as affirmative development coaches rated themselves and also the other rater version whereby surbordinates,peers and even superiors to the managers rated the coach.

provide a valid and reliable measure of one of 17 specific latent coaching competencies. The ideal approach therefore has to be to fit a measurement model in which the individual items serve as indicator variables of the latent coaching competencies. To fit the CCCQ measurement model with individual items requires a larger sample of managers acting as coaches as well as coachees and other raters. It is therefore recommended that the study be repeated on a larger sample in which the individual items serve as indicator variables.

Future research on the CCCQ should also consider using multi-group SEM analyses in which the measurement model is simultaneously fitted to representative samples from different population groups such as race (Black and White managers), gender and possibly language groups to investigate the measurement invariance and equivalence of the CCCQ.

Discriminant validity presented a serious problem. This means that the latent coaching competencies are not clearly separated but flow into each other. If similar findings would emerge when the CCCQ measurement model is fitted with the individual items as indicator variables the problem should be the focus of attention in future studies. If the problem persists the possibility of combining the 17 current latent coaching dimensions into a smaller number of factors should be explored via exploratory factor analysis.

Future studies should also investigate the relationships hypothesised between the affirmative development coaching competencies and coaching outcomes as depicted in the structural model in Figure 2.1.

Last but not the least, the difficulty level of the language used in the instrument especially for coachees (other raters) as intended target population should be considered (for instructions and clarity).

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APPENDIX A

Self Rater Version (CCCQ)

CCCQ

CHIKAMPA COACHING COMPETENCY QUESTIONNAIRE

[SELF-RATER VERSION]

EXPERIMENTAL VERSION OF THE CHIKAMPA COACHING COMPETENCY QUESTIONNAIRE - Information on the Validation Study

Introduction

The Chikampa Coaching Competency questionnaire [CCCQ] is currently being developed with the objective of determining the level of coaching competence of managers currently serving as coaches for one or more coachee's that have been assigned to him/her. The objective of this study is to evaluate the success with which the CCCQ measures coaching competencies and if necessary refine the instrument. The results of this study will not be used to determine your competence as a coach, but solely to evaluate the merit of the instrument.

CHIKAMPA COACHING COMPETENCY QUESTIONNAIRE - Background Information and Rater Instructions

Introduction

This document describes the background and guidelines for completion of the CCCQ. You have been given this document by an individual who is co-coordinating the project of gathering data on the CCCQ for the purpose of evaluating the quality of the instrument.

Background Information

The quest for competitiveness in the business environment, combined with a dire need for constructive change in South Africa, requires leaders and managers that are competent in coaching people. This assessment was developed in order to measure how effectively coaches meet this challenge.

The CCCQ assesses the extent to which a coach demonstrates specific coaching behaviours or competencies needed to affect specific outcomes in the coachee. This is achieved through ratings provided by superiors, peers and followers on the frequency with which they observe specific behaviours.

You will be referred to as the candidate *and you* should provide a realistic picture of your behavioural functioning as a coach, and not provide unrealistic, overly positive responses in an attempt to portray what you believe would be a 'helpful' picture.

Anonymity of Raters

Every effort necessary will be made to maintain the anonymity of your responses. Your responses are confidential.

Confidentiality and Anonymity of Data Storage

All responses are stored in the CCCQ data base for continual re-standardization of the instrument as well as psychometric research on the measurement quality of the CCCQ. Names of candidates or their raters will not be associated with this data. The raters' status and their

responses to each item will be collected.

Access to Candidate Results

No unauthorized individual has access to the scores of candidates other than the assessment practitioner.

Instructions for Completion of the CCCQ

When responding to the questions, please select the response that best describes how you think you typically behave. Provide answers that reflect current functioning, not how you would like yourself to be or how you may have acted in the past if it is different than today. Please do not leave any questions blank. If you find it difficult to answer a particular question, do your best to select the response that best fits. If you cannot recall displaying the behaviour at all, you may choose the "Not observable" option. Be sure to provide your own responses to the questions, not the opinion or responses of someone else. And please do not guess. Base your answers on what you know.

