
Applying Career Competencies in Career Management

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Declaration

I declare that no portion of the work referred to in this thesis has been submitted for another degree or qualification of any comparable award at this or any other university or other institution of learning.

This thesis is a presentation of my original research work. Wherever contributions of others are involved, this is clearly acknowledged and referenced. Where I have quoted from work of others, the source is always given. With exception of such quotations, this thesis is entirely my own work.

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Abstract

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Applying Career Competencies in Career Management

The thesis critically examines the use of competencies in career management, and introduces career competencies as an approach to sustainable career management.

An 87-item measure of career competency (CC) was tested on a sample of 632 individuals from different backgrounds. From this, the Career Competencies Indicator (CCI) was developed. The CCI comprises 43 items, measuring seven sub-scales: goal setting and career planning, self-knowledge, job-related performance effectiveness, career-related skills, knowledge of (office) politics, networking and mentoring and feedback-seeking and self-presentation. Sub-scale alphas were of acceptable level and the factor structure was replicated with two other samples.

The impact of CCs on objective career success (OCS) and subjective career success (SCS) was explored, administering the CCI to a sample of 269 police officers and 110 university employees. SCS was measured using Gattiker and Larwood's (1986) five SCS scales and Greenhaus, Parasuraman and Wormley's (1990) career satisfaction scale. OCS was assessed as income and number of promotions. The control variables included personality (Saucier, 1994), career salience (Allen & Ortlepp, 2002) and demographics. Discriminant validity was demonstrated between most of the CCI sub-scales and the personality variables. Above-chance similarity between the CCI sub-scales indicated convergent validity. The CCs contributed to SCS and OCS. For four of the SCS variables, this contribution added to the contribution of the control variables. The CCs further mediated the relationship between career salience and career outcomes. To generalise these results, future work should focus on a longitudinal approach considering a range of organisations.

The CCI was used as a framework for informal career discussions with twenty-one police officers. The intervention was highly valued by participants. Behavioural changes were reported three months after the intervention. A pre-post approach found no significant differences in the increase of CCs, SCS and OCS between the control and the intervention group, apart from life success which was reportedly higher for the intervention group. However, the interaction plots showed an increase in CCs, SCS and OCS from time1 to time2 for the intervention group, which reached significance for the OCS and some of the SCS variables.

The thesis considers the implications of the present findings and suggests avenues for future work. The role of CCs in dealing with the requirements of the new career realities and different ways of promoting CCs are also considered.

Chapter 1

Introduction

“Paying attention to career competencies suggests new possibilities for both career actors and employing companies.”

(Arthur, Inkson & Pringle, 1999, p. 125)

1.1 Introduction

This research re-introduces the concept of career competencies to the context of career management and develops a measure of career competencies.

Dramatic changes in work organisations have created new 'career realities' that focus on the individual and require them to take responsibility for their own career development (Kidd, 2002). Organisations increasingly incorporate self-development features into their career management interventions. In general, these initiatives emphasise job-related issues, reinforced by the use of competencies that focus on performance at work. However, individual career development goes beyond the assessment of strengths, weaknesses and training to improve job performance (e.g. McDowall & Silvester, 2006). Therefore, it is questionable if current practice is effective in supporting self-reliance in career management. Development activities should rather consider the competencies necessary for individual career management and the wider life areas in which these competencies develop (DeFillipi & Arthur, 1994).

There has as yet been little research into the reality of career self-management and no comprehensive taxonomy of the qualities necessary for effective career management is available. Some authors in this respect looked at what has been described as career strategies (e.g. Gould, 1979; Uzoamaka, Hall & Schor, 2000), while others focused on career competencies.

Hackett, Betz and Doty (1985) used the term career competencies to describe the competencies necessary for women's pursuit of professional-level academic careers. The development of a taxonomy was based on interviews with 50 women working in one academic institution but no operationalisation of the taxonomy has since been provided.

Arthur, Claman and DeFillipi (1995) derive their use of career competencies from Quinn's (1992) concept of the Intelligent Enterprise. They define career competencies as personal competencies that an individual puts at the disposal of the employing organisation (Arthur, Inkson & Pringle, 1999). Arthur and colleagues describe career competencies as three areas of knowing: knowing-why (why do we do a job), knowing-how (how do we do a job) and knowing-whom (with whom do we work).

Arthur, Amundson and Parker (2002) introduced an operationalisation of the three areas of knowing in form of the Intelligent Career Card Sort (ICCS). While the ICCS is currently used in different career development contexts with different groups of people, its development lacks an empirical basis and no information regarding its psychometric properties has so far been published. Furthermore, due to the discordance and lack of clarity surrounding the definition of competencies, the authors have of late abandoned the term career competencies and now refer to the three areas of knowing as career investments.

Departing from the work by Arthur and colleagues, this study introduces a re-conceptualisation of the term career competencies.

The research project is part-funded by a local police force. The organisation is seeking to hand over more responsibility for career development to the individual using competencies. Bearing the organisational background in mind, the study sets out to achieve the following objectives.

1.2 Objectives of the research

This study seeks to:

1. Answer the question whether the criticism of the current use of competencies in career development as found in the literature is reflected in practice? How do practitioners define terms such as career development and competency, how do they use competencies in career development and how do they evaluate their approaches?
2. Investigate whether the concept of the three areas of knowing is applicable to the police context? What factors are important for police officers in their career development at different ranks and whether the ICCS covers all these factors?
3. Develop an instrument to measure career competencies.
4. Demonstrate the reliability and validity of the instrument.
5. Use the instrument in an applied setting within the co-operating police force and evaluate this application.

1.3 Structure of the dissertation

Chapter 1 serves as a brief introduction to the research study and its aims. Chapter 2 introduces the concepts of career, career development/management and career success and how these are affected by changes in the world of work. It looks at a range of features that are important to consider when looking at careers and career success. Chapter 3 focuses on the issue of competencies. It explores the relationship between competencies and other concepts, e.g. competences and personality. It further looks at different types of competencies, e.g. meta-competencies and organisational competencies before reviewing the concept of career competencies (CCs) and offering a re-conceptualisation of the term.

In Chapter 4 the organisational context of the study is described. Special attention is paid to the issue of career development and the use of competencies in the police force.

Chapter 5 is the first data chapter. It presents two preliminary studies, providing evidence from practice for the theorising that forms the basis of this research. In the first study, interviews with experts working in the area of career development and competencies were conducted to address the first objective mentioned above. The second preliminary study describes an application of the ICCS to a sample of police officers working at different ranks to answer the second set of questions outlined under the objectives above. The information obtained from both studies is used for the operationalisation of career competencies as described in Chapter 6.

Chapter 6 describes the development of the Career Competencies Indicator (CCI), addressing the 3rd objective of this study. After consultation with subject matter experts and a pilot study, an 87-item measure of career competencies is tested on a sample of 632 individuals of varying age, tenure and occupation in a number of different organisations. From this, the CCI is developed, using factor and item-analysis.

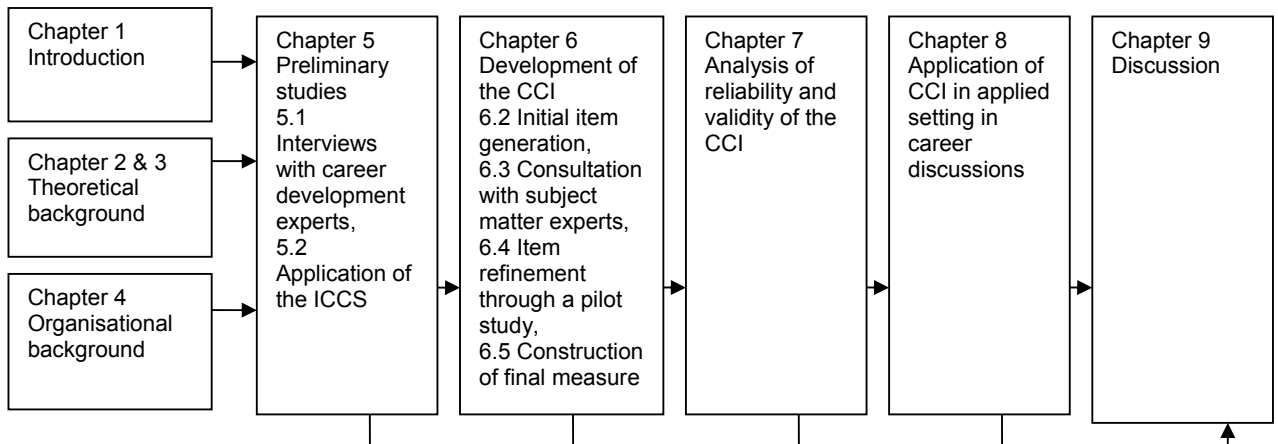
Chapter 7 focuses on the validation of the CCI developed in Chapter 6 (objective 4). It explores the impact of CCs on objective career success (OCS) and subjective career success (SCS), administering the CCI to a sample of 406 individuals, 269 working for the police and 110 for a university.

Chapter 8 describes the application of the CCI in informal career discussions with 21 police officers. Focussing on their results and using a coaching approach, officers are supported in exploring ways of applying and developing their CCs. The intervention is evaluated in two stages: through a questionnaire administered immediately after and another administered three months after the session. In addition to this, using a pre-post control group approach, CCs, SCS and OCS are assessed before and three months after the intervention.

Chapter 9 sets out the conclusions of the study, considers the limitations of the research design and the methodologies, and discusses implications for future research.

The diagram below maps the research/dissertation in its entirety.

Figure 1.1 Overview of the dissertation



Chapter 2
Career, Career Success and Career Development

“A career depicts the person, the elementary unit in work arrangements.”
(Arthur & Rousseau, 1996, p.3)

2.1 What is a career?

“Work gets done. Time passes. Careers [...] unfold.” (Arthur & Rousseau, 1996, p.3). The question arises, what is a career? This first chapter provides an introduction to career theory, how success in a career can be measured and how careers can be managed.

There have been many attempts to define the term career. Depending on the disciplinary approach and the audience, definitions vary in content and focus: career is a “construct that has been used for different purposes in different contexts” (Collin, 2006, p. 299). The following sections present an introduction to traditional and contemporary career theory, aiming to identify the definition of career most suited for the context of this study.

2.1.1 Traditional definitions of career

The two major schools of thinking with regard to career theory are objectivist and constructivist (Savickas, 2000). The former has its foundation in positivistic beliefs, seeing the individual as a natural entity that can be studied empirically and independently from the environment (Sampson, 1989 in Collin, 1998). The latter is rooted in social constructivist ideology, focusing on the individual as a learner developing meanings and understandings out of social encounters.

The majority of traditional career theories describe career in structural rather than in personal terms. Career is defined as “a succession of related jobs, arranged in a hierarchy of prestige, through which persons move in an ordered (more-or-less predictable) sequence” (Wilensky, 1961, p. 523) or “occupations that are characterized by interrelated training and work experience, in which a person moves upward through a series of positions that require greater mastery and responsibility and that provide increasing financial return” (Perlmutter & Hall, 1992 in Bryant & Yarnold, 1995, p. 2).

This archetype of career as upward progression within a hierarchical organisation has also been labelled a bureaucratic career (Kanter, 1989). It stems from the industrial era when hierarchical and bureaucratic organisational structures were prevalent, affording regularity and efficiency (Collin & Watts, 1996). The bureaucratic career has for a long time formed the framework which career actors and observers used to describe and interpret careers. It places careers in the context of one or a

few organisations, assuming continuous, fulltime employment (Valcour & Tolbert, 2003).

The main aim of these objectivist approaches was to match individuals to their occupational role within the organisation (Collin & Watts, 1996), seeing the organisation as a dominant managing agent.

This external perception has frequently been referred to as an objective or actual career (Arthur, Khapova & Wilderom, 2005; Collin, 1998). As described above, it focuses on the ordered movement of individuals through a patterned sequence of positions (Milkovich, Anderson & Greenhalgh, 1976, in Landau & Hammer, 1986). As such, it lends itself to a construction of career in terms of normative stages that unfold across the lifespan, as described, for instance, in Super's lifespan development theory. Super (1957, 1980) views career as development through different stages based on age, e.g. establishment, consolidation, etc. Each stage is characterised by unique concerns, psychological needs and developmental tasks (Giannantonio & Hurley-Hanson, 2006). An individual's "career maturity" could be assessed by comparing the career concerns, developmental tasks and psychological needs confronting an individual with those expected of their age.

However, the world of work has been changing, leading to new career theories being proposed. The focus of attention has shifted from the organisation to the individual and social constructivist perspectives on career have become increasingly prevalent. The following section focuses on the changes that have been occurring in the world of work over the last few decades, outlining the impact these changes have had on the way careers are viewed.

2.1.2 New career realities

There have been dramatic changes in work organisations over the last few decades. These transformations have been attributed to profound changes in the context of employment, such as pressures brought about by the globalisation of economies, increased workforce diversity and technological advances (e.g. Bryant & Yarnold, 1995; Sullivan, 1999). These contextual changes led to what Kidd (1996) described as 'new career realities'. Processes such as downsizing, internal restructuring and delayering often resulted in increased lay-offs, fragmentation and diversification of job groups and career paths. As a result, promotion is now often harder to obtain and job security has declined (Valcour & Tolbert, 2003). Lifelong employment can no

longer be expected and fixed lattices of job positions and stable career paths are now less likely to be encountered (Dalton, 1989). Frequent employer changes, new forms of working and notions of marketability have become acknowledged features of careers (King, Burke & Pemberton, 2005). As a result, new rules, expectations and conditions of employment emerged, creating new work experiences for employees (Uzoamaka, Hall & Schor, 2000).

A valuable concept to illustrate these changes is the psychological contract. The psychological contract describes the employee-employer relationship. It refers to beliefs regarding the terms and conditions of a reciprocal exchange agreement, i.e. the promises or obligations between the employer and the employee (Robinson & Rousseau, 1994). The psychological contract is supposed to be revised and updated in the course of the employment relationship. Under the psychological contract in the bureaucratic career, workers exchanged loyalty for job security (Sullivan, 1999). However, as mentioned above, in the new career realities the latter is not a given anymore. Instead, voluntary and involuntary job changes happen with increasing frequency, forcing individuals to make and remake career decisions more frequently. Security for individuals no longer lies in employment but employability, the establishment of which is their responsibility (Kanter, 1989). This effected a change in the psychological contract, moving it from a longer term relational basis to a shorter term transactional one (Hall & Moss, 1998). The authors argue further that it was not so much a contract with the organisation anymore. Instead, they see it as a contract with oneself that in times of frequent changes needs regular re-evaluation.

Thus the contemporary career realities often do not support the traditional bureaucratic career anymore (Donohue & Patton, 1998). Rather, they have been described as “distinctively different phenomenon from the traditional career models” (Sullivan, 1999, p. 459).

2.1.3 New conceptualisations of career

To account for the changes in career contexts, theorists have attempted to redefine the concept of career. Three prominent theories are the protean career, career as repositories of knowledge and the boundaryless career.

2.1.3.1 Protean Career

Hall (1996) introduced the notion of the “protean career”, a career which is driven by the individual rather than by the employing organisation. Hall proposes that individuals are expected to bring their whole personalities to work, including values, passions and personal lives, while the organisation provides work challenges, information, resources and relationships. The protean career is further characterised by continuous learning that spans organisational boundaries; therefore “career age” counts instead of chronological age or life stages. In the face of frequent changes in the world of work, individuals are required to reinvent their careers from time to time, a pursuit that “requires high levels of self-awareness and personal responsibility” (Hall, 1996, p. 10). Hall refers to the higher order skills and knowledge that are related to the management of self and career as ‘career meta-competencies’. Career meta-competencies also include self-knowledge and adaptability and tolerance for ambiguity and uncertainty. They enable individuals to learn how to learn and can only be acquired through interaction with other people. Hall stresses that the social interaction and the process of valuing differences is important for the development of a range of personal abilities e.g. self-discovery, effective communication, building interdependent relationships and coping. Overall, the protean career is seen as a lifelong series of short learning stages, with the aim of achieving employability in the light of fading job security.

2.1.3.2 Career as repositories of knowledge

Again drawing on the idea of continuous learning, Bird, Hugh and Arthur (1996) define ‘careers as repositories of knowledge’ as “... accumulation of information and knowledge embodied in skills, expertise and relationship networks acquired through an evolving sequence of work experiences over time.” (p. 326). This definition follows on from criticism of traditional definitions of career as having omitted the knowledge that results from sequences of employment experiences. Bird and colleagues emphasise that it was not so much the progression of work experience itself, but the information and knowledge that is accumulated in the course of these experiences that constitute career. The nature and quality of a career is defined by

the knowledge gained, which can be removed, rearranged and replaced. Forming networks is seen as an important part of this process, since interaction provides opportunities for interpersonal discourse which is key to gaining knowledge.