Informed Consent

You are free to withdraw from participating in this activity at any time. In completing the CCCQ rating, it will be assumed that you have read this document and that you understand and agree with the information contained herein.

Thank you for taking the time to complete the CCCQ.

*Click here to indicate that you have read and understood the preceding information and whether you voluntary agree to participate in the research under the conditions outlined above

- [ ] I agree to participate
- [ ] I decline the invitation to participate

Submit Submit

Biographical detail (coach)

Please fill in the following particulars by clicking on the appropriate option or by entering the required information

***Gender**

- [ ] Male
- [ ] Female

***Highest educational qualification**

- [ ] Matric
- [ ] Bachelor's degree
- [ ] Honour's degree
- [ ] Masters degree
- [ ] Phd
- [ ] Other

Age [please specify]

Years of service/Tenure at [redacted] in current position [please specify]

*Peromnes job level [please specify]

- Top Management (MD,Director,GM))
- Senior Management/senior professional
- Middle Management/professional/admin
- Junior Management/admin officer
- Semi-skilled

Submit Next >>

Detailed instruction (Coach)

The CCCQ consists of 82 items rated on a five-point scale and will take approximately 20 minutes to complete. You have been asked to evaluate yourself. Please read the following items and indicate the frequencies with which you exhibit each of the following behaviours over the past twelve months using the scale indicated below.

<< Back Next >>

Thank you for your time and effort in completing the survey

The questionnaire itself has been removed to protect the intellectual property of the designer. Anyone interested in using the CCCQ for research should please contact Callie Theron (ccth @ sun.ac.za) or Victor Chikampa (chikampavictor@yahoo.com)

APPENDIX B

Other Rater Version (CCCQ)

CCCQ

CHIKAMPA COACHING COMPETENCY QUESTIONNAIRE

[OTHER-RATER VERSION]

EXPERIMENTAL VERSION OF THE CHIKAMPA COACHING COMPETENCY QUESTIONNAIRE - Information on the Validation Study

Introduction

The Chikampa Coaching competency Questionnaire [CCCQ] is currently being developed with the objective of determining the level of coaching competence of managers currently serving as coaches for one or more coachee's that have been assigned to him/her. The objective of this study is to evaluate the success with which the CCCQ measures coaching competencies and if necessary refine the instrument. The results of this study will not be used to determine the competence of the coach you have been asked to rate, but solely to evaluate the merit of the instrument.

CHIKAMPA COACHING COMPETENCY QUESTIONNAIRE - Background Information and Rater Instructions

Introduction

This document describes the background and guidelines for completion of the CCCQ. You have been given this document by an individual who is co-coordinating the project of gathering data on the CCCQ for the purpose of evaluating the quality of the instrument.

Background Information

The quest for competitiveness in the business environment, combined with a dire need for constructive change in South Africa, requires leaders and managers that are competent in coaching people. This assessment was developed in order to measure how effectively coaches meet this challenge.

The CCCQ assesses the extent to which a coach demonstrates specific coaching behaviours or competencies needed to affect specific outcomes in the coachee. This is achieved through ratings provided by superiors, peers and followers on the frequency with which they observe specific behaviours.

The person you have been asked to assess will be referred to as the candidate. Raters should provide a realistic picture of the candidate's behavioural functioning as a coach, and not provide unrealistic, overly positive responses in an attempt to portray what they believe would be a 'helpful' picture.

Anonymity of Raters

Every effort necessary will be made to maintain the anonymity of the rater responses. Your responses are confidential.

Confidentiality and Anonymity of Data Storage

All responses are stored in the CCCQ data base for continual re-standardization of the instrument as well as psychometric research on the measurement quality of the CCCQ. Names of candidates or their raters will not be associated with this data. The raters' status and their

responses to each item will be collected.

Access to Candidate Results

No unauthorized individual has access to the scores of candidates other than the assessment practitioner.

Instructions for Completion of the CCCQ

When responding to the questions, please select the response that best describes how you think the person typically behaves and how you have observed the person to behave. Provide answers that reflect current functioning, not how you would like the person to be or how they may have acted in the past if it is different than today. Please do not leave any questions blank. If you find it difficult to answer a particular question, do your best to select the response that best fits. If you have not observed the behaviour at all, you may choose the "Not observable" option. Be sure to provide your own responses to the questions, not the opinion or responses of someone else. And please do not guess. Base your answers on what you know.

Informed Consent

You are free to withdraw from participating in this activity at any time. In completing the CCCQ rating, it will be assumed that you have read this document and that you understand and agree with the information contained herein.

Thank you for taking the time to complete the CCCQfor the candidate.

*Click here to indicate that you have read and understood the preceding information and whether you voluntary agree to participate in the research under the conditions outlined

above

- [ ] I agree to participate
- [ ] I decline the invitation to participate

<< Back | Next >>

Biographical detail (coachee / other raters)

Please fill in the following particulars by clicking on the appropriate option or by entering the required information

***Gender**

- [ ] Male
- [ ] Female

***Highest educational qualification**

- [ ] Matric
- [ ] Bachelor's degree
- [ ] Honour's degree
- [ ] Masters degree
- [ ] Phd
- [ ] Other

Age [please specify]

[redacted]

Years of service/Tenure at Distell in current position [please specify]

*Peromnes job level [please specify]

- ☐ Top Management (MD,Director,GM)
- ☐ Senior Management/senior professional
- ☐ Middle Management/professional/admin
- ☐ Junior Management/admin officer
- ☐ Semi-skilled

***Relationship to candidate**

- ☐ Superior
- ☐ Peer/Colleague
- ☐ Coachee/Follower

Detailed instructions (Coachee / other raters)

The CCCQ consists of 82 items rated on a five-point scale and will take about approximately 20 minutes to complete. You have been asked to evaluate a specific colleague. Please read the following items carefully and indicate the frequency with which the colleague/coach you are asked to evaluate exhibits each of the following behaviours over the past twelve months using the scale indicated below.

<< Back | Finish

<< Back | Next >>

Thank you for your time and effort in completing the survey.

The questionnaire itself has been removed to protect the intellectual property of the designer. Anyone interested in using the CCCQ for research should please contact Callie Theron (ccth @ sun.ac.za) or Victor Chikampa (chikampavictor@yahoo.com)

APPENDIX C
CONTACT LETTER WITH THE COMPANY

TO WHOM IT MAY CONCERN

Letter of permission for research project

I am currently enrolled for my master's thesis in Industrial Psychology at the University of Stellenbosch under the supervision of Prof. C Theron (ccth@sun.ac.za)

The proposed study aims at identifying affirmative development coach competencies. Coaching @ Work Competency Model to be developed through this research would help clarify and define what affirmative development coaches need to know and do to be successful on the job. The study will also endeavour to examine the relationship between coach behaviours and their outcomes through a structural model. This study examines affirmative development coach competencies and how they impact on coachee outcomes. The coach competencies measure will have to be developed and validated. The coach outcome measure will also have to be validated by evaluating the fit of the measurement model implied by the architecture of the instrument.

I hereby request permission to conduct my research within [redacted] The information I need will be gathered through 2 electronic questionnaires, one completed by 50 managers/supervisors acting as coaches and the other to be filled by employees who are the coachees to the manager. The coachees should be between 250 and 300 in number. The completed questionnaires can be e-mailed to chikampavictor@yahoo.com

This letter also serves to inform you that all information will solely be utilised for research purposes and the anonymity of all will be guaranteed.
I trust that you will kindly grant me the consent to conduct the envisaged research project.