2.1.3.3 Boundaryless career

The boundaryless career (Arthur & Rousseau, 1996) is another concept that defies the traditional assumptions of organisational hierarchies and career advancement. Acknowledging the unpredictability and market-sensitivity of the world in which many careers now unfold, it seeks to characterise not one but a range of possible career forms. The boundaryless career includes various meanings, the most prominent of which is that careers are not bound to a single organisation any more, but move across the boundaries of organisations and employers. This promotes the idea of the permeability of work and non-work. The boundaryless career concept also represents careers that reflect the interpretation of the career actor. Such careers involve decisions about existing career opportunities based on personal reasons that are validated from outside the present employer through the assessment of marketability and are sustained by external networks and information (Arthur & Rousseau, 1996).

2.1.3.4 Important characteristics of career definitions in the new career realities

These theories have a range of common features. In response to the new career realities they all emphasise:

1. The importance of learning and the accumulation of skills and knowledge over time, acknowledging the increasing importance of security in the form of employability instead of employment security.
2. That careers should not be treated as stable situations, but as complex, dynamic and ever-evolving processes that involve study over time and across organisations.
3. That a definition of career should apply to all workers and all sequences of work experiences, moving from a restricted perception of careers in the context of employment, to the integration of professional and personal lives.
4. The importance of a more holistic approach and of social interaction, for sustaining careers. This perception of career as a socially constructed process represents a social constructivist perspective.
5. The individualistic perspective. This looks at individual development, or the individual definition of career, in personal terms, rather than assuming universal, objectively identifiable, or normative stages of career (Collin, 1998). This internal

perspective on career has also been described as the subjective or perceptual career, i.e. the “sense that individuals make of their careers, their personal histories and skills, attitudes and beliefs that they have acquired” (Arnold & Jackson, 1997, p. 429).

2.1.3.5 Criticism

This emerging body of literature is not free of criticism. These redefined and new theories add to the diversification of the field of career theory and the existing debate. Hence, they contribute to the difficulties practitioners experience in developing a clear understanding of the term (Collin, 1998).

In addition, most of these career concepts have received a considerable amount of theoretical but very little empirical testing (Pringle & Mallon, 2003). This may be due to a number of fundamental and conceptual issues. For instance, it has been suggested that the boundaryless career perspective has merely introduced a labour market phenomenon to the career context (Gunz, Evans, & Jalland, 2000). The boundaryless career has also been criticised for not addressing definitional inadequacies that occur due to differences in career patterns across occupations (Goffee & Jones, 2000).

Apart from this, Staw and Cohen-Charash (2005) have expressed concerns about the untenable dichotomies between old and new careers, promoted by this emerging literature and “its neglect of the potential downside of more flexible careers” (p. 51). Guest and McKenzie-Davey (1996) also question the viability of a complete write-off of the traditional career. They argue that in almost all the organisations they conducted research into, “the traditional career is alive and well” (p. 23). Many of the organisations they worked with showed elements of the new organisational forms, for instance, a decreased number of opportunities available to employees, making onward and upward movement more difficult. However, none had been completely transformed. While it is generally acknowledged that today few people work for their whole life on one career track in one organisation (Inkson & Arthur, 2001), it has to be noted that there are only a few people whose careers could be genuinely described as ‘boundaryless’ (King, Burke & Pemberton, 2005). King et al. (2005) showed that even the career options of highly skilled workers in IT, a field that is acknowledged to have felt the impact of the new career realities, are bound by labour market intermediaries. This supports the argument by Gunz, Evans and Jalland (2000) that careers have not become boundaryless, but that career boundaries have

become more complex in nature, formed by demand and supply (King, Burke & Pemberton, 2005).

Sullivan, Carden and Martin (1998) conclude this discussion adequately by stating that many career patterns will depict the career of workers in the career realities of the 21st century, one of which will still be the traditional career. Both traditional and new views of career have credibility and are not as exclusive as suggested by some scholars. They are rather ideal types that can be found to different extents in present career realities.

2.1.4 Working definition of career

Arnold (1997a) presented a definition of career that accommodates new career realities without carrying forward the division between “old” and “new” careers. He defined career as “the sequence of employment-related positions, roles, activities and experiences encountered by a person” (p. 16).

This definition implies that some aspects of career are objective, while others are subjective. Arnold does not oppose a conventional definition of career, but by offering a wider, less restrictive description and not confining it to upward and/or predictable movements within one organisation, he leaves it to the individual to define career in personal terms. By not advocating a binary perspective on career, this definition defies the aforementioned criticism and offers a basis for a holistic approach to career. Therefore, it will be used as working definition for this study.

Summary

This section looked at developments and changes in the world of work and the impact these have had on the theory and definition of career. It introduced a range of features that are important to consider when looking at careers in the context of new career realities and criticisms related to the emerging body of literature. It argued for a holistic approach to career and without completely negating the idea of the traditional career, it presented a working definition of career that is to be used in this study.

2.2 Career success

The definition of career by Arnold does not imply success or failure. What characterises success in a career? Career success has been defined as “positive psychological or work related outcomes or achievements that an individual accumulates as a result of work experiences” (Seibert & Kraimer, 2001, p.2). In the style of the theoretical distinction between objective and subjective career, this definition refers to actual and perceived forms of success, suggesting that as there are objective and subjective components of careers, there are also objective and subjective components of career success.

2.2.1 Objective career success

Objective career success (OCS) refers to the perception of an individual’s career by other people or by society (Gould & Penley, 1984), i.e. “an external perspective that delineates more or less tangible indicators of an individual’s career situation” (Arthur, Khapova & Wilderom, 2005, p. 179). OCS, also referred to as external career success, is concerned with social role and official position, reflecting shared social understandings. It is generally measured along external standards e.g. pay, position or promotion (Heslin, 2003). OCS variables are readily available and standardised if they arise from within one organisation (Heslin, 2003). They are efficient to measure and free from self-serving and common method variance, since they can be cross-validated. However, they are affected by factors that are beyond the individual’s influence such as labour market conditions, appraiser bias, etc. Another limitation of this approach is that pay and promotion are not important to everybody (Gattiker & Larwood, 1988) and not everybody feels proud and successful about these kinds of achievements (Korman, Wittig-Berman & Lang, 1981). On the contrary, Korman et al. (1981) found that managers often felt alienated from their careers in spite of their objective success. This demonstrates that OCS measures are deficient in that they do not capture all the important facets of the career success construct (Heslin, 2003). Individuals’ own assessment of their success may be strongly influenced by subjective internal career concepts. Focusing solely on external career success may therefore lead to career goals and strategies that are inconsistent with personal values and beliefs (Callanan, 2003).

2.2.2 Subjective career success

The arguments above draw attention to the importance of the eye of the beholder when assessing career success. Jaskolka, Beyer and Trice (1985 in Judge, Kammeyer-Mueller, & Bretz, 2004) point out that career success is an evaluative

concept – its judgment depends on who does the judging. Individuals' perspectives, their internal interpretations and evaluation of their careers, may be referred to as subjective career success (SCS) or internal career success (Arthur, Khapova & Wilderom, 2005). Carson and Carson (1998) stress that in the present, in career realities where the focus has shifted onto the individual, career success is psychologically driven and aimed at psychological fulfilment. Psychological success in the context of careers is the result of setting and attaining challenging personal career goals (Hall & Chandler, 2005).

Recent research findings suggest various interdependent aspects of SCS (e.g. Eby, Butts & Lockwood, 2003), with career satisfaction being an integral factor (Lounsbury, Loveland, Sundstrom, Gibson, Drost & Hamrick, 2003). It has been argued that SCS reflects individuals' evaluation of their own success. This includes reactions to both objective facets, e.g. level of pay and subjective facets of their career, e.g. challenge and security (Heslin, 2005), evaluated against personal standards, values, preferences, age, aspirations and views of significant others (Nabi, 2003). Therefore, SCS variables are not as readily assessable as OCS measures, for various reasons. First, while there is only one way to achieve hierarchical success, there are infinite ways to achieve psychological success (Hall, 1996). Furthermore, the definition of success depends on the individual, i.e. is idiosyncratic. People differ in the way they conceptualise career and with fewer socially agreed markers of good and/or appropriate career progress being available, SCS can only be measured according to individual standards.

2.2.3 Objective and subjective career success as distinct concepts

Judge, Higgins, Thoresen and Barrick (1999) provided explicit quantitative support for distinguishing the two concepts, OCS and SCS. They assessed intrinsic career success with eight overall job satisfaction items and extrinsic career success as income and occupational status. Factor analyses of the items revealed two factors. The job satisfaction items loaded strongly on one factor that could be labelled 'intrinsic career success', while occupational status and income loaded strongly on the second factor, which could be labelled 'extrinsic career success'. That OCS and SCS are separate entities is also supported by the fact that they have different antecedents (Boudreau, Bosewell & Judge, 2001). The authors found that motivation and human capital were positively associated with remuneration and ascendancy, while being only moderately associated with career satisfaction. The personality

factor conscientiousness was found to be unrelated to extrinsic career success, while being negatively related to intrinsic career success.

Even though the two sides of career success have been demonstrated to be empirically distinct entities, they are not independent from each other (e.g. Seibert & Kraimer, 2001; Turban, & Dougherty, 1994). Research demonstrates that the intrinsic and extrinsic elements of career success are moderately correlated (e.g. Turban & Dougherty, 1994). OCS is thought to produce positive self-perception, which in turn is expected to lead to greater career satisfaction (Ng, Eby, Sorensen & Feldman, 2005). In addition Hall and Chandler (2005) showed that subjective outcomes can cause objective outcomes.

It can, therefore, be summarised that OCS and SCS are separate but interdependent concepts, whose evaluation does not always overlap (e.g. Nicholson, West & Cawsey, 1985; Poole, Langan-Fox & Omodei, 1993).

This subjective-objective career success duality has yet not been acknowledged by all career success researchers (Arthur et al., 2005). Especially in the past, a large body of research focused solely on objective extrinsic criteria, reflecting the prevalent bureaucratic career theory of the time. The continuous effect of this approach is reflected in the attitudes of professional staff in large organisations that still often see career success strictly in objective terms, such as climbing the organisational ladder and speed of progression, which sometimes becomes an obsession (Callanan, 2003). However, as demonstrated above, focusing solely on career success in terms of an individual's position or attained promotions does not reflect the new career realities, where the personal meaning of career success has become more important (Arthur & Rousseau, 1996). Parker and Arthur (2000) take this argument further, stating that how individuals feel about their career accomplishments is more important than external indicators such as salary or promotion. This perspective is based on findings that individuals with high SCS feel happier and more successful about their careers relative to their own internal standards (Peluchette, 1993). However, acknowledging the importance of a holistic approach, various authors conclude that it is imperative to incorporate both OCS and SCS, to give a complete account of individual career outcomes and gain an in-depth understanding of career success (e.g. Arthur et al., 2005; Peluchette, 1993).

In order to gain a fuller understanding of career success, it is necessary to look at its antecedents.

2.2.4 Antecedents and correlates of career success

The following section briefly introduces factors that have been found to be related to career success.

2.2.4.1 Motivation and career salience

Motivation describes the direction, arousal, amplitude and persistence of an individual's behaviour (Campbell & Pritchard, 1976, in London, 1983). London (1983) coined the term 'career motivation' to describe motivation associated with a wide range of career decisions and behaviours, e.g. searching for a job, revising career plans, etc. He defined career motivation as a multidimensional construct of "individual characteristics and associated career decisions and behaviours that reflect the person's career identity, insight into factors affecting his or her career and resilience in the face of unfavourable career conditions" (p. 620). Career identity looks at the extent to which individuals define themselves by their work and the organisation they work for. Career insight describes people's understanding of factors that affect their careers and the extent to which they have realistic perceptions about themselves. Career resilience refers to the ability to adapt to changing circumstances. Day and Allen (2004) found career motivation to be positively related to salary, subjective reports of career success and performance. Jones and Whitmore (1995, in Day & Allen, 2004), showed the positive relationship of career motivation to participation in developmental activities. Career insight, as part of career motivation, was found to be of predictive value for perceived career success (Eby, Butts & Lockwood, 2003).

Measures for career motivation reflecting the three domains were developed not only by London (1993), but also by Noe, Noe and Bachhuber (1990), with the latter focusing more on behaviours than London. Various authors have mixed both measures, in order to combine attitudes and behaviours of career motivation (e.g. Day & Allen, 2004; Grzda & Prince, 1997).

Vroom (1964, in Wayne, Liden, Kraimer & Graf, 1999) introduced the expectancy-valence theory of motivation. His theory suggests that people are motivated to invest effort if they expect this effort to lead to good performance that will then lead to the attainment of intrinsic and extrinsic rewards. This applied effort has in the past often

been measured as career salience (e.g. Boudreau, Boswell & Judge, 2001; Whitely, Dougherty & Dreher, 1991). Career salience was introduced by Greenhaus (1971) as the importance and personal significance of a career within an individual's total life. In general, it is expected that people who consider their job and career most important, might measure career success on a different scale than people who are more concerned about life outside their job (Lodahl & Kejner, 1965). As has been demonstrated by Nabi (2001), attaching a great degree of centrality to work in one's life appears to help with SCS.

2.2.4.2 Personality traits

Career success can be seen as an outcome on an individual level that has been shown to be related to dispositional traits, i.e. personality. Eysenck et al. (1975, in Truch, Bartram & Higgs, 2004) provided one of the most widely accepted definitions of personality, describing it as "relatively stable organization of a person's motivational dispositions, [...] which determine man's characteristic or distinctive behaviour and thought" (p. 137). There has been significant debate over the most appropriate taxonomy of personality traits (Truch et al., 2004). However, the last decades have afforded a structure of phenotypic personality traits that is largely accepted (Tokar, Fischer & Subich, 1998). Most analysis of large and representative samples of adults yielded a five factor solution that has been found to generalise across virtually all cultures (e.g. Judge, Higgins, Thoresen, & Barrick, 1999), i.e. the "Big Five" (Goldberg, 1990). In the majority of cases they are labelled following McCrae and Costa's (1996) 'ocean' model: Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness.

Research into dispositional causes of career success has recently begun. Bozionelos (2004) found a relationship between the Big Five-Factor Model of personality and extrinsic and intrinsic career success in a British sample of 308 white-collar workers. He showed that intrinsic career success was primarily associated with personality. This suggests that certain individuals are predisposed to be satisfied or dissatisfied with their work experiences, regardless of actual facts. The author also found that personality played an important role in extrinsic career success. However, this was complemented by other factors such as mental ability and experiential issues. High levels of neuroticism were found to reduce both extrinsic career prospects and intrinsic career evaluations, while high agreeableness reduced extrinsic career prospects, but enhanced intrinsic career evaluations. Conscientiousness and extraversion were negatively associated with extrinsic career

success. This replicated the findings by Judge et al. (1999) who demonstrated in a longitudinal study that the Big Five traits were capable of predicting multiple facets of career success, even over the span of 50 years, thus providing evidence of an enduring relationship between personality traits and career success.

2.2.4.3 Career Strategies

Career strategies are defined as behaviours which might be utilised by the individual to decrease the time required for and uncertainty surrounding, the attainment of important career objectives. Various authors have discussed such strategies or behaviours that can be applied in order to accelerate the achievement of upward mobility, salary progression or other career aspirations (Gould, 1979; King, Burke & Pemberton, 2005; Uzoamaka, Hall & Schor, 2000).

For instance, Gould and Penley (1984) developed an inventory that tapped into the following seven career strategies: seeking guidance, self-nomination, networking, other enhancement, creating opportunities, extended work involvement and opinion conformity. In a study of 414 individuals from a large municipality in the United States, Gould and Penley (1984) found the last four strategies to be related to the rate of salary progression.

Applying career strategies can be seen as proactive behaviour. Claes and Ruiz-Quintanilla's (1998) operationalisation of proactive career behaviours that drew on Penley and Gould's Career Strategies Inventory, revealed a four-factor structure: career planning, consultation, networking and skill development.

King et al. (2005) refer to the behaviours that are used to respond to and overcome difficult conditions or barriers and hence lead to career satisfaction, as career self-management behaviours. The authors argue that individuals use three types of career self-management behaviours: positioning behaviour (e.g. active network development), influence behaviour (e.g. self-promotion) and boundary management (e.g. boundary maintenance).

The following sections describe a range of career strategies that find frequent mention in the literature in more detail.

Development of career-related skills

The more opportunities that are open to individuals, the more likely they are to achieve their career objectives (Gould & Penley, 1984). Creating career opportunities refers to the development of skills and seeking out of experiences, to build a broad foundation for advancement. It is a future-orientated strategy that is closely related to continuous learning. Eby et al. (2003), for instance, drew on it for the development of a measure of career-relevant skills and job-related knowledge. They found it to be positively related to perceived career success (Eby et al., 2003).

Goal setting and career planning

Career goals are career-related outcomes that an employee desires to obtain (Noe, 1996). They have been linked with enhanced performance, through directing attention and promoting a clear picture of a potential future (Greenhaus et al., 1995 in Uzoamaka, 2000). Career goals represent a motivation (Ayree, & Debrah, 1993) and serve as cognitive mechanisms through which career behaviour is organised, enacted and evaluated (Gould, 1979).

Career planning was in the bureaucratic career referred to as pursuing orderly progress towards previously determined goals (Arthur, Inkson & Pringle, 1999). However, in the light of the new career realities, the career is "less about a planned destination than it is about a series of lived experiences along the way" (Arthur et al., 1999, p. 47). The change in societal values, away from a concern with pay and other security benefits, to psychological rewards, has created an increased interest in career planning at the individual level (Ayree, & Debrah, 1993). Individuals have to develop career plans to solve career problems and make career transitions less stressful.

Gould (1979) introduced a model of career planning that equates career planning with goal setting. He demonstrated the relationship between an individual's engagement in career planning and salary level and advancement. Individuals who engage in career planning activities were also found to be more likely to participate in self-development activities. Results from Carson and Carson (1998), showing a relationship between self-awareness and career planning, support this notion. The same authors also found that people who engaged in career planning set career goals, suggesting the two are aspects of the same construct.

Career planning has also been found to be positively related to career satisfaction (Ayree & Debrah, 1993; Wayne, Liden, Kraimer & Graf, 1999). However, it has been shown that career planning alone does not guarantee career satisfaction (Lee, 2001). The author points out that planning without implementing the plan could be futile. He suggests that individuals need to strategise their plans, by creating opportunities for themselves.

Various authors have developed measures for career planning, e.g. Claes and Ruiz-Quintanilla (1998) and Noe (1988). However, the measure most frequently used and adapted is that by Gould (1979).

Self-knowledge

Self-knowledge refers to individuals' understanding of their likes, dislikes, assets, strengths and weaknesses. It has been identified as a skill set needed to improve career self-management (Uzoamaka et al., 2000).

Callanan and Greenhaus (1990) looked at self-knowledge in the context of career indecision, i.e. the degree of certainty that people show in the selection of career goals. They found that the lack of self-knowledge was a source of indecision. They also showed that career indecision has an impact on career outcomes, such as career satisfaction and life stress (Callanan & Greenhaus, 1990). Operationalising the lack of self-information, using seven items that demonstrate a reliability of .8, they found that life stress was highest for those individuals who experienced, among other things, a lack of self-information (Callanan & Greenhaus, 1990). The authors argue that self-awareness is an essential ingredient of effective career management. They suggest that a lack of self-insight may trigger a sense of powerlessness, which may, subsequently, produce feelings of stress.

Self-knowledge can be achieved through personal learning, i.e. learning about oneself, one's attitudes and values (Uzoamaka et al., 2000). A construct related to the development of self-knowledge is career exploration. Career exploration includes mental or physical activities, which elicit information about oneself or one's environment (Jordaan, 1963 in Noe, 1996). Self-exploration should lead to increased self-knowledge and a greater awareness of what skills and behaviours need to be developed to be successful in one's career (Noe, 1996). Stumpf, Colarelli, and Hartman (1983) developed a Career Exploration Survey (CES) that investigates self-exploration, focusing on contemplation and reflection on past experiences.

Job performance

Job related performance is an important factor with regard to promotion and is therefore instrumental in career success (e.g. Judge, Kammeyer-Mueller & Bretz, 2004).

Williams and Anderson (1991) and Morrison and Phelps (1999) looked at performance effectiveness by assessing in-role behaviour. Katz (1964 in Williams & Anderson, 1991) first raised the distinction between extra-role and in-role behaviour. Extra-role behaviour has frequently been labelled “organisational citizenship behaviour”, describing behaviours that are not directly and explicitly recognised by the formal reward system. In-role behaviours describe behaviours that are within role expectations. Both groups of authors developed measures of in-role behaviour. Their measures address issues such as fulfilment of responsibilities (as described in the job description) and meeting performance expectations. Alphas of .91 and .94 respectively show high levels of reliability.

Knowledge of (office) politics

Organisations have been described as political arenas (Mintzberg, 1985). However,, looking at a career from a political perspective is an approach that has only recently been emphasised (e.g. Perrewé & Nelson, 2004). The political viewpoint assumes that, by investigating how political behaviour can affect careers, careers can be analysed from a more realistic perspective. Learning about politics refers to gaining information about formal and informal work relationships, as well as power structures within the organisation. By knowing who the most knowledgeable and powerful people are, individuals can adjust more efficiently to an organisation (Pfeffer, 1981 in Chao, Walz & Gardner, 1992). Perrewé and Nelson (2004) support this notion, stating that “political skills are essential career competencies” (p. 367). King (2001) also emphasises the importance of politics. He describes the charting of the political landscape of the organisation and the identification of key decision-makers, who have influence over career outcomes, as important self-management behaviours that go beyond the establishment of networks. Instead, they represent the knowledge that allows individuals to “play the game”.

Greenhaus (1987, in Zanzi, Arthur & Shamir, 1991) identified organisational politics as one of the strategies that people use to enhance their chances of career success. Seibert, Kraimer and Liden (2001) provide evidence to support this argument,

showing that political knowledge is related to two dimensions of career success: salary and career satisfaction.

Chao, O'Leary-Kelly, Wolf, Klein and Gardner (1994) suggest that individuals who are well socialised in organisational politics may be more promotable than those who are not. They analysed knowledge of politics as one dimension of socialisation and found it to be related to personal income and job satisfaction.

Seeking career guidance and mentoring

Seeking career guidance is often used synonymously with seeking mentoring. Mentoring is the mutual relationship between a higher-ranking, influential individual, who has advanced experience and knowledge and a mostly younger, less experienced individual. It can take place formally or informally and generally fulfils two main functions: career-related support and psychosocial support (Kram & Isabella, 1985). The career enhancement function of the relationship increases the employee's ability to develop their career. The psychosocial function of the relationship assists employees in developing a sense of identity within the organisation, as well as a feeling of confidence and competence in the job (Rigsby et al. 1998, in Joiner, Bartram & Garreffa, 2004). Scandura (1992, in Allen, Eby, Poteet, Lentz & Lima, 2004) identified a third overarching mentoring function: role modelling. Role modelling focuses on mentoring as social learning process, in which the mentor helps the mentee to develop the professional competence and self-esteem needed to achieve career success (Allen et al., 2004). The basic means by which mentoring achieves these three functions are the exchange of information and the acquisition of knowledge (Seibert, Kraimer & Liden, 2001). This shows that one of the main purposes of mentoring is the provision of guidance, i.e. it can be seen as a developmental relationship (Joiner et al., 2004).

Mentoring has been found to be positively related to OCS variables such as financial success and advancement (e.g. Dreher & Ash, 1990) and hierarchical level (Kirchmeyer, 1998). Furthermore, mentored individuals expressed greater satisfaction with their careers than their non-mentored counterparts (Allen et al., 2004).

Turban and Dougherty (1994) present a scale measuring the initiation of mentoring relationships. They found that initiation behaviour had an effect on the mentoring received, which again was related to career attainment and perceived career

success. However, career guidance can be provided by individuals other than mentors, e.g. line managers. Noe (1996) describes seeking career guidance as a career strategy and presents a four-item measure to assess it.

Networking

Networks are deliberately constructed structures and collections of individuals who regularly exchange information and support (Bozionelos, 1996). A network can be defined as “a system of interconnected or cooperating individuals [...] closely associated with the dynamics of power and the use of social and political skills” (Luthans, Hodgetts & Rosenkrantz, 1988, cited in Ferris et al., 2005, p. 128).

Offering instrumental benefits, networks are considered essential factors for success in the contemporary career (DeFillippi & Arthur, 1994). Results of an interview study conducted by Kram and Isabella (1985) suggest that peer relationships offer an important alternative to conventional mentoring relationships, by providing a range of developmental support for personal and professional growth. Different to mentoring relationships, peer relationships offer a degree of mutuality that enables both individuals to experience being the giver as well as the receiver of support. In addition, peer relationships do not necessarily carry the difference in age and hierarchical level normally associated with mentoring relationships. Further, they have a longevity that exceeds that of most mentoring relationships. Analyses of both relationships suggest that their relative importance may change over the course of a career (Kram & Isabella, 1985). While conventional mentors are most important in early career, peers seem to be important at all stages. Bozionelos (1996) found that mentoring and networking were significantly correlated.

Research indicates a relationship between networking and OCS measures, such as salary growth and promotion (Gould & Penley, 1984; Orpen, 1996), as well as SCS criteria (Peluchette, 1993).

There are various measures for networking available, e.g. Bozionelos (2003), Sturges, Guest & Mackenzie (2000), Claes and Ruiz-Quintanilla (1998), Nabi (2001) and Eby et al. (2003). Most of these measures demonstrate acceptable levels of reliability and validity.

Seeking Feedback

Feedback seeking behaviour is a self-regulation activity. It is used by the seeker to assess progress, develop skills and improve performance, etc. (VandeWalle, 2003). Kossek, Roberts, Fisher and Demarr (1998) define developmental feedback seeking as “the extent to which one seeks feedback on performance and career development needs” (p. 938). Feedback seeking includes initiatives and interventions to find information and advice from others on one’s own behaviour, through the building of relationships with one’s boss or colleagues (Claes & Ruiz-Quintanilla, 1998).

Several scales of networking that have been shown to be related to extrinsic and intrinsic career success include items on feedback seeking (Bozionelos, 2003; Sturges et al., 2000). This suggests that feedback seeking behaviour is important for career success. Drawing on these scales, Kossek et al. (1998) developed a measure for self-initiated developmental feedback seeking, showing acceptable levels of reliability.

Self-presentation

Self-presentation refers to proactive behaviours such as “communicating to superiors one’s desire to assume greater responsibility and present oneself in the best possible light.” (Gould & Penley, 1984, p. 245). It includes strategies such as making personal career aspirations and objectives, as well as personal achievements and accomplishments, known to others, including superiors and peers. This creates visibility and helps build a reputation. However, it has been pointed out that if not done well, this form of self-promotion might be perceived as bragging, suggesting that it takes political skill to know the audience (Perrewé & Nelson, 2004).

As part of their career strategies inventory, Gould and Penley (1984) developed a scale for self-nomination. Their scale shows acceptable levels of reliability and has been widely used (e.g. Ayree & Debrah, 1993; Noe, 1996; Sturges et al., 2000).

2.2.4.4 Demographic factors

It has been demonstrated that demographic characteristics explain a significant amount of variance of OCS as well as of SCS (Judge, Cable, Boudreau & Bretz, 1995; Nabi, 2001).

Age

Career success is a process that unfolds over time (Boudreau et al., 2001). This makes it dependent on career stage and the time interval studied (Boudreau et al., 2001). On the one hand, age implies experience, while on the other it is seen as a limiting factor for career opportunities (Carson, Carson & Bedeian, 1995). Age was found to be strongly correlated with OCS variables such as managerial level and salary (Melamed, 1996a). It has also been shown to have an influence on individuals' perceptions of career success. For example, Ayree and Debrah (1993), in a cross-cultural study, involving employees from private as well as public sector organisations, found age to be positively related to career satisfaction. Rogers (1991, in McElroy & Wardlow, 1999) reported a positive relationship between job satisfaction and the age of police officers. This makes it essential to control for age when looking at career success (Erdogan, Kraimer & Liden, 2004).

Gender

Gender is another important demographic variable that needs to be taken into consideration when looking at career related issues. Several studies found differences in the career perceptions of men and women (e.g. Kirchmeyer, 1998). The results showed that women rated themselves as equally successful in their careers as their male counterparts, even when they earned less and had less experience. Results by Ng, Eby, Sorensen and Feldman (2005) suggest that women have lower expectations with regard to SCS than men. They further indicate that even though organisations promote women as often as men, women generally earn lower salaries (Ng et al., 2005). Ng et al. also found a stronger relationship between education, salary and hours worked for women than for men. These results support Melamed (1996a) when he states that the two sexes cannot be considered as one group when attempting to explain career success and when he argues for a gender-specific model of career success.

Human capital

Human capital refers to personal investments of individuals in education and experience to enrich their value in the work place (Wayne et al., 1999). Human capital is often operationalised as level of occupation, education and/or years of work experience (Metz & Tharenou, 2001; Wayne et al., 1999).

Education and work experience gained before joining the organisation provide important work-related and career-related knowledge for the individual. These

investments are generally highly rewarded in the labour market (Becker, 1964, in Ng, 2005) and can therefore enhance career attainment. They often influence the grade in the organisational hierarchy from which the individual starts when joining the organisation (Bozionelos, 2004). This in turn influences the remuneration and also the current grade of the individual in the organisation. Consequently, human capital has been found to strongly predict OCS outcomes, such as managerial progression (e.g. Gattiker & Larwood, 1988; Dreher & Ash, 1990) and salary (Seibert, Crant & Kraimer, 1999). Human capital also appears to affect SCS, though to a lesser extent (Judge et al., 1995).

Tenure

There are two indices of tenure – organisation tenure and position tenure (Hoath, Schneider & Starr, 1998). Organisation tenure measures how long employees have been with their current employer, while position tenure looks at the length of time employees have been working in their current role. Research suggests that job tenure and total time in the organisation are positively related to objective career attainments, such as number of promotions, salary, etc. but not to subjective career attainments (Judge et al., 2004). Bozionelos (2004) states that organisational tenure influences the hierarchical grade of an individual: those who stay longer are likely to reach higher grades in the organisational hierarchy. Some authors even found a negative relationship between both forms of tenure and job satisfaction. In a study with police officers, O'Leary-Kelly and Griffin (1995 in Hoath et al., 1998) found that officers' job satisfaction declined after they had finished their training, as a result of the difficult realities of police work. Hoath et al. (1998) found that position tenure explained a unique variance in job satisfaction, with low satisfaction being linked to increased length of time in the current role.

Family structures

Other personal variables that were found to be significant predictors of career outcomes were family structures, such as marital status, parental status and spousal employment (e.g. Bashaw & Grant, 1994; Kirchmeyer, 1998). Tharenou (1999) points out that according to human capital theory, employers would regard marriage as a proxy for stability and responsibility when allocating wages and status to men. He was able to demonstrate that family structures were linked to career advancement of managers and professionals. By taking a longitudinal approach, he could show that family structures were antecedents to women's and men's career advancement. Marital or single status was more consistently linked to advancement

for men and women than were other family structures (Tharenou, 1999). Married men and woman, childless or not, with spouses employed or not, advanced more than childless single women. Landau and Arthur (1992) presented similar results, showing that married men and women gained greater pay than childless singles.

Summary

This section introduced the concept of career success and its components, objective and subjective career success, as an analogy to the objective and subjective career. It looked in detail at the conceptual differences between these components, stressing the increasing importance that subjective aspects of career success are gaining in the light of new career realities. It further introduced a range of antecedents and correlates of both aspects of career success that need to be taken into consideration when seeking to understand these career outcomes.

The achievement of career success can be optimised utilising career management programmes. The following section examines the practice of career management.

2.3 Career development and career management

When defining career as a sequence of employment related experiences, the term 'development' can be seen to cover all the things that individuals learn from these experiences. Career experiences are generally brought about by the individual making certain career choices. Therefore, career development can be defined as "the changes and adjustments experienced by a person as a consequence of a career choice" (Arnold, Cooper & Robertson, 1998, p. 416). Development is not restricted to formal, usually short-term, training, retraining or upward mobility. Instead, it is future-focused, wide ranging and encompasses a self-directed, relational process that can be found in work challenges (Hall, 1996). In other words, development includes not only professional and technical development, but also personal development. It is important to notice that development is characterised as an ongoing, open-ended process and that development activities can be formal and planned, but also ad hoc and informal (McDowall & Silvester, 2006).

All the techniques and strategies that individuals and organisations use to optimise careers and bring about career development can be referred to as career management (Bryant & Yarnold, 1995). The distinction between the individual and the organisation as active agents already suggests that career management can take place both within organisations and independent from organisations.

Reflecting the idea of the bureaucratic career, career development in organisations traditionally tended to focus on key staff groups and was designed and managed centrally by the organisation (Hirsh, Jackson & Kidd, 2001). It generally focused on the future business needs of the organisation, rather than on the needs of employees (Kidd, 1996) and was often seen as synonymous with succession planning. Career management was defined as what the organisation did to develop its employees' careers, in line with business needs.