Thanking you in anticipation

Yours
Victor Chikampa

Signature: _____ Date: _____

I _____ give permission for Victor Chikampa to conduct his research at DISTELL.

Signature: _____ Date: _____

_____

Name of company representative

RESEARCH PROPOSAL

"THE DEVELOPMENT AND EMPIRICAL TESTING OF A PARTIAL AFFIRMATIVE DEVELOPMENT COACHING COMPETENCY MODEL"

This proposal is to seek for an organisation to participate in affirmative development based coaching. It will be a great opportunity for your organisation to assess your current state of managers/supervisors coaching and your employees motivational factors. This study is conducted by Victor Chikampa (Industrial psychology) at the university of Stellenbosch as part of his masters dissertation. This study is supervised by Proffesor Callie Theron from the department of industrial psychology (Stellenbosch).

RESEARCH PURPOSE

Managerial coaching is seen, identified and practised as an effective strategy in business. In the case of South Africa Inequalities before democracy in South Africa through exclusionary policies in terms of education as well employment meant that members of the previously disadvantaged groups lacked the necessary skills to succeed at work and also the ability to occupy certain positions in industries. In order to rectify the injustices experienced by members of the formerly designated groups the new post-apartheid government enacted policies and laws based on the principle of affirmative action measures. However the demand required by affirmative action measures in terms of preferential hiring in favour of blacks disadvantages organisations and the performance of the economy because most members of the previously disadvantage groups lack the necessary skills to succeed at work. The proposed study aims at identifying various coach competencies. Coaching @ Work Competency Model would help clarify and define what affirmative development coaches need to know and do to be successful on the job. Competencies are derived from examining outputs. This study also endeavours to examine the relationship between competencies (behaviours) and outcomes. This study examines 17 affirmative development coach competencies and how they impact on nine outcomes.

RESEARCH DESIGN

This survey will assess nine motivational factors as outcomes of affirmative development coaching namely employee personal learning, role clarity, job satisfaction, organisational commitment, self-efficacy, work engagement, contextual performance, task performance and intention to quit and also seventeen coaching competencies. Two groups are required that is managers/supervisors acting as coaches as well as employees who are the coachees. Each of the two groups will be asked a set of different questions using two different questionnaires. The participants will be asked to answer a web based survey that will only take 30 minutes.

RESEARCH PROCEDURE

If you agree to support this study I would be grateful if you could help with the following:

1. identify employees to participate in the survey as coachees.

2. Identify managers/supervisors acting as coaches to participate in this survey.

3. Distribute emails to those employees with the provided invitation to participate in the study.

4. Distribute reminding emails to complete the survey.

ETHICAL CONCERNS

Participation of your company is voluntary. All data will be treated as anonymous. The decision on the part of the employees and the organisation at large as to whether or not to participant will not affect your future or current relations with the department of industrial psychology and the University of Stellenbosch. Participants are free to withdrawal any time without affecting those relationships.

CONTACTS AND QUESTIONS

If participants have questions they can contact as follows

Name: Victor Chikampa

Phone: 0714625136

Email: chikampavictor@yahoo.com

Or you may contact my supervisor professor Callie Theron at ccth@sun.ac.za.

APPENDIX D
APPROVAL LETTER

25 April 2013

Dear US Ethics Committee,

This serves to confirm that permission has been granted to Victor Chikampa to collect data for his Master's thesis at Distell on the topic: [redacted]

THE DEVELOPMENT AND EMPIRICAL EVALUATION OF AN AFFIRMATIVE DEVELOPMENT COACHING COMPETENCY QUESTIONNAIRE, subject to informed consent completed by all research participants and ethical documentation fully completed prior to data collection.

You are welcome to contact me should you require any further clarification.