However, as elaborated on above, changes in the world of work have led to more diverse workplace trends and have diverted focus from the organisation to the individual. In the context of these changes, "employers are increasingly unable (or unwilling) to promise and formally manage career opportunities" (Kossek et al., 1998, p.936). Instead, employers are taking an increasingly 'hands-off' approach to career management (Bryant & Yarnold, 1995). The imperative of this is that individuals are required to take more responsibility for their own career development (Bryant & Yarnold, 1995; Kidd, 2002). Individuals need to develop the skills and abilities to manage this process successfully and to stay flexible and adaptive throughout it. This represents a fundamental change in attitude and identity. Individuals need to develop personal resources for effective career management. This will enable them to make full use of their capability to impact their own personal career development, by influencing the system in which they are embedded (Vondracek, Lerner & Schulenberg, 1986, in Kidd, 1992). They have to collect a portfolio of skills and experiences, to secure employability inside their current organisation or elsewhere (Hirsh et al., 2001). Bridgstock (2005) summarises this point by saying that "we are in an era of 'do-it-yourself career management' where individuals are being challenged to play a greater role in constructing their own career development, an era where [...] workers are encouraged to act as free agents [...] and learn the skills which will assist them in taking responsibility for the direction and evolution of their own careers" (p. 41). Thus, career self-management has become a key concept (King et al., 2005).

Individual career management has been described as “the process by which individuals collect information about values, interests and skill strengths and weaknesses (career exploration), identify a career goal and engage in strategies that increase the probability that career goals will be achieved” (Greenhaus, 1987, cited in Noe, 1996, p. 119).

“Individuals are seen as needing to become more self-reliant in managing their own careers and the ways organizations might help employees to do this are much debated” (Kidd, 1998, p. 277). The organisation’s role has shifted from facilitating development through established career paths, to helping individuals to manage their own careers and develop portable skills that secure employability (Kidd, 2002). This follows the notion of the learning organisation that focuses on the personal development of its employees, emphasising the need for continuous development and learning (Ball & Jordan, 1997). This is reflected in changes in career management interventions.

2.3.1 Career management interventions

Career management interventions are any efforts by organisations to provide individuals with specific experiences aimed at assisting them in managing their careers and meeting organisational requirements (Allred, Snow & Miles, 1996).

Traditionally, career development interventions in organisations were formally implemented. They emphasised the design, implementation and monitoring of employees’ careers to address organisational needs. Succession planning aimed at key individuals was often used as a synonym for career development. That is, the focus was on the identification of high potential employees early in their careers and their development for particular posts (Kidd, 1996).

However, in response to the new career realities, some organisations abandoned career management, to the extent that they would not even provide information about the skills and experiences required of their employees (Hirsh, Jackson & Jackson, 1995). However, with human resources often decisive in the competitive advantage of an organisation, there is a strong argument that it is more beneficial than ever for an organisation to get involved in career management (Bryant & Yarnold, 1995). Craig (1992) states that organisations need to engage in career development to ensure that adequately skilled and trained individuals are promoted into key positions. Engaging in career development practices can help the

organisation to attract, retrain and develop its workforce, thereby increasing its resilience to adapt to and survive in a competitive business environment (Hirsh et al., 2001). Hall and Hall (1976, in McGinnis, 1985) suggested three basic reasons why organisations should concern themselves with career development. First, employees' feelings of success or failure about their careers are tied to their career experiences. Second, employees' self-concept, commitment to work and feelings towards the company are affected by their career experiences. Third, employees' ability to be flexible and adaptable and their self-development are affected by their career experiences.

The importance of organisational involvement is also emphasised by findings from Macaulay and Harding (1996). The authors showed that the introduction of individual-centred career development does not, on its own, guarantee successful career management. Rather, their case suggests that self-development needs to be managed and supported if it is to be successful. This implies a shared responsibility of both organisation and individual for successful career development.

As a result, over recent years, many large organisations have expanded their career management activities and have introduced new initiatives. They have changed their traditional interventions, increasingly incorporating self-development features. There is no comprehensive taxonomy of aspects that career development interventions should cover (Kidd & Killeen, 1992). Geared towards encouraging and helping employees assume more control over their career development (Kidd, 1998), interventions often focus on aspects such as career exploration, development of career goals and career strategy implementation (Noe, 1996). They generally expect individuals to do most or all the work required to benefit from the processes offered by the organisation and often involve elements of self-assessment and action planning (Kidd, 1997),

Most career development interventions only serve a small number of purposes (Hirsh et al., 2001, p. 30). These include:

- filling vacancies
- assessment of potential, competencies, skills or interests
- development of skills and competencies
- identification of career options
- action to implement career plans

From an organisation's point of view, if career development programmes are effective in addressing the above issues, they should ultimately increase the organisation's flexibility to respond to change and reduce recruitment and training costs (Hirsh et al., 2001). From an individual's point of view, they should, in the long-term, lead to an increase in career and job satisfaction and reward (Craig, 1992). Interventions that address the aforementioned purposes include career coaching, career workshops and career discussions.

Career coaching

A study by the CIPD (2003) found that half of the 700 organisations surveyed offered career coaching to their employees and that a quarter of these had formally structured approaches in place. Career coaching has been defined as "a process which enables an employee to have focused attention on their individual career concerns, leading to increased clarity, personal change and forward action" (CIPD, 2003, p. 26). It generally aims to assist clients' personal development within the context of work and career (Chung & Gfroerer, 2003). The career coach can be described as a personal consultant on any issues related to work and career e.g. identification or development of skills, career decision making, evaluation of career strategies, etc. (Chung & Gfroerer, 2003). Career coaches may take an active role in providing assistance and instant feedback and they may interact with clients over the phone or internet, etc. This makes career coaching open to approaches such as participatory engagement and the exploration and implementation of career plans with the client (Chung & Gfroerer, 2003).

Career workshops

Career workshops generally aim to guide individuals to assess their strengths and weaknesses, identify job and career opportunities and determine necessary actions to achieve career goals (Bryant & Yarnold, 1995). They present individuals with the opportunity to discuss career-related issues in a group setting and to receive information, e.g. feedback from others and input on organisation-specific opportunities, processes and policies.

Career discussions

Career discussions present career management support in the form of advice and information on skills and roles that will be relevant in the future (Kidd, Hirsh & Jackson, 2004). Career discussions have been defined from a "receiver's" point of view as "discussion about aspects of their career which the individual found to be of

significant positive value" (p. 232). Drawing on accounts from 104 employees, Kidd et al. found that the majority of effective discussions were with managers who were not the individual's direct superior.

Career discussions still tend to take place only in certain situations, e.g. when individuals join an organisation, or when a job move is contemplated. However, it has been argued that broader interventions such as career guidance should be available at all critical career points (Kidd, 2002). The majority of these interventions are still offered formally in organisations. However, some can also take place in an informal setting. In fact, a survey study by the CIPD found that the by far most common career management activities in organisations are informal career discussions with managers and peers (CIPD, 2003). This might be due to formally structured human resource systems not giving individuals sufficient opportunities to explore their own values and goals (Kidd, 1998). Alternatively, it could also be the result of restricted individual access to career management interventions. Research showed that only about one third of companies provided their employees with formal career planning and employment self-assessment opportunities (Russel & Curtis, 1993, in Seibert et al., 2001). This made it necessary for employees to look for alternative ways to develop themselves.

2.3.2 Career self-management behaviours

As described above, the importance of career self-management has increased over recent years. To date, there has only been little research into the reality of career self-management. Some authors describe it as a single entity, rather than a number of separate interrelated activities (e.g. Stickland, 1996). However, the results of a study by Sturges et al. (2000) question the appropriateness of this approach. Sturges et al. assessed the occurrence of several different career management practices, as experienced and practised by employees. Four discrete but interrelated factors for career self-management emerged: networking activities, mobility oriented behaviour, drawing attention to achievements and practical activities. This list finds its analogy in the seven career strategies as identified by Gould and Penley (1984). The authors argue that the aforementioned behaviours and activities are employed primarily at the volition of the employee. This implies that individuals know what they want out of a job and, therefore, where to invest their time and energy. King et al. (2005) divide career self-management into three groups of behaviour: positioning, influence and boundary management. They further describe it as a cyclical process,

that individuals use in the course of their working lives to overcome 'thwarting conditions' and career barriers and to establish a sense of control over their career. However, so far there is little evidence to confirm that career self-management is associated with career success outcomes such as promotions or greater fulfilment (King et al., 2005).

2.3.3 What makes career management initiatives effective?

A range of factors have been suggested as contributing to the success of career management interventions (Bryant & Yarnold, 1995). Interventions should be successful when:

- There exists a high level of trust between the organisation and its employees. Kidd (1998) points out that in organisations with a strong "performance culture" employees may feel unable to disclose concerns about their development, their perceived weaknesses, etc., which may impede on the success of career management interventions.
- The activities involved in the intervention are valued by employees and achieve to engage them.
- They have clearly stated objectives that address individual as well as organisational needs.
- There aren't too many interventions available, the available ones are compatible with each other and they are integrated with overall human resource (HR) and business practices. This challenges the proliferation of career development initiatives in some organisations.
- All the line managers and HR staff involved in the intervention are trained. For instance, it has been suggested that line managers do not get involved in the career development activities of their staff because they feel they are lacking the required competences and qualities (Garavan, 1990, in Dick & Hyde, 2006).
- Senior management and line managers are committed to career management and take it seriously.
- There is a clear, written strategy available, conveying a clear and honest message about careers to all employees.

Failure to address any of these factors may impact negatively on the success of a career management initiative. This leads to the question how the success of a career management intervention can be measured.

2.3.4 Evaluation of career management interventions

Evaluation has been defined as “the process of placing value or determining worth” (Williams, 1981, p. 264). Kidd (1996) points out that very little is known about the benefits of career management interventions. Arnold (1997a) states that even though some thorough analyses have been done on how to evaluate career interventions, very little good-quality research has been conducted to assess the impact of these interventions, the necessary conditions in which they work well and possible areas for improvement.

While the question of how to determine the worth of a HR programme in general has been widely discussed, the evaluation of career management interventions in particular has figured less frequently (Williams, 1981). Most literature on the subject of evaluation focuses on training (Williams, 1981), with the most prominent model being Kirkpatrick’s (1967) hierarchy of training evaluation.

Kirkpatrick’s model suggests that in order to achieve a full and meaningful appraisal of learning in organisations, four levels of outcomes need to be evaluated: reaction, learning, behaviour and organisational outcomes. Reaction focuses on participants’ satisfaction, assessing if their expectations were met and what they thought and felt about the training. It is at the base of the evaluation hierarchy and is the easiest level to measure. Learning, the second level, looks at the immediate change in participants. It measures the increase in knowledge or capability that was achieved through the training. The third level of the hierarchy is behaviour. It is concerned with the extent to which behaviour and capability improvement occurs on the job, as a result of the individual’s participation in the training. The highest level of the hierarchy is results. It represents longer-term goals that are generally not immediately visible after the engagement in the intervention, e.g. effects on the business or the environment that result from the trainee’s performance.

Client self-reports is the method of choice in most evaluations (Whiston, 2003). While it provides valuable input on the first level of Kirkpatrick’s model, other sources might be more appropriate for the assessment of the second and the third levels, e.g. relevant others, trained observers, etc. Especially for the evaluation of the fourth level, the organisational outcomes, it becomes almost inevitable to consult other domain resources, such as institutional information. The application of the four hierarchy levels generally increases in complexity and usually cost, from level one to level four. While information on the first three levels are quite frequently collected

(Alliger & Janak, 1989), level four is only very rarely assessed (Alliger & Janak, 1989; Alliger & Tannenbaum, 1997). Organisational outcomes, though highly desirable and often perceived most fundamental to judging training success, represent the criteria most distal from the training, which is why most training efforts are said to be incapable of directly affecting them (Alliger & Tannenbaum, 1997).

It has been suggested that Kirkpatrick's model could be modified to conceptualise the evaluation of career management activities (Kidd, 1997; Williams, 1981). For instance, the assessment of individuals' satisfaction with the outcomes of an intervention would represent evaluation on level one. Furthermore, the assessment of whether participants learned certain skills and whether they apply them repeatedly in the course of their careers (Donohue & Patton, 1998), would represent evaluation on levels two and three. The increased importance of the individual's perspective on career and career success suggests that the effectiveness of career self-management should also be judged on idiographic criteria. It needs to be taken into consideration, however, that some of the more private career development outcomes may be difficult to evaluate.

In order to assess the four levels correctly, it is important to first identify its exact aims. That is, it is important to establish the precise goals and objectives of the career intervention and translate them into outcome variables. In the past, most career interventions and, therefore, evaluations of their effectiveness, focused predominantly on career outcomes such as job satisfaction, or OCS (Kidd, 1998). However, with the focus of career development shifting to individual lifelong learning, a more educative, developmental approach to career interventions has evolved and learning outcomes have largely displaced career outcomes. This change has also led to a greater emphasis on long-term, rather than short-term, learning outcomes.

However, there is no generally agreed set of outcome measures for career interventions, or common methods for collecting outcome data (Maguire, 2004). There are merely suggestions available that an appropriate taxonomy should include factors such as exploration skills, reflective self-awareness, career planning and monitoring and adaptability (Kidd & Killeen, 1992).

The problems described in evaluating the impact of career management initiatives and the lack of empirical evidence, make it difficult to persuade organisations of the value these interventions can add. Some isolated studies have shown a correlation

between the use of certain HR practices and organisational performance, suggesting that career management interventions have a noticeable impact on bottom-line productivity outcomes (Arthur, 1994). However, more research is needed to refute the statement by Guest and McKenzie-Davey (1996) that new forms of career management often dissolve on closer inspection. In seeking to identify and measure the outcomes of career management practices, a clearly delineated intervention is desirable (Maguire, 2004).

Summary

This section introduced the distinction between career development and career management. It described how the changes in the world of work have affected the way organisations deal with the career management of their employees. It highlighted the increased requirement of individuals to self-manage their careers and described how organisations currently support this process. It critically discussed the lack of evaluation studies available and described how Kirkpatrick's model of training evaluation could be adapted to serve for the evaluation of career interventions.

Chapter 3

Competencies and Competency Frameworks

“The increase in the use of competencies means that there are different views about the definition, applications and structure of competencies.”

(Whiddett & Hollyforde, 2003, p. 3)

3.1 What is a competency?

There is considerable confusion, ambiguity and disagreement about what competencies are and how they should be measured (Shippmann, Ash, Battista, Carr, Eyde, Hesketh, et al., 2000). Difficulty in identifying a standard definition for the term is emphasised by the range of conceptualisations available. This is partly because the concept is prevalent in a number of disciplines. People look at competencies differently according to interest and field of study (Whiddett & Hollyforde, 2003).

Therefore, the first part of this chapter is going to introduce the evolution of the competency concept, with the aim of establishing a working definition of competencies.

The competency movement started in the United States. McClelland (1973) laid the foundation of competency modelling with his article "Testing for Competence rather than for Intelligence". He raised questions about the reliability of intelligence tests and grades at school, as predictors of job success and achievement in life. He pointed out that success or failure was the result of multiple influences. Consequently, he introduced a new approach to defining the requirements for success in a profession or a job and named these requirements "competency". Although he did not prove all of his propositions, he was the first to introduce the idea of criterion-referenced assessment as means of identifying competence.

Other authors took up the concept and developed it further. McLagan (1997), for instance, introduced competency models as a focal point for planning, organising, integrating and improving all aspects of HRM systems, including, for instance, individual development planning, succession planning and career pathing.

Boyatzis (1982) wrote the first empirically-based and fully-researched book on competency model development. He extended the perspective to managerial jobs and provided one of the most frequently cited definitions of the term, describing a job competency as "an underlying characteristic of a person which results in an effective and/or superior performance of a job [...] it may be a trait, motive, skill, aspect of one's self image or social role, or body of knowledge that he or she uses." (p.20). He viewed competencies as personal qualities that reside in the individual and are tightly

integrated with concepts such as needs, motives and traits. His main focus was on the differentiation between good and poor performance.

Boyatzis' definition, being rather broad, has been described as an umbrella term, contributing to a situation where almost anything can be described as competency (Woodruffe, 1992). Woodruffe points out that some aspects of personality, e.g. traits, are only poorly understood. He warns that connecting competencies with these aspects may lead to competencies inheriting some of the confusion that surrounds traits. Consequently, he moves away from a trait-based definition, instead conceptualising competency as "the set of behaviour patterns that the incumbent needs to bring to a position in order to perform its tasks and functions with competence" (p. 17). This behavioural view puts a stronger emphasis on establishing and describing the requirements of the job situation and how people do their jobs, rather than focusing on performance at work, i.e. outputs.

In the text above, competence, competency and personality traits are sometimes mentioned in the same sentence. It is necessary, in order to clarify the term competency further, to establish a clear distinction between these concepts.

3.1.1 Competency and competence

The two concepts of competency and competence are often used interchangeably, which can cause confusion (CIPD, 2001). This problem has its origin in the introduction of a UK government policy, in the late 80s, to develop a suite of new vocational awards. The approach promoted by the UK government focused on standards of performance. They used the word "competence" to describe what should be done in a job in order to comply with good practice, i.e. minimum acceptable performance levels. This led to the introduction of schemes such as National Vocational Qualifications (NVQs) (CIPD, 2001). Hence, competence generally means a description of job- or role-related work tasks, functions, or objectives, which can be assessed against outputs (Whiddett & Hollyforde, 2003). Focusing on states of attainment, i.e. the mastery of specified goals or outcomes, makes competence a backward-looking concept (Kurz & Bartram, 2002).

The competency approach described earlier, on the other hand, focuses on the person and not the job. Competencies do not relate to meeting objectives, but to behaviours observed in effective people, using behavioural statements as

performance indicators (Whiddett & Hollyforde, 2003). They address the issue of how people perform, how they apply their skills and knowledge in the context of work requirements and answer the question of what enables them to perform competently. While competences are usually job- or role-specific, competencies can cover a wide range of different jobs and levels of jobs. Contrary to competences, competencies are not confined to a backward-looking perspective, but can be used to assess concurrent behaviour and, in a forward-looking way, to predict competency-potential.

In summary, individuals can demonstrate competence by applying their competencies. In order to prevent confusion, the two concepts should be kept separate (CIPD, 2001).

3.1.2 Competency and personality

There is confusion as to whether competencies should be defined as personality aspects and this is reflected in competency models. Moloney (2000) points out that personality, i.e. who we are and what we do, is often used in competency frameworks, thus confusing the notion of what makes someone competent.

Personality is often defined as individual differences that predispose people to behave in a certain way (Robertson & Callinan, 1998 in Truch et al., 2004). However, predisposition does not guarantee that the predicted behaviour will follow, because other factors related to the situation such as beliefs, consequences, expectations of personal efficacy and motivation moderate what behaviour an individual will actually display (Moloney, 2000). Bartram, Robertson and Callinan (2002) refer to the attributes necessary for someone to produce desired behaviours as 'competency potential'. Competency, however, is described in behavioural terms, disregarding the underlying characteristics and predispositions of a person. The significance of competency for performance at work is the main difference between competency and other psychological constructs such as traits (Kurz & Bartram, 2002).

Furthermore, personality traits are generally described in a non-judgemental way. They are neither good nor bad, they simply are (Moloney, 2000). However, competencies focus on effective performance and are therefore imbued with values and aspirations. They communicate a message to employees about what qualities are desired.

Another issue that needs addressing is trainability. Eysenck et al.'s (1975, in Truch et al., 2004) definition of personality already emphasises that personality is seen to be relatively stable over time. This argument has been widely supported by research (e.g. Judge et al., 2004; Robins, Fraley, Roberts & Trzesniewski, 2001) and a genetic basis (Digman, 1989) and heritability of the personality dimensions has been suggested (Jang, Livesey & Vernon, 1996).

In contrast, the emphasis in competencies is on the changeability of behaviour. Competencies are behaviours that are instrumental in the achievement of desired outcomes. Implicit in this definition is the ability to guide individuals in which behaviours to adopt to be effective in their jobs. Mirabile (1998) goes as far as to argue that competencies are only useful and of value if they can be influenced in some way, e.g. through training, coaching, etc.

Overall, it can be seen that competency and personality are related but separate concepts.

3.1.3 Other types of competency

Although often subsumed by the concept of competency, there are two other forms of competency that have been mentioned in the literature: meta-competencies and organisational competencies. It is important to keep these separate on theoretical and practical grounds.

3.1.3.1 Meta-competencies

Meta-competencies can be defined as the abilities to judge the availability, application and learnability of personal competencies (Weinert, 2001). A prerequisite for the acquisition of meta-competencies is the ability to introspect and the ability to carry out self-guided learning (Weinert, 2001).

As mentioned earlier, Hall and Mirvis (1996) use meta-competencies in their protean career model, describing them as a "set of skills required to prepare an individual for learning how to learn" (p. 11). These higher order skills and knowledge include self-knowledge and adaptability and are acquired through collaborative learning. It must be noted that meta-competencies are broader than the behavioural competencies described above. They focus on long-term development, instead of current or short-term development in particular jobs or roles. Kandola and Galpin (2002, in Whiddett & Hollyforde, 2003) suggest the use of meta-competencies, e.g. seeking

opportunities to learn, adapting to cultural differences, etc. alongside current competency models to assess individuals for long-term development.

3.1.3.2 Organisational competencies

Prahalad and Hamel (1990) were the first to take competency modelling beyond individuals and into the realm of organisational performance. They introduced the concept of “core competencies”, to indicate the essence of what makes an organisation competitive in its environment and what enables it to adapt and innovate in response to change (Prahalad & Hamel, 1990). Core competencies or organisational competencies have been described as things that organisations are best at (Whiddett & Hollyforde, 2003). They are design components of an organisation’s competitive strategy (Prahalad & Hamel, 1990) that are usually a result of collective individual competencies. It has been suggested that the concept has galvanised interest in individual-level competencies, highlighting the importance they have for the building of organisational competencies (Shippmann et al., 2000).

3.1.4 Working definition

It has been shown that it is important to differentiate between competencies, meta-competencies and organisational competencies. It has also been shown that, as a concept, competency should be kept separate from competence and personality, in order to avoid confusion. Bartram et al. (2002) provide a definition that meets these demands and represents the behavioural approach to competencies most frequently used by organisations (CIPD, 2001). They define competencies as “sets of behaviours that are instrumental in the delivery of desired results or outcomes” (p. 7), suggesting that competency relates to behavioural repertoires. “A competency is not the behaviour or performance itself but the repertoire of capabilities, activities, processes and responses available that enable a range of work demands to be met more effectively by some people than by others” (Bartram et al., 2002, p. 230). This study will use the term competency in accordance with this definition.

3.2 Competency frameworks

Competencies, as performance criteria, cover common themes across a range of people-management processes and contribute to an integration of HR applications (Whiddett & Hollyforde, 2003). Competencies enable an organisation to communicate what behaviours need to be emphasised and de-emphasised, using a common language. What competency frameworks are composed of will be described below, as well as how they are structured, developed and used.

3.2.1 What do competency frameworks look like?

Although the presentation of competencies varies from organisation to organisation, it generally takes the form of a structured framework (Whiddett & Hollyforde, 2003). Most frameworks consist of similar features and competencies. Competencies can be relevant to all jobs within an organisational context, generic framework, or they can be developed for a specific application or role, specific framework (Whiddett & Hollyforde, 2003). The focus of competency models is typically on broad applicability, resulting in fairly high-level general descriptions (Shippmann et al., 2000).

The actual frameworks generally consist of a list of competencies, each of which is a collection of related behavioural indicators (Whiddett & Hollyforde, 2003). Each competency is described by a competency title, which either summarises the included indicators, or provides a rationale for the competency. In a simple framework, each competency would have a single set of indicators that relates to all jobs. More complex frameworks, that cover a wide range of jobs, with different levels of demands, may have various sets of behavioural indicators within each competency. The behavioural indicators form the basic elements or building-blocks of the framework, normally indicating types of behaviours that would be expected to be observed, i.e. examples of effective competency. Whiddett and Hollyforde (2003) point out that it is impossible and unnecessary to provide examples of all behaviours that could be observed within a competency.

Users usually consider the detail in a framework as worthwhile if it is easily and quickly accessible (Whiddett & Hollyforde, 2003). It is important to structure competencies and frameworks in a simple and logical way, to ensure they are unambiguous and to use simple language. Whiddett and Hollyford (2003) present the following list of quality standards for competency frameworks. For a competency framework to be effective, it must:

- 1) be clear and easy to understand,
- 2) be relevant to all people who will be affected by the framework,
- 3) take account of expected changes,
- 4) have discrete elements (e.g. competencies should be distinct from each other: behavioural indicators should not overlap between clusters, only relate to one competency and describe just one piece of behaviour or evidence),
- 5) contain elements of the same type, e.g. be behaviour-based,
- 6) contain behaviours that are necessary and appropriate and
- 7) be fair to all affected by its use (p. 19).

These quality standards provide a good basis for the evaluation and testing of a competency framework and should also be taken into consideration in their development.

3.2.2 How are competency frameworks developed?

A literature review revealed a number of different approaches to competency identification and modelling. In general, frameworks are either borrowed, i.e. 'off-the-shelf', or adopted from another organisation, tailored, i.e. developed from scratch according to organisation-specific needs or borrowed and tailored (Rothwell & Lindholm, 1999). Whiddett and Hollyforde (2003) suggest four stages in the development of a tailored competency framework: preparation, collecting information, compiling the framework and implementation. In this description, evaluation will be added as a fifth stage.

Preparation

This stage focuses on clarifying the purpose of the framework and its use and securing the buy-in from key individuals. Whiddett and Hollyforde (2003) stress three key principles to encourage ownership and acceptance by future users. First, it is important to involve the intended users of the frameworks in its development. Second, people should be kept informed about the reasons for developing the framework, how it will help them and the organisation, how it is going to be produced and how it will be used. Third, it is essential to create competencies that are relevant to potential users.

The preparation stage also involves a decision on the type of development approach. Briscoe and Hall (1999) distinguish research-based, strategy-based and value-based approaches. The research-based approach is methodologically rigorous and

typically uses behavioural event interviewing to exemplify behaviours important for success in a job. It typically focuses on past or current behaviour to develop competencies, a point which has been criticised, since for the representation of future needs and developments, a future-perspective should be adopted. Competencies in the strategy-based approach are based on the strategic direction and future goals of the organisation. However, the accuracy with which the future is predicted and prepared for will have an impact on the effectiveness of any strategy-based approach. The value-based approach links idiosyncratic, normative, or cultural values to the competency construct. The aim is to provide stability and a consistent approach to learning, conducting business, meeting customer needs and leading. However, the methods for establishing value-based frameworks do not necessarily reflect a systematic process, which comes more naturally to a research-based approach. While some developers only follow one approach, others chose a combination.

Collecting information

The method used to collect data at this stage depends on the chosen development approach. For the research-based approach, critical incidents might be collected from employees through interviews. For the strategy-based approach, analysis of organisational strategy documents, or an expert panel, might form the basis. However, many of the identification processes have been criticised with regard to their reliability, i.e. the extent to which they yield consistent, stable and uniform results and validity (Garavan & McGuire, 2001).

Compiling the framework

This stage focuses on the analysis of the collected data and the drafting of the framework. General guidelines for the design of competencies e.g. phrasing of competencies, clustering etc. (Shippmann et al., 2000; Whiddett & Hollyforde, 2003) are described in more detail in Chapter 6. Mirabile (1998) proposes that competencies must answer four questions if they are to be of value and of use: can you describe the competency in terms that others understand and agree with; can you observe it being demonstrated or failing to be demonstrated; can you measure it; can you influence it in some way, e.g. train, coach, develop, etc.? This so-called DOMI rule (describe, observe, measure, influence) has emerged from purely theoretical considerations and lacks empirical support. In an ideal scenario, it might be possible to ensure that competencies are easy to explain, observe, measure and

influence through training, etc. However, the practical feasibility of this rule has not been assessed.

The compiling stage generally closes by revising and finalising the competencies and the framework as a whole.

Rolling out the framework

Organisations often pilot competency frameworks on a small scale before launching them organisation-wide. Once any problems that might have occurred during the pilot study have been resolved, it is important to integrate the competencies into the various HR processes, to ensure that the framework is implemented throughout the organisation. This can be conducted on a need-to-do basis.

Evaluation

Once a competency model is implemented, it is necessary to evaluate its impact. However, the majority of competency modelling efforts do not involve an evaluation of the competencies' impact on performance (CIPD, 2001), or of the consistency or reproducibility of the results (Shippmann et al., 2000). The only form of evaluation that is widely practised is the assessment of impact on an individual level (CIPD, 2001). In terms of Kirkpatrick's (1967) model, that would mean evaluation on level one and two, i.e. reaction and learning. Evaluations at broader levels of behaviour, or organisational outcomes, are far less common. However, the few cases where the impact of competencies has been evaluated yielded positive results on various aspects of the business. These aspects included individual performance, team performance, cultural change initiatives and labour overturn rates (CIPD, 2001).

Apart from the evaluation process, it is important to keep competency models up to date. They can become outdated as fast as organisations develop, such as when facing new external challenges, changing products or services, or confronting customer preferences for different products or services (Rothwell & Lindholm, 1999). Competency frameworks need to be continuously evaluated and adapted, according to emerging changes in needs and requirements.

3.3 Use of competencies

Competencies are enthusiastically used by employers to structure processes and to improve and standardise HR functions (CIPD, 2001). The overall aim of their application is to assess and improve individual performance and to address developmental needs, by suggesting developmental experiences or training to help employees make best use of their talents (Briscoe & Hall, 1999).

An investigation into the use of competencies in organisations showed that they were most commonly used as a basis for training and development processes, appraisal or performance management, personal development planning or career planning systems, recruitment and selection processes, job design and cultural change (CIPD, 2001). The study also analysed trends with regard to the application of competencies by employers. The results suggested a marked shift away from competencies in succession planning. On the other hand, recruitment and selection, personal development and career planning stood out as key processes for which an increase in the use of competencies was predicted (CIPD, 2001). Due to its relevance to this study, career management will be looked at in more detail below.

3.3.1 Competencies in career management

Even though competencies are frequently used in career management, there is a very limited amount of literature available on the subject. The general approach is to use competencies as a basis of career-related processes, such as promotion interviews, career workshops, or development centres. Craig's (1992) chapter on the use of competencies in career development specifies three ways in which competencies can positively contribute to these career-related processes. First, they enable focus on aspirations and expectations. Reviewing what competencies are required in the desired role, individuals can make informed decisions about their ability to achieve the requisite skill level and design their development plan accordingly. Second, competencies enable individuals to assess their strengths and development needs, thereby individualising the process and making it purposeful to them. Third, if handled well, the output of the assessment provides valuable information for developing a realistic and timed personal development plan. This should advance specific development, with positive outcomes for the individual, as well as for the organisation.

The next section looks at how competencies are measured.

3.4 From competency models to measuring competency

In general, the identification and assessment of competencies is a controversial issue (Garavan & McGuire, 2001). Many of the assessment methods are based on positivistic principles, adopting quantitative approaches, without, however, meeting psychometric standards (Sarges, 2002). However, issues such as reliability and validity must be taken into consideration when deciding on the method for assessing competencies.

There are numerous techniques for assessing people's performance against competencies (Craig, 1992). The most common form of performance assessment in organisations is assessment by supervisors (Weightman, 1994). Supervisors are generally assumed to be familiar with the work of their subordinates and are considered to have the legitimate right to assess. However, levels of trust and credibility may not always be sufficient. In addition, if a supervisor has many subordinates, this can be a time-consuming process.

Peer assessment is the assessment of the contribution of a team member against different competencies by peers. This form of assessment is less frequently used (Weightman, 1994) as it is rather time consuming and its credibility depends on the trust involved.

Many competency models offer some sort of self-assessment (Weightman, 1994). This can take the form of simple questions or the writing of a log book of activities which demonstrate certain competencies. The advantages of self-assessment are that it emphasises self-development by placing responsibility on the individual and their understanding of their work (Weightman, 1994). It is also economical with regard to time and effort (Weightman, 1994). However, the major drawback of self-assessment is its liability to being very subjective. Some individuals will judge themselves more harshly than others. Therefore, it might be necessary to include some form of external validation in the assessment.

Organisations also use specialist staff in personnel or training, or external experts, to assess the competencies of individuals, e.g. in an assessment centre context.

3.4.1 Assessment of competencies in the career development context

The techniques most commonly used to assess competencies in career development include career review interviews, promotion centres and career development

workshops (Craig, 1992). Career review interviews are very similar in structure and process to appraisal meetings. They often involve subordinate and supervisor discussing and evaluating competencies and the results of present or past performance. However, they run the risk of neglecting the competencies that are important for an aspired future position. In addition, they depend on trust from both parties, as well as commitment to development. Promotion centres or assessment centres for promotion are frequently used, highly formalised processes. They involve the observation of performance using multiple assessors and multiple techniques. Career development workshops are one of the most frequently used techniques to assess competencies. They apply similar methods than development centres, but designed for specific use in career development. Unlike assessment centres, career workshops actively engage participants in designing their own career development action plans, either with their supervisors, or with a group of other participants. Therefore, they are a valuable method of support for individual career management.

3.5 Developing and maintaining competencies

Competencies are generally used to establish individual training and development requirements (Weightman, 1994). To support the precise tailoring of processes and interventions to individual needs, careful use and assessment of competencies is expected.

Briscoe and Hall (1999) suggest a continuous learning approach to competency development. They emphasise four important points to help executives “learn how to learn” (p. 48), which can be generalised to other target groups. They state that to develop competency, it is necessary to:

1. Become aware of the ongoing need for new competencies in rapidly changing environments.
2. Know how to develop these new competencies.
3. Where appropriate, transfer that learning and associated competencies (via responsive HR systems), to other individuals in the organisation.
4. Institutionalise learning wherever possible in organisational culture and systems, to increase organisational learning and adaptability.