APPENDIX E
INVITATION EMAIL TO PARTICIPANTS

I would like to ask for a few minutes of your time to help fill in the questionnaire (CCCQ) by 24 may 2013.. Iam currently conducting a research study that aims at developing and evaluating a coach competency questionnaire. You are one of the selected line managers/coachees and I would like you to participate in this anonymous online survey in the capacity as a coach. Please follow the link below to access the survey.
https://surveys.sun.ac.za/Survey.aspx?s=048803aa6bc54644abb7f1dec3d33175

As noted above, responses to the survey will be completely anonymous. There will be no way of tracking individuals responses back to a particular employee. The survey should take no more than 15-20 minutes to complete. Thank you in advance for your participation.
Best Regards.
Victor

APPENDIX F
E-MAIL REMINDER REQUEST

Reminder request

Hello!

Two weeks ago you were invited to participate in a research study on affirmative development coaching conducted by Victor Chikampa a masters student in industrial psychology at the university of Stellenbosch.

This is a second reminder for you to participate in the survey. If you have not had an opportunity to complete the survey, I will greatly appreciate your participation at this time. It will take about 15-20 minutes .If you already participated in the study please disregard this message. I am greatly grateful for your help.

Please feel free to contact me if you have any questions at chikampavictor@yahoo.com or call me at 0714625136. Thank you again for your support for this important study.

Sincerely

Victor Chikampa

APPENDIX G
SKEWNESS ANALYSIS

Statistics

		ACK1	ACK2	ACK3	ACK4	ART1	ART2	ART3	ART4	CON1
N	Valid	398	398	398	398	398	398	398	398	398
	Missing	0	0	0	0	0	0	0	0	0
Mean		4.00000	3.84422	3.78392	3.99749	3.78392	3.64573	3.74121	3.87186	3.82663
Median		4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000
Mode		5.000	4.000	5.000	5.000	4.000	4.000	4.000	4.000	4.000
Std. Deviation		1.172738	1.177392	1.271086	1.201382	1.165647	1.209792	1.151436	1.125013	1.134570
Variance		1.375	1.386	1.616	1.443	1.359	1.464	1.326	1.266	1.287
Skewness		-1.121	-.923	-.853	-1.143	-.867	-.709	-.785	-.983	-.924
Std. Error of Skewness		.122	.122	.122	.122	.122	.122	.122	.122	.122
Kurtosis		.360	-.036	-.283	.367	.032	-.357	-.117	.247	.219
Std. Error of Kurtosis		.244	.244	.244	.244	.244	.244	.244	.244	.244

Statistics

		CON2	CON3	CON4	CON5	CON6	DEV1	DEV2	DEV3	DEV4
N	Valid	398	398	398	398	398	398	398	398	398
	Missing	0	0	0	0	0	0	0	0	0
Mean		4.00754	3.89950	3.78894	4.17085	3.72613	3.59799	3.29648	3.74623	3.94724
Median		4.00000	4.00000	4.00000	5.00000	4.00000	4.00000	3.00000	4.00000	4.00000
Mode		5.000	5.000	5.000	5.000	4.000	4.000	3.000	4.000	5.000
Std. Deviation		1.096109	1.168413	1.194310	1.083866	1.125778	1.216675	1.254729	1.222552	1.131072
Variance		1.201	1.365	1.426	1.175	1.267	1.480	1.574	1.495	1.279
Skewness		-1.099	-.956	-.835	-1.406	-.829	-.702	-.328	-.860	-1.051
Std. Error of Skewness		.122	.122	.122	.122	.122	.122	.122	.122	.122
Kurtosis		.616	.033	-.150	1.386	.124	-.333	-.836	-.154	.449
Std. Error of Kurtosis		.244	.244	.244	.244	.244	.244	.244	.244	.244

Statistics

		DIS1	DIS2	DIS3	DIS4	DIS5	EMP1	EMP2	EMP3	EMP4
N	Valid	398	398	398	398	398	398	398	398	398
	Missing	0	0	0	0	0	0	0	0	0
Mean		4.17337	3.59296	3.56784	3.72362	3.88191	3.81407	4.00000	3.63568	3.90452
Median		5.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000
Mode		5.000	4.000	4.000	4.000[a]	4.000	5.000	5.000	4.000	4.000[a]
Std. Deviation		1.116668	1.245708	1.168077	1.259321	1.154828	1.261962	1.174884	1.146864	1.142682
Variance		1.247	1.552	1.364	1.586	1.334	1.593	1.380	1.315	1.306
Skewness		-1.426	-.693	-.527	-.859	-1.040	-.991	-1.152	-.663	-1.023
Std. Error of Skewness		.122	.122	.122	.122	.122	.122	.122	.122	.122
Kurtosis		1.302	-.472	-.471	-.225	.376	-.045	.499	-.243	.306
Std. Error of Kurtosis		.244	.244	.244	.244	.244	.244	.244	.244	.244

a. Multiple modes exist. The smallest value is shown

Statistics

		EMP5	EMP6	EMP7	ENT1	ENT2	ENT3	ENT4	ENT5	ENT6
N	Valid	398	398	398	398	398	398	398	398	398
	Missing	0	0	0	0	0	0	0	0	0
Mean		3.70603	4.05276	3.88442	3.26382	3.60553	3.58794	3.57286	3.76884	3.84925
Median		4.00000	4.00000	4.00000	3.00000	4.00000	4.00000	4.00000	4.00000	4.00000
Mode		4.000	5.000	5.000	3.000	4.000	4.000	4.000	4.000	5.000
Std. Deviation		1.134090	1.055025	1.156172	1.266999	1.186689	1.215374	1.240974	1.147480	1.145525
Variance		1.286	1.113	1.337	1.605	1.408	1.477	1.540	1.317	1.312
Skewness		-.695	-1.127	-1.001	-.327	-.607	-.625	-.664	-.815	-.925
Std. Error of Skewness		.122	.122	.122	.122	.122	.122	.122	.122	.122
Kurtosis		-.169	.804	.284	-.853	-.396	-.535	-.465	.000	.179
Std. Error of Kurtosis		.244	.244	.244	.244	.244	.244	.244	.244	.244

Statistics

		EXS1	EXS2	EXS3	EXS4	HAR1	HAR2	HAR3	HAR4	INP1
N	Valid	398	398	398	398	398	398	398	398	398
	Missing	0	0	0	0	0	0	0	0	0
Mean		3.49749	3.45226	3.71608	3.88442	3.78392	3.87437	3.88945	3.81910	3.89698
Median		4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000
Mode		4.000	4.000	4.000	5.000	4.000	4.000	5.000	4.000	4.000
Std. Deviation		1.146122	1.160423	1.149874	1.134176	1.152609	1.087736	1.147921	1.130051	1.077333
Variance		1.314	1.347	1.322	1.286	1.329	1.183	1.318	1.277	1.161
Skewness		-.513	-.535	-.797	-.938	-.870	-.988	-.947	-.924	-.996
Std. Error of Skewness		.122	.122	.122	.122	.122	.122	.122	.122	.122
Kurtosis		-.431	-.433	-.026	.181	.041	.527	.122	.200	.494
Std. Error of Kurtosis		.244	.244	.244	.244	.244	.244	.244	.244	.244

Statistics

		INP2	INP3	INP4	INS1	INS2	INS3	INS4	PLA1	PLA2
N	Valid	398	398	398	398	398	398	398	398	398
	Missing	0	0	0	0	0	0	0	0	0
Mean		3.73116	3.92462	3.83920	3.54523	3.59548	3.74121	3.64824	4.03266	3.54774
Median		4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000
Mode		4.000	5.000	4.000	4.000	4.000	4.000	4.000	5.000	4.000
Std. Deviation		1.179414	1.144188	1.101531	1.188405	1.150919	1.153621	1.184231	1.058224	1.221752
Variance		1.391	1.309	1.213	1.412	1.325	1.331	1.402	1.120	1.493
Skewness		-.855	-1.079	-.917	-.520	-.688	-.818	-.672	-1.168	-.590
Std. Error of Skewness		.122	.122	.122	.122	.122	.122	.122	.122	.122
Kurtosis		-.063	.468	.266	-.577	-.147	-.032	-.357	.912	-.529
Std. Error of Kurtosis		.244	.244	.244	.244	.244	.244	.244	.244	.244