The use of competencies usually makes individuals consciously aware of their own behaviour. By pointing out the differences between their own and “successful”

behaviour, it provides a good starting point for development activities (Moloney, 2000).

However, "...People will only produce competent action in a situation if they know how to and if they value the consequences of the expected outcomes of the action (Krampen, 1988, in Woodruffe, 1992, p. 17). On the one hand, this emphasises the importance of processes that advance skill development i.e. training and development methods. These can include acting up, i.e. doing a more senior job temporarily, coaching, job rotation, distance learning etc. On the other hand, it stresses the relevance of motivation. It is imperative to communicate why the competencies are important, so that individuals relate to them and engage in them when back in the workplace. Organisations can support this by providing an environment that encourages learning and the application of the required competencies.

Mirabile (1998) sees one fundamental problem with taking a behavioural perspective on competencies and judging an individual's development on their performance against behavioural indicators. That is, changing what someone does, does not fundamentally change who they are. For instance, teaching an introverted person to network may not necessarily result in them displaying this behaviour, or if they do display this behaviour, they may not feel comfortable doing so (Mirabile, 1998). However, Moloney (2000) argues that it may not be necessary to produce a change in personality. Instead, it may be more important to help individuals to realise the boundaries of their personality and to find the behaviour they feel most comfortable with. Organisations can support this process through offering interventions such as coaching.

3.6 Criticisms of the use of competencies

The positive effects of the use of competencies have already been mentioned above, e.g. enhancement of individual and organisational performance, alignment and improvement of HR processes etc. This list of advantages, however, is countered by a number of disadvantages. A report produced by the CIPD (2001) describes potential problems with the use of competencies.

Of key concern was the language and terminology used. In the guidelines for the development of effective competencies, it is stated that they should be clear and jargon-free. However, this criterion is not always met. Rankin (2001, in CIPD, 2001) reports that competencies are often vague and overlap with other competencies, causing difficulties in understanding and assessment. In some cases, this problem was caused by the lack of precision in the use of the term competency (Mansfield, 1999). Insufficient differentiation can create situations where competencies are effectively personality traits. This, subsequently, leads to problems with assessment and use of the framework and raises concerns regarding equal opportunities.

Related to this, Cheung-Judge (2000, in CIPD, 2001) draws attention to the problem of cloning. He states that developing a competency framework as an image of existing employees carries the risk of recruiting further similar people, thereby impeding the promotion of a diverse workforce. Individuals may bring unexpected competencies to work that may stimulate unplanned but desirable developments (Arthur et al., 1999). If competencies are used in a rigid and restrictive manner, they could become a mechanism for controlling and constraining potential (Kandola, 1996).

Briscoe and Hall (1999) argue that competency models are often too complex and can get caught up in overly detailed competency definitions. Many frameworks over-generalise. This can result in operationally-defined competency dimensions not being equally as useful for all jobs in all parts of an organisation (Shippmann et al., 2000). Shippmann et al. argue that competency models need to allow for flexibility, for individuals to “drill down to a level of detail required to support certain applications and to spiral up to a broader or more generic set of descriptors to drive other applications where the additional detail is unnecessary or a distraction” (p. 735). However, there needs to be a balance. Focusing only on broad and general competencies leaves a large number of factors related to individual job success unaccounted for.

Another issue that has been raised is that many competencies are backward-looking (Kandola, 1996). Using current good performers as standards, competencies are at risk of overlooking future-orientated topics such as learning new skills and adapting to new environments, etc.

Conducting competency assessment has also been cited as an area of difficulty (CIPD, 2001). Issues included ambiguity of the competencies and problems with regard to assessment methods, as mentioned above.

Furthermore, there are problems getting employees to understand the concept of competencies. Using inappropriate or difficult language contributes to this issue which is further aggravated by lack of communication and training. Neglecting to brief employees and supervisors, not keeping them informed and not familiarising them with the framework may result in lack of involvement and commitment.

When using competencies, Whiddett and Hollyforde (2003) stress that it is important to keep them in the background of the application. It is the application that is important and competencies simply help to make the application effective by providing a framework. The authors point out that this advice is often disregarded, causing growing criticism on the use of competency frameworks.

A high percentage of employers reported difficulty with keeping their competencies up to date, with frameworks sometimes losing their relevance for the organisation (CIPD, 2001).

Summary

The above sections introduced the concept of competency. They stressed the importance of a clear and unambiguous definition of the term and the importance of differentiating it from competence and personality. Furthermore, the composition and development of competency frameworks were discussed, demonstrating the importance of a structured approach and presenting guidelines for the design of effective frameworks. Competencies are used as the basis for various HR processes, including career development. However, lack of research on the effective combination of the two concepts makes it difficult to assess the value that competencies can bring to the career development context. Finally, even though competencies present a valuable model, adding value to HR processes, there exist a range of problems and potential pitfalls with regard to their use.

3.7 Career competencies

Organisations tend to emphasise performance-related and job-related issues in their career-related processes, as shown in the sections above. This tendency is reinforced by using competencies that focus on performance at work as a basis for career development processes. Also, competencies are generally developed and defined according to the organisation's objectives.

This tendency has been criticised, especially in light of movement towards a more individual-centred perspective on career. Only paying attention to issues centred on job performance is unlikely to sufficiently support individuals in the management of their careers. Considering other competencies, as well as the wider life areas in which these competencies develop, can create valuable new possibilities, not only for career actors, but also for employers (Arthur et al., 1999). This is where the concept of career competencies comes into play.

3.7.1 Self-efficacy and career competencies

In the early 1980s, Hackett and colleagues (e.g. Hackett, Betz & Doty, 1985) conducted research focusing on the importance of self-efficacy for the conceptualisation, understanding and modification of career development, especially women's career development. They built on Bandura's (1977 in Hackett et al., 1985) argument that behaviour and behaviour change are primarily initiated by expectations of personal efficacy. These efficacy expectations determine not only whether or not the behaviour will be initiated, but also how much effort will be expended and how long the behaviour will be sustained. Hackett et al. (1985) argue that efficacy expectations are developed through experience and that many career-related problems faced by women are due to low or weak self-efficacy expectations. To enable assessment of self-efficacy with regard to career development, the authors sought to produce a taxonomy of behaviours and skills important to professional women's careers. They called these behaviours and skills career competencies. The taxonomy was based on a literature review and semi-structured critical-incident interviews with 50 female faculty members. It contained eight major categories of career-related competencies: communication skills, interpersonal skills, political skills, organisational skills, general-career planning and management skills, career-advancement skills, job-specific skills and adaptive cognitive strategies. Each category was further divided into two or more sub-categories.

However, there are problems with this taxonomy. First, the authors do not provide a clear definition of what they understand career competencies to be, nor which competency approach they have based their research on. Second, the taxonomy has been developed on the basis of interviews with 50 women working in academic capacities at the same university. The restricted range of this sample restricts the generalisability of the findings, especially since there are no studies replicating the taxonomy using more representative samples. Third, the taxonomy was specifically developed to describe competencies important to women's careers. Although many of the skills and behaviours may be applicable to men, half of the categories contained competencies that were directly related to women, e.g. promoting women and handling sexist behaviour. No effort was made to guarantee the representativeness of the items in each category. Furthermore, the research interviews focused on a dependent variable of career success which was derived rationally. In other words, no objective validation of the taxonomy was presented. This may be due to the fact that, as yet, no operationalisation of the whole taxonomy has been developed.

Overall, it must be acknowledged that Hackett et al. (1985) realised the importance of career competencies for women's careers. Their focus on self-efficacy is relevant to the present study. Also relevant is their argument that the belief that one can successfully perform a given behaviour is essential for the initiation of that behaviour. However, Hackett et al. (1985) did not focus on introducing the concept of career competencies but to develop a self-efficacy approach to women's career development. This is reflected in the methodological approach they chose and in that no clear definition or operationalisation of the taxonomy has been provided.

Another approach that focused on the competencies relevant for career development is the intelligent career model.

3.7.2 The Intelligent Career Model

Quinn (1992) introduced the paradigm of the "intelligent enterprise", a concept fundamentally grounded in the retreat from old ideas about vertical coordination. Instead of focusing on the management of physical assets, Quinn emphasises the development and deployment of intellectual resources, i.e. the talents of the organisation's people. Similar to Prahalad and Hamel (1990), Quinn argues that a company's success stems from its core competencies, which are a reflection of its internal culture (shared values and beliefs), its overall know-how (accumulation of

performance capabilities embodied in employees' skills, knowledge and expertise) and its business networks (relationships with customers, suppliers etc.).

Arthur, Claman and DeFillipi (1995) analysed the impact of this new paradigm on work and careers. As a result, they introduced the idea of the 'intelligent career', complementing Quinn's intelligent enterprise. Intelligent career can be defined as "any sequence of work roles undertaken at the worker's own discretion, and with personal goals in mind" (Arthur, Amundson & Parker, 2002, p. 2). Intelligent career builds on the concept of the boundaryless career, while also relating to the protean career and careers as repositories of knowledge. Arthur and colleagues investigated how individuals can contribute to the competencies of their organisation and concluded that each arena of organisational competency suggests a matching arena of individual competency (DeFillippi & Arthur, 1994).

Arthur et al. (1999) define career competencies as personal competencies that are put at the disposal of the employing organisation, but whose benefits often outlast the employment relationship. They are seen as assets or accumulations of knowledge that are developed over time and facilitate successful career management (DeFillippi & Arthur, 1994). Career competencies go far beyond the technical skills and managerial abilities on which company development programs tend to focus. They reflect individuals' interpretations of their career situation and are subject to constant change, in line with changing circumstances (Amundson, Arthur & Parker, 2002).

The intelligent career framework introduces three career competencies as areas of knowing: knowing-why, knowing-how and knowing-whom. Knowing-why relates to a person's identification with the culture of the employing organisation (Arthur et al., 1995) and stems from their values, interests and beliefs (DeFillippi & Arthur, 1994). It embodies the factors that influence a person's overall commitment and adaptability to the employment situation, such as career motivation, personal meaning, and sense of purpose. It also incorporates accommodation of family and other non-work factors. Knowing-how refers to the expertise and abilities that a person brings to an organisation's know-how. It reflects career-related skills and job-related knowledge and is based on occupational learning and the accumulation of experience. Knowing-whom refers to the individual's contribution to organisational communication (Norhiah, 1992, in DeFillippi & Arthur, 1994). It describes the social contacts, relationships, reputation and attachments that are established within as

well as outside of the organisation while in pursuit of a career (Inkson & Arthur, 2001).

3.7.2.1 Interrelationship of the three areas of knowing

It is fundamental to the intelligent career model that the three areas of knowing are not independent, but interdependent (Parker & Arthur, 2002). Amundson et al. (2002) propose that an unbalanced development of the three areas is likely to result in unsatisfactory career development. They support their case with an example of employees at a bank, who possessed valuable job-skills (knowing-how) and enjoyed their work (knowing-why), but were not given much opportunity to network (knowing-whom), which limited their effectiveness and career prospects.

Research into the factors that influence career success support the assumption of interdependence. For instance, Colarelli and Bishop (1990, in Day & Allen, 2004) looked at personal and situational correlates of career commitment, a variable that according to the above definition represents knowing-why career competency. They found that having a mentor, which relates to knowing-whom, was the most robust correlate, increasing career commitment by three means. Day and Allen (2004) showed that mentorship was also related to career motivation, which is another measure for knowing-why - protégés reported more career motivation than did non-protégés. A mentoring relationship provides individuals with information about their role, thus feeding into their knowledge of how to behave in their job.

3.7.2.2 The re-labelling of the term career competencies

The intelligent career framework was “derived from a branch of strategic enquiry concerned with the competency-based view of the firm rather than from existing career or human resource management literature.” (DeFilippi & Arthur, 1994, p. 310). The developers of the model do not define the term ‘competency’. They simply adopt Quinn’s (1992) paradigm of organisational competencies and apply it to the individual level, without clarifying exactly what career competencies are. This absence of a definition has been indirectly addressed through a re-labelling of the term. While earlier literature on the intelligent career model made frequent use of the term ‘career competencies’ (e.g. Arthur et al., 1999; DeFilippi & Arthur, 1994), more recent publications abandon the term and instead refer to the three arenas of knowing as ‘career investments’ (Inkson & Arthur, 2001; Parker, Arthur & Inkson, 2004). Career investments have been defined as the time, energy, skills and

relationships that each individual brings to their job and to their employer (Inkson & Arthur, 2001).

3.7.2.3 The Intelligent Career Card Sort

In order to gather data about the subjective side of individuals' careers, Arthur et al. (2002) translated the intelligent career model into a card sort.

As their first step in the development of the card sort, the developers collected evidence of the population's career concerns through case studies and focus groups. Then, they categorised the information into the three career competency areas. They presented it to 95 individuals, attempting to clarify the factor structure using orthogonal factor analysis. However, entering all 87 prospective items into the factor analysis at the same time provided only limited support for the three dimensions.

With traditional factor analysis failing to support the three-fold structure, Parker and Arthur (2002) resolved to investigate each of the three areas of knowing separately. Factor analysis of the items representing knowing-why generated the following twelve factors: societal, innovation, challenge, flexibility, family, supportive work atmosphere, stability, security, approval, personal ambition, influence/environment and influence/others. For the knowing-whom career competency the following factors emerged: learning through feedback, gaining support, mentoring, company specific relationships, external relationships, support/potential, work relationships, suppliers, internal support and working in teams. Factor analysis of the knowing-how items revealed the following factors: skills and knowledge, distinctive skills, learning, working with others, projects, leadership, coaching, developing new knowledge, strategic thinking and job situations. The results demonstrate that each area of knowing in the intelligent career model covers an array of aspects, ranging from personality-related items such as stability, to behaviours such as working with others.

Using this information, the first version of the Intelligent Career Card Sort (ICCS) (Parker & Arthur, 2002) was developed. Since then, it has been refined, incorporating information from additional research and results from practical experiences (Arthur et al., 2002).

The aim of the ICCS is to help individuals explore their own career situation and to make sense of the parallel career investments they make (Arthur et al., 2002). The ICCS consists of three stacks of cards, representing the three areas of knowing,

using descriptions such as “I enjoy being a member of a high performing team” (knowing-why), “I seek to become a better leader” (knowing-how) and “I work with people from whom I can learn” (knowing-whom). Individuals are asked to look through each stack and to select the seven cards in every area of knowing that best describe their current career situation. They are then instructed to re-sort the seven cards in order of importance. The card sort can be completed in an individual or group context. It is a fundamental principle of the card sort that every person interprets the cards in their own way. One consequence of this is that choices cannot be directly compared. Moreover, the ambiguous formulation of the items and the resulting subjectivity of the selection make an in-depth exploration of individuals’ choices necessary. This exploration forms the basis for recommendations on practical interventions and change.

The ICCS is currently being used in various contexts, e.g. with adults in organisations, with teenagers etc. However, its lack of psychometric properties and the dearth of evaluative studies analysing its impact must be critically noted.

3.8 A new approach to career competencies

It has been shown that career competency, as coined by DeFillipi and Arthur (1994), includes both personality-related and behaviour-related items. While it is generally acknowledged that the development and application of competencies is influenced by dispositional factors, it has also been argued that if competencies are to be effective and of value, they need to be clearly defined and distinguished from personality. The same applies to career competencies. However, the prevalence of dispositional traits in DeFillipi and Arthur’s (1994) definition of career competency does not comply with these requirements.

This study suggests a re-conceptualisation of the term career competency. Career competencies are underpinned by the traditional idea of competencies, as behaviours instrumental in the delivery of desired results or outcomes (Bartram et al., 2002). Knowledge is considered to be an important outcome of career competencies, emphasising career as a process of continuous learning. According to Sveiby (1996, in Truch et al., 2004), “knowledge is an activity which would be better described as a process of knowing” (p. 132). Therefore, the inclusion of

knowledge conforms with requirements for an effective competency definition. Career competencies are here defined as behavioural repertoires and knowledge that are instrumental in delivering desired career-related outcomes. They are learned capabilities that result in effective performance in individual career management. It must be emphasised that career competencies do not focus on personality, i.e. they do not include characteristics such as motives, traits and aspects of one's self-image, nor designate individuals' potential to become skilled at career management. Rather, they focus on how much potential a person actually realises, describing existing behaviours and knowledge. Career competencies translate given dispositions into career capabilities, depending on an individual's exposure to important environmental experiences, learning situations or practices.

The definition of career competencies in this study has an important impact on the three areas of career competency. Knowing-why career competencies refer to behaviours and knowledge that contribute to the development of realistic career expectations and why a person is pursuing a certain career. Knowing-how competencies describe job-related and career-related skills and knowledge. Knowing-whom competencies refer to behaviours that support the establishment of networks and social contacts and development of a reputation inside and outside the organisation. These definitions differ from Arthur and colleagues' understanding of the terms. For instance, they see knowing-whom as investments in relationships, rather than the skills to promote these relationships. The intelligent career model places skills under knowing-how, whereas interpersonal relationships are placed under knowing-whom. However, when following the definition of career competencies in this study, it is essential to look at the ways these investments into relationships can be achieved by considering the skills, activities and knowledge involved.

This study also adopts the idea of interdependency between career competencies and the importance of developing all three areas of knowing, as suggested by the intelligent career model (DeFillippi & Arthur, 1994). If an individual is about equal in all career competency areas but one, the deficiency in that one area may highlight a specific problem. Therefore, to support individuals in managing their careers, it is important to assess competency in all three areas. Conversely, it is acknowledged that a deficiency in one area may be compensated for through proficiency in another.

This study suggests that individuals only develop and display career competencies if they have a positive attitude towards them, value their consequences and believe they are instrumental in achieving their career goals. This suggestion is based on the influence of motivation on the development and application of competencies, as described in Chapter 2. Furthermore, in line with Bandura's (1977, in Hackett et al., 1985) self-efficacy theory, it is argued that individuals only initiate career competencies when they believe that they can successfully perform them. In addition, it is expected that certain career competencies will be more important than others at different points in an individual's career. For instance, after a job change, the development of relevant skills (knowing-how) and getting to know the organisation (knowing-whom) may be more important than reflection on career goals. However, when a career change is considered, a re-evaluation of career goals may be more important.

Since career is defined as an ever-evolving process, career competencies are also expected to change over time. Career competencies may develop in quantity and quality. Individuals are expected to develop their behavioural repertoires and accumulate knowledge which helps them to achieve desired career-related outcomes. For instance, an individual may develop certain strategies for establishing relationships over the years. These learned abilities may make the individual more effective in establishing networks and result in the individual engaging in those behaviours more frequently.

Overall, career competencies aim to provide a general taxonomy of the behaviours which are important for the achievement of desired career outcomes. This framework does not claim to be exhaustive, since specific career behaviours and particular career options are boundless in their number and variety. However, career competencies are thought to cover the most important areas and to be applicable to most careers.

3.8.1 Comparison to other concepts

It is enlightening to compare career competencies to other concepts, such as competencies in general, career strategies and meta-competencies.

3.8.1.1 Career competencies and competencies in general

Contrary to the definition of competency in organisations as a "set of behaviour patterns that the incumbent needs to bring to a position in order to perform its tasks

and functions with competence” (Bartram et al., 2002), career competencies are not directly related to the job, but to the whole career. Thus, career competencies span a much longer time frame than just a single position. By taking a holistic approach, career competencies allow a more complex conceptualisation of competencies (Arthur et al., 1999), permitting the integration of diverse strings of research. Furthermore, they are not limited to considering job-related abilities, but also address issues such as the importance of knowing yourself and your goals.

3.8.1.2 Career competencies and career strategies

The career competency model is very similar to the career self-management strategies mentioned earlier, in that it focuses on activities and processes related to career development. However, career competencies extend further and provide a much more holistic perspective, by including aspects that are not represented in career strategy approaches, such as self-awareness and knowledge of strengths and weaknesses. This shortcoming on the part of career strategies is illustrated by the fact that all seven career strategies, as presented by Gould and Penley (1984), can be conceptually subsumed by only two areas of career competency, namely knowing-how and knowing-whom. The inclusion of knowing-why in the career competency model is essential, and the importance of knowing-why related issues for career development was emphasised by, for instance, Kidd & Killeen (1992).

3.8.1.3 Career competencies and meta-competencies

The concept of career competencies emphasises the importance of continuous self-guided learning and long-term development. In this it is similar to meta-competencies. However, the concepts differ in focus and level of operation. While meta-competencies focus on the ability to judge the availability, application and learnability of personal competencies, career competencies focus on the knowledge, skills and behaviours necessary for effective career self-management. Meta-competencies generally present higher-order skills and knowledge, while career competencies operate on a lower-order level and are specifically defined for the career context.

Summary

This chapter introduced the intelligent career model and provided a case for a re-conceptualisation of the term ‘career competency’. A distinct definition of career competency was developed and contrasted with other similar concepts.

Chapter 4

Organisational Context

“A career in the police service should be seen as an opportunity for life-long learning and professional development.”

(Blunkett, 2004, p. 88)

4.1 Introduction to the Police Organisation

This research project was partly funded by a small UK police force. They were seeking advice on improving career management processes, to support individuals, and to promote proactive individual career development. This specific organisational context informed the formulation of the research questions and provided the setting for the practical application of this research project.

This chapter describes the organisational background. It provides a general introduction to the police organisation, with special focus on career-related issues. Furthermore, it looks at the use of competencies in the police force with regard to career management. The chapter concludes by highlighting the problems and limitations of present practices, showing what impact these had on identifying the research objectives of this study.

4.1.1 The Police Force and new career realities

As described earlier, contemporary developments such as globalisation and technological advances have had a dramatic impact on the world of work, changing the structure of organisations, as well as the way they function.

The police force is one of the organisations affected by these changes. In 2004, there were nearly 140,000 police officers in the 43 police forces in England and Wales, more than ever before (Blunkett, 2004). The Government is committed to maintaining this record number of officers.

The world in which the police service operates has changed considerably, resulting in more complex police functions: "Technology has removed borders and barriers; changes in society have opened up new opportunities and challenges; increasing investment in public services and a growing consumer culture has led to rising expectations of customer service." (Blunkett, 2004, p.6).

The police forces expressed themselves as prepared and willing to take on these changes, and to meet the new challenges laid out in the White Paper 'Building Communities, Beating Crime: A better police service for the 21st Century', published in 2004. The document sets out the direction for a reform programme to deliver community policing, and to face the new challenges of changing criminality. It is part of a range of organisational changes that the police force has undergone since the beginning of the 21st century. With the overall aim of reducing public fear of crime

and building public confidence, the police reform programme was introduced, along with reforms to the criminal justice system. One important point on the reform agenda is the cultural change towards a more dynamic and modern workforce, looking at issues such as leadership, powers and career development. The Home Office states that people are the most significant asset in policing, and that providing staff with opportunities for learning throughout their careers should be seen as an investment (Blunkett, 2004). As a result, the forces made it their aim to “foster and build a culture of learning and self-improvement within the police service” (p. 9), by creating and implementing “improved learning and development programmes for everyone in the service” (p. 79).

4.2 Career development in the Police

Unlike most other organisations and professions, all police recruits in the UK are required to begin their career at the same level, at the bottom of the organisation (Wright, 1986b). Once selected into the force, recruits must go through a two year training programme as probationary or student officers, before starting their career as a Police Constable (PC). Such a long period of training is necessary, because the skill set required for police work is very specific. Police officers work under immense pressure, and perform duties that are physically demanding and dangerous (Davies, 1981, in Kakabadse, 1984). Consequently, learning the ropes is especially important (McGinnis, 1987).

A new approach to the training of police recruits, the Initial Police Learning and Development Programme (IPLDP), has been introduced in 2005. The programme is designed to support student officers throughout their two-year probationary period, addressing individual development needs, whilst working towards organisational objectives. The overall aim of the IPLDP is to provide new recruits to the police service with the most effective learning and development, and to support cultural change in line with police reforms.

After the introductory period, individuals become PCs. PC is the key rank in the police force, with just over three-quarters of police officers in England and Wales working in this rank, and most officers remaining in the post of PC throughout their service (Blunkett, 2004).

From there, officers have four broadly defined choices with regard to career development (Dantzker, 2000, in Whetstone, 2001). These include patrol, management, specialisation, and moving to another agency. Some of these areas offer a range of additional internal choices. However, in general, none of these decisions are permanent, and moving from one job to another hones skills and fosters career development.

Patrol

Police patrolling is geared towards providing public reassurance. Patrol, one of the main duties of most PCs, is the overt presence, whether on foot or mobile, of a locally accountable police officer.

Management

Patrol, i.e. day-to-day policing of the streets, specialisation, and joining of other agencies does not necessarily involve movement up the ranks. However, going into management is directly connected with moving up the hierarchical ladder.

Police forces are characterised by a narrow rank structure (McGinnis, 1985). Officers can seek advancement up the hierarchical ladder into the ranks of Sergeant, Inspector, Chief Inspector, Superintendent, and then the upper echelons of Chief Superintendent, Assistant Chief Constable, Deputy Chief Constable, and Chief Constable. The higher up the pyramid to each successive rank officers get, the more they have to compete for relatively fewer jobs. This very structured system only allows a fraction of employees to attain upward mobility. On average, the first promotion is gained after nine years in the service (Gaston & Alexander, 1997).

In order to get promoted from PC to Sergeant and from Sergeant to Inspector, officers have to pass an Objective Structured Performance Related Examination (OSPRES). OSPRES is a national process that consists of two parts, a multiple choice examination testing knowledge of the law and an assessment centre. After this successful candidates are often required to attend an internal promotion board within their force in order to achieve promotion. From rank of Inspector upwards, interview, backed by an appraisal report completed by a superior officer, is the formal process to assess candidates' suitability for promotion.

Breaking through the Sergeant and Inspector barriers has been described by officers as quite an achievement. This is because a lot depends on examination experience

and performance (Kakabadse, 1984), while promotion thereafter depends more on job-related performance. In a survey study of 178 middle ranking police officers, Kakabadse (1984) found that apart from having sound professional training, the following issues were perceived as of paramount importance for development as a senior officer: knowing how to work effectively with a wide variety of people, knowing whom to know and how to influence them, having early overall responsibility for important tasks, understanding the political side of life in the organisation, willingness to take risks and breadth of experience. The processes that helped middle ranking officers to develop can be summarised in three categories: making oneself visible and known in the organisation, making the most of opportunities offered and personal characteristics. In addition, officers appreciated other officers acting as role models early in their career (Kakabadse, 1984).

Moving into specialist roles

There is an increasing trend in police forces to put more emphasis on lateral movement into specialised roles. These posts are available to police officers after successful completion of the probationary period. Officers can, for instance, apply for specialist roles in areas such as dog handling, fire arms or the Criminal Investigation Department (CID).

Moving to another agency

As has been pointed out above, it is not easy for police officers to move into other organisations. However, there are some opportunities available. Officers can, for instance, go on secondments or change permanently to agencies such as councils, other police forces, the Home Office or other Government Departments.

Promotional opportunities in police organisations are not only limited by the narrow rank structure but also by the low attrition rate. Police officers usually have a long career, spanning 20 to 35 years (McGinnis, 1987). Various factors are responsible for this. As mentioned above, the skill set acquired in police work is very specific, and therefore not easily transferable to most civilian occupations. "Policing is commonly viewed as an occupation providing the practitioner with an 'adventure' that allows the broadening of his or her life experiences and participation in an area few others will have the chance to experience" (Meagher & Yentes, 1986, p. 321). As a result, entry from outside the sector tends to be very rare (Williams & Matthewman, 1999). To fill positions, officers are either recruited from within the same force or from other forces and even the latter is not a frequent occurrence (Kakabadse,

1984). Job rotation within the same police authority is more common than mobility from authority to authority (Kakabadse, 1984).

As a result, contrary to other professions, career progression into other organisations is not a given for police officers. This typically gives officers good job security and the option of 'a job for life'. Furthermore, the maximum pension in the police will be received after 30 years of service, providing an additional encouragement for officers to stay with the organisation (Blunkett, 2004). Consequently, the police service has been described as a 'closed' career system. Specialist and professional experience gained within the system is valued but most of it cannot be obtained outside the organisation (Williams & Matthewman, 1999).

The roles of police officers are continually changing. The government has asked police forces to progress towards a more integrated model of staffing. This maximises the potential which police staff can achieve, by releasing police officers for front line duties. In other words, more police staff roles will be introduced, to free up police officers for frontline policing duties. This will have an impact on the breadth of opportunities available to police officers in the organisation.

In many respects, the police force does not correspond to the concept of the boundaryless career (DeFillippi & Arthur, 1994). Frequent job changes between organisations are not necessary and moreover, difficult to obtain. Apart from this, police officers apparently experience social isolation in their non-working relationships with members of the public, which is a particular source of strain and frustration (Davies, 1981, in Kakabadse, 1984). Kakabadse (1984) found that stable family life is highly valued by police officers. His study showed that having family support was positively correlated with various issues around the perceived trustworthiness and capability of police officers, such as "having an ability to work with a wide variety of people".

4.3 The importance of job satisfaction

In such an enclosed system, it is essential to maintain a stable workforce with a positive outlook (McElroy & Wardlow, 1999). Hoath et al. (1998) conducted research on job satisfaction in the police force and gave several reasons why it would be of utmost relevance to police forces. First, negative job satisfaction may affect job

performance, which can have detrimental effects, given the important role the police service plays in society. Second, negative police attitudes may adversely affect the public's perception of the service, which in turn may undermine police-community relations. Third, the authors state that police forces have a moral obligation to care for their employees, and to promote positive work-related attitudes. Fourth, job satisfaction is associated with lower levels of stress. "Happier workers produce more, use less sick leave, have fewer accidents, and less turnover" (More & Unsinger, 1987, p. 89). Research consistently shows that job satisfaction declines after police officers finish their training (e.g. Hoath et al., 1998). Hoath et al. analysed the relationship between job satisfaction and position tenure, organisation tenure, rank and age, in 239 police officers. They found that job satisfaction was associated with low position tenure and suggest that this decline was due to officers having to cope with the difficult realities of police work.

Other studies found that officers remained satisfied with their jobs, as long as they felt that their qualifications and prospects for promotion remained high (Dantzker, 1998, in Whetstone, 2001). Career orientations and career aspirations of police officers have also been shown to be linked with job satisfaction (e.g. Buckley & Petrunik, 1995; Burke, 1989; Burke & Deszca, 1987).

Cherniss (1980) used the term career orientation to describe individuals' needs, values and aspirations and distinguished between four orientations: self-investors, who are more involved in their private than work lives, social activists, who hope to bring about social and institutional change, careerists, who seek conventional success through prestige, recognition, etc. and artisans, who value growth and the mastery of new skills. Using this framework, Burke and Deszca (1987) found that career orientations changed over time and that most police officers who changed their career orientation reported lower levels of job satisfaction and psychological well-being than officers with stable career orientations. This not only indicates that career development is an ongoing process experienced by all officers at all levels but also that individuals undergoing transformations in their self-concepts and values must be supported or these changes will lead to greater organisational and individual distress (Burke & Deszca, 1987)

The organisational structure creates special demands for human resource processes. The narrow rank structure and lengthy careers of police officers can cause potential problems with regard to vertical and lateral career development

(McGinnis, 1985). Retaining officers and keeping them satisfied is complicated when promotional opportunities are rather static (Whetstone, 2001). Career management is of enormous relevance, because it has been shown to be linked to increased job satisfaction (Craig, 1992). As Kaye (1982, in Whetstone, 2001) points out, it is possible for employers to increase employee satisfaction by providing alternative personal and career goals. Career management is also of particular importance because it enables the organisation to promote skilled people into key positions, an area where the police presently encounter difficulties.

4.4 Career management in the Police

Bland, Mundy, Russel and Tuffin (1999) analysed the career profiles of 990 officers and found that the majority were either happy or fairly happy with their careers. This proved to be the case even if the officers' career expectations upon joining the force had not been met. The authors offered two explanations for this. First, they pointed out that many individuals would only become aware of the full range of employment opportunities offered by the police service after they joined the force. Second, they argued that career aspirations for rank only tend to manifest themselves after officers have achieved their first promotion.

While officers in general were happy with their careers, dissatisfaction with career management in the organisation was found amongst all rank groups (Bland et al., 1999). Most concerns were expressed around quality. There was a perceived lack of consistency in line management, the standard of performance appraisals and its role in selection decisions. Furthermore, there was a perceived unfairness regarding selection into special posts and appointments for promotion.

To date, no systematic approach to police officers' career progression or their access to specialism is available. Even though officers are frequently moved from one job to another, often no particular career development plans exist (Kakabadse, 1984). As a consequence, officers can be described as 'plastic men' (More & Unsinger, 1987). To plastic men, career is a loosely joined string of opportunities which they take advantage of. There are no strong underlying principles at work with respect to how these individuals developed their careers. Instead, they take a reactive approach, go with the flow, take on each new assignment willingly and achieve within the limits of the opportunities that presented themselves (More & Unsinger, 1987).

The majority of career management interventions in the police are aimed at particular groups of individuals, namely new recruits, probationers and senior managers (Blunkett, 2004). They include, for instance, the aforementioned IPLDP for probationer officers. Apart from this, there is a range of leadership initiatives available, such as the high potential development scheme (HPDS). This scheme selects individuals with high potential and gives them the opportunity of guided and supported progress to the rank of Superintendent, as long as they demonstrate consistently that they perform and develop themselves. The main emphasis of the HPDS is on self-development, individuals are expected to use their own efforts, initiative and commitment to advance their careers.

Development beyond this is largely restricted to preparation for promotion through the rank system. This reflects the fact that within police forces rank is still seen as the main source of power, status and prestige (McGinnis, 1987). "Formal and informal recognition, financial rewards, and increased responsibility come almost exclusively with promotion" (Whetstone, 2001, p. 150).

However, using career development as a synonym for accelerated promotion has created problems in the past (Wright, 1986a). One of the concerns expressed by the Police Federation was that officers with potential were not progressing quickly enough through the ranks. Analysing the situation, it became clear "that career development did not, and could not, equate solely with upward progression through the ranks" (Wright, 1986a, p. 24). Instead, Wright emphasises that career development must be concerned with the development and motivation of all police officers, also focusing on lateral movements.

In addition, under the present system, officers who are content with their current station are often devalued for not seeking upward mobility (Whetstone, 2001). Whetstone points out that organisations must recognise that promotional processes can produce adverse effects. There will always be employees who do not desire or are not equipped to compete for promotion. For many employees, financial rewards, which are often offered as incentive, are not the most important consideration (Whetstone, 2001). He further suggests that the traditional approach of linking an automatic pay raise to promotion may not be sufficient to stimulate officers' interest in upward mobility. He warns that proceeding in this way may create a culture where those who do not gain promotion feel like failures.

4.4.1 Police culture and career

The issues that individuals face throughout their careers are hugely influenced by the organisational culture, i.e. the variance in normative behaviour, accepted practices, ethics and ideals (More & Unsinger, 1987), they work in. The police have a unique culture, with singular operating procedures and internal values. Some characteristics of this organisational culture are conservatism, pragmatism and group solidarity (Bowling, 1998, in Bland et al., 1999). Police officers work in a bureaucratic organisation that is strictly hierarchical, creating rigid relationships between leaders and those being led (More & Unsinger, 1987). These attitudes, norms and philosophies, as well as the patterns of behaviours commonly found in the police service, strongly influence career orientation. This, over time, is linked to career satisfaction (Buckley & Petrunik, 1995).

The police is still a male-dominated organisation (Dick & Hyde, 2006). Even though equal opportunity policy statements are in place in some form in all forces, research shows that women and ethnic minority officers face additional pressures. These pressures result in them suffering from disadvantages with regard to career development (Bland et al., 1999). Career-related processes tend to be deeply gendered. For instance, 'forced postings' (postings driven by the requirements of the force) work to the disadvantage of female officers, especially those with child-care responsibilities (Dick & Hyde, 2006). Furthermore, compared to white officers, ethnic minority officers experience pressures that exert a negative impact on their careers (Bland et al., 1999).

Bland et al. (1999) argue that equal opportunities often treat all officers the same, as if they were facing similar issues, even though this is not the case. Research attempting to document the existence of a prototypical police personality has been inconclusive (More & Unsinger, 1987). Whetstone (2001) stresses that career paths, rather than being focused on upward mobility, should be individualised and adapted to each officer's particular needs and interests.

4.4.2 Personal responsibility and self-management

While the structure of the organisation and the current career management processes are not in accordance with the concept of the boundaryless career, there are certain institutionalised principles in the police force that have boundaryless character. One of them is the expectation that individuals are responsible for their own career development (Dick & Hyde, 2006). This principle is reflected in the

character, as well as the availability, of career management processes. Kakabadse (1984), in his study with 178 middle ranking police officers, found that drive and ambition were important factors that contributed to police officers getting promoted. Officers stated that it was essential to look out for oneself, as results and personal goals could only be achieved through self-reliance and effective self-management. As a result, line managers tend to “see HR matters as welfare issues, best dealt with by specialists at Headquarters, but they take for granted the idea that truly committed officers will seek out their own developmental opportunities” (Kakabadse, 1984, p. 358).

Williams and Matthewman (1999) also mention the significance of self-managed learning in the police. However, Wright (1986a) points out that this approach requires planned input on personnel development that should begin as early as possible during the officer’s time in the service. He argues that officers need to receive additional training in the skills of self-management and self-development.

The importance of this kind of development has also been established by police organisations. For instance, Northamptonshire Police conducted a career development pilot scheme, after finding that highly capable officers were somehow failing the promotion boards (Whitern, 1998). The scheme was aimed at helping participating officers, all of whom had been unsuccessful at the promotion interview board, to sell themselves better in promotion situations, through an increased understanding of themselves, their skills and their abilities (Whitern, 1998). The project showed that participants sometimes had a hazy and distorted view of themselves and were uncertain about how to assess their own potential, or which career paths they wanted to follow. This highlights the problem that after their probationary period, officers are often left without much guidance on career development. In the course of the programme, participants were coached. They received feedback on their performance on several psychometric tests, including personality, ability and career interest inventories. They were also coached through mock promotion boards. The programme was a success, with almost half of the participants achieving promotion after the pilot study. As a result, career counselling services are now offered to all officers in Northamptonshire.

A study by Atkinson, Barrow and Connors (2003) also highlighted problems related to self-management skills in the police service. Atkinson et al. compared supervisors’ models of expected career advancement to probationer police officers’ models. They

showed that supervisors rated relational and specific occupational skills, e.g. conforming to cultural norms, as important for career advancement. However, probationer officers did not see the potential link between these skills and future advancement. Instead, they believed that more universal skills, such as human capital, evidenced in qualification and cognitive ability, were the most likely factors to lead to future career advancement. This difference in expectations may be important at later stages, when they influence supervisors' judgements, e.g. in the context of performance appraisals or discussions about career development. These findings highlight the need to establish some common ground between the relevant parties. It is important that individual officers know what the expectations are and how they can comply with them, especially if they are expected to self-manage their careers. Otherwise, officers may be confused by their lack of progression and may leave the organisation or become frustrated by the system (Atkinson et al., 2003).

These examples highlight the importance of the development of self-management skill. They also demonstrate the relevance of effective feedback arrangements to an integrated career development system, including input from line managers on career-related issues (Williams & Matthewman, 1999). "Unfortunately, feedback in police organizations is notoriously bad" (Beck & Wilson, 1997, p. 191). Beck and Wilson note that feedback in police organisations is minimal and primarily used for punishment purposes.

Currently, while other channels for seeking feedback are generally available, e.g. mentoring processes, feedback is mainly given and received through the Performance and Development Review (PDR) system. The PDR process aims to encourage the best possible performance from all police officers and to ensure that they achieve the required level of competence. A PDR interview should be carried out annually between officers and their supervisors. As part of the process, individuals are expected to set objectives for the forthcoming year. Supervisors are asked to ensure that individuals direct their performance towards achieving their professional objectives and enable them to do so. The PDR system is based on the Integrated Competency Framework (ICF).

4.5 The National Competency Framework

The ICF is a series of standards and guidelines aimed at improving quality and consistency of performance and behaviour in police jobs. The ICF is made up of three strands, the National Competency Framework (NCF), National Occupational Standards (NOS) and National Performance and Development Reviews (PDR).

The idea behind the development of the NCF was to make explicit what is expected of all personnel in carrying out their duties. The NCF was designed for the Police Service in Wales and England but has also been adopted by the Police Service of Northern Ireland.

After its development, the NCF was integrated with National Occupational Standards (NOS) and Performance Development Reviews. NOS specify standards of performance and enable component performance to be formally recognised. Linking the NCF with the NOS was of special importance, since it provides police officers with the possibility of recognition by the regulatory authorities. Using these standards and qualifications should make it easier for individuals to progress within or beyond the organisation.

As with most competency frameworks, the NCF focuses mainly on job performance. At its heart are rank and role profiles. These profiles consist of an activity library and a behavioural library. The activity library describes the role and focuses on what effective performance in the job looks like, i.e. it lists the things individuals need to do in order to perform effectively. Each activity is linked to the suitable NOS. On the other hand, the behavioural library describes how individuals need to behave to do their job effectively.

The NCF is currently used in recruitment, police training, selection and performance assessment in the workplace. It also serves as a self-development tool for individuals in the service.

In light of the above, there has been a call on the police service to reconsider some of their career development and promotion practices (Dick & Hyde, 2006). Gaston and Alexander (1997) suggest the establishment of career development departments that offer opportunities for informal and confidential advice to officers. However, Dick and Hyde (2006) argue that the likelihood of a wholesale adoption of a career counselling approach in the police is problematic, because of prevalent historical

modes of management that favour a 'command and control' approach. The asymmetric hierarchical relations between different ranks impede negotiation, discussion and exchange of information through reciprocal communication (Waddington, 1999, in Dick & Hyde, 2006).

Summary

Due to the specific structure and culture of the police organisation, it is essential to ensure that officers are satisfied with their jobs and their careers. Only focusing on certain groups of employees at certain times in their careers and equating career development with upward promotion, can have adverse impacts. Research also suggests that officers may lack the self-management skills necessary to take complete responsibility for their careers, as is being asked of them by the organisation.

Not only are most available career management processes aimed at certain groups of individuals, they also focus on vertical career movements. In addition, they are generally based around the NCF which, like most other competency frameworks, focuses solely on job performance. The suitability of this approach must be critically questioned (see Chapter 2). As pointed out by More and Unsinger (1987), a more individual-centred approach might be necessary, especially if the responsibility for career management is supposed to lie with the individual. Consequently, career management processes that focus on the development of these skills and that are available to all officers, have been called for.

With no specific career development plans in place, officers have been found to do what seems best for their career but without following a structured approach. This raises the question of how much potential is lost. If officers knew exactly what they wanted to do and how to develop towards their goal, officers may be more effective in their job and experience an increase in job satisfaction. Career planning and the identification of the skills required for the roles aspired to, are essential steps in career management.

During the current implementation of the competency framework within UK Police Forces, HR processes are undergoing changes. A better understanding of what factors influence successful career development and of how competencies can be utilised, are of great importance in informing these changes.

Chapter 5

Preliminary Studies

“Determining how to manage and develop today’s workforce effectively from the perspective of career development has become a critical issue at the organizational level.”

(Kim, 2005, p. 47)

5.1 Introduction to the preliminary studies

This chapter presents the results of two preliminary studies.

The first study aimed to explore the current use of competencies in career management. In particular, it sought to gain an insight into the current practices of organisations in general and police forces in particular. This was to inform the practical aspect of the study, i.e. the development of the career development intervention. The first study also aimed to provide supportive evidence for the criticism of the use of competencies in career development, and to strengthen the call for an introduction of career competencies.

The second study applied the Intelligent Career Card Sort (ICCS) to a sample of police officers. The goal of this study was to assess the suitability of the three-fold structure for the police context. It sought to establish whether police officers would appreciate the career competency model. It also attempted to highlight issues that officers felt may be missing from the card sort, with a view to informing future item generation for the conceptualisation of career competencies. In addition, the application of the ICCS aimed to provide contextual information on the issues of importance to police officers with regard to their career development.

5.2 Interviews with career development experts

5.2.1 Introduction quantitative vs. qualitative research

In respect to methods for gathering and obtaining knowledge, two epistemological research traditions can be distinguished: the positivist and interpretive approaches.

The positivist model is derived from natural science and looks at the objective external world. The observer takes an objective role and tests hypotheses under carefully controlled conditions (Coolican, 1999). This realist or determinist approach forms the underlying principle of quantitative research.

The interpretive approach, on the other hand, is concerned with how “the social world is interpreted, understood, experienced or produced” (Mason, 1996, p. 4). It holds the view that reality is socially constructed. It was developed on the basis of strong objections against over-emphasis of quantification, which were raised within the field of social science and forms the foundation of qualitative methods. To explore the meaning which people attach to situations and their social environment, qualitative research adopts flexible measures that are sensitive to the social context. It aims at producing rich, contextual and detailed data, which is then analysed and explained in a holistic form, rather than through statistical analysis (Mason, 1996).

Which approach should be preferred? The ‘qualitative-quantitative debate’ is probably the most widely discussed methodological topic in social science. Various authors questioned whether or not the two approaches can or should be so strictly separated (e.g. Mason, 1996; Silverman, 2000). Even though they involve differing strengths and weaknesses (Patton, 1990), they are not mutually exclusive. Using both approaches in the same study may strengthen the research (Silverman, 1985). One widely accepted approach in psychology is the use of qualitative methods to inform the development of subsequent quantitative analysis. This reflects the idea that qualitative researchers share a preference for inductive, hypothesis-generating research, rather than hypothesis testing (Silverman, 2000). However, it has been argued that qualitative research can contribute beyond simply preparing the ground for subsequent quantitative research (Henwood & Pidgeon, 1992).

Qualitative research does not represent a unified set of techniques, but since it originates from a range of disciplines, it includes a wide array of methods (Denzin & Lincoln, 2003). Some of these methods are designed to test theories. One example

is content analysis, which involves the reflexive analysis of documents through the categorisation of words and phrases according to their meaning (Silverman, 1993). However, some methods border both testing and generating theory. One such method is the template approach, which uses past literature to establish a preliminary coding template. The template is attached to data where possible, or created from the data where no appropriate template exists (Tesch, 1990).

The means by which qualitative material can be collected for analysis are many and include: participant or remote observation, gathering and analysis of texts and written documents, semi-structured or group interviews and reimagining of visual methods, such as analysis of motion pictures, photography, etc.

5.2.2 Objectives

The literature review revealed that previous research had widely neglected the analysis of competencies in career development. Theoretical articles and publications on competencies frequently note career development as one area of employment (e.g. Craig, 1992; CIPD, 2001). However, the specifics of combining the two concepts have hardly been investigated. Arthur et al. (1995) introduced the concept of career competencies with the intelligent career model. This model can be seen as the first conceptual and methodological approach that explicitly combines the two areas. However, the authors did not derive their model from research into competencies, nor did they provide a clear definition of the term. Instead, they adopted it from an organisational perspective. However, the term 'career competencies' has lately been replaced by terms such as career assets (Inkson & Arthur, 2001) or career investments (Parker et al., 2004). Does this retraction of the earlier term mean that competencies and career development cannot be combined?

This study was of an exploratory nature, aiming to develop ideas, while at the same time gathering facts and a description of external reality. Therefore, a qualitative approach was chosen, involving only a few quantitative elements. On the basis of an extensive literature review, a list of issues that required further information was formulated.

The objectives of this exploratory study were:

1. To establish what definition practitioners use to describe competencies, especially within the police.

2. To explore the current use of competencies in career development and the relationship of the two concepts in practice.
3. To identify the advantages and disadvantages of the use of competencies in career development, as perceived by practitioners.
4. To establish the definition of career development used by practitioners, including their perception of responsibilities, i.e. the role of the individual and the organisation.
5. To describe the current application of career development activities within organisations and their evaluation.
6. To generate a list of factors that experts believe influence successful individual career development, especially within the context of the police, to inform the subsequent item generation process. To compare this list against the career competency framework in order to identify themes which have not been covered in the model, but seem important for successful individual career development.

5.2.3 Method

5.2.3.1 Selection of the qualitative method

In order to be able to draw general conclusions from data, it is important that every respondent is asked the same questions (Oppenheim, 1992). Therefore, a questionnaire was developed, to elicit information with regard to the objectives. The majority of questions were phrased in an open-ended format, rather than a closed format (Oppenheim, 1992). This gave participants the freedom to communicate their answers with greater richness and spontaneity. An open-ended format is best supported by an interviewer probing the participants. Therefore, interviewing was chosen as the method of data collection, rather than a questionnaire approach. Compared to the latter, interviewing has the advantage of improved response rates. It also allows participants a more in-depth explanation of the purpose of the study, as well as enabling a thorough exploration of their responses (Oppenheim, 1992). From the various types of interviewing, telephone interviewing was chosen, because it allows detailed exploration of opinions and practices, while avoiding the problems of cost and travel associated with face-to-face interviews. Also, telephone interviews are generally conducted at a faster pace than face-to-face interviews (Oppenheim, 1992). However, an often-mentioned drawback of telephone interviewing is a lack of representativeness in the sample (Oppenheim, 1992). This problem would be addressed by approaching individuals from a wide range of contexts e.g. profitable and charitable organisations, consultancies that offer services in career development and competencies and all the police forces in England and Wales.

5.2.3.2 Participants and procedure

An opportunity sample of diverse individuals was selected, all working in career development, in a context where competencies are used as a basis for general HR processes. Restricting the sample to 'experts in the field' was considered appropriate, since the focus lay more on transferability than generalisability. In other words, the findings of this study were going to be applied in a context similar to the one in which they were first collected.

Thirty-three private organisations, 11 of which were consultancies, were contacted via telephone. The individuals in charge of career development were invited to participate in the project. Once personal contact had been established and the background to the study had been explained, emails