Statistics

		PLA3	PLA4	REV1	REV2	REV3	REV4	SOU1	SOU2	SOU3
N	Valid	398	398	398	398	398	398	398	398	398
	Missing	0	0	0	0	0	0	0	0	0
Mean		4.00503	3.95729	3.87940	3.87186	3.97487	3.83166	3.74121	3.89447	3.67839
Median		4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000
Mode		5.000	5.000	5.000	5.000	5.000	5.000	4.000	5.000	4.000
Std. Deviation		1.088050	1.102178	1.175110	1.142785	1.069086	1.163813	1.127115	1.124008	1.140986
Variance		1.184	1.215	1.381	1.306	1.143	1.354	1.270	1.263	1.302
Skewness		-1.024	-.948	-1.000	-.928	-1.044	-.825	-.708	-.957	-.726
Std. Error of Skewness		.122	.122	.122	.122	.122	.122	.122	.122	.122
Kurtosis		.394	.173	.170	.146	.582	-.158	-.234	.313	-.149
Std. Error of Kurtosis		.244	.244	.244	.244	.244	.244	.244	.244	.244

Statistics

		SOU4	SOU5	SOU6	STR1	STR2	STR3	STR4	TRU1	TRU2
N	Valid	398	398	398	398	398	398	398	398	398
	Missing	0	0	0	0	0	0	0	0	0
Mean		3.57789	3.88442	3.68593	3.55779	3.58040	3.76131	3.95226	4.04774	3.58040
Median		4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	4.00000	5.00000	4.00000
Mode		4.000	5.000	4.000	4.000	4.000	4.000	5.000	5.000	4.000
Std. Deviation		1.248763	1.149618	1.218809	1.140254	1.238475	1.135997	1.111077	1.219172	1.209666
Variance		1.559	1.322	1.485	1.300	1.534	1.290	1.234	1.486	1.463
Skewness		-.572	-.912	-.790	-.681	-.601	-.744	-1.068	-1.206	-.670
Std. Error of Skewness		.122	.122	.122	.122	.122	.122	.122	.122	.122
Kurtosis		-.671	.027	-.216	-.155	-.559	-.192	.524	.468	-.335
Std. Error of Kurtosis		.244	.244	.244	.244	.244	.244	.244	.244	.244

Statistics

		TRU3	TRU4	TRU5	TRU6	TRU7	TRU8	VIS1	VIS2	VIS3	VIS4
N	Valid	398	398	398	398	398	398	398	398	398	398
	Missing	0	0	0	0	0	0	0	0	0	0
Mean		3.84171	3.87688	3.74121	4.01256	3.74623	4.10302	3.71859	3.58040	3.67588	3.73116
Median		4.00000	4.00000	4.00000	4.00000	4.00000	5.00000	4.00000	4.00000	4.00000	4.00000
Mode		5.000	5.000	4.000	5.000	4.000	5.000	4.000	4.000	4.000	4.000
Std. Deviation		1.156547	1.143338	1.129348	1.121057	1.159094	1.175716	1.209203	1.152073	1.212018	1.168686
Variance		1.338	1.307	1.275	1.257	1.343	1.382	1.462	1.327	1.469	1.366
Skewness		-.896	-.997	-.838	-1.178	-.781	-1.332	-.778	-.650	-.766	-.768
Std. Error of Skewness		.122	.122	.122	.122	.122	.122	.122	.122	.122	.122
Kurtosis		.039	.347	.093	.733	-.156	.888	-.240	-.228	-.265	-.203
Std. Error of Kurtosis		.244	.244	.244	.244	.244	.244	.244	.244	.244	.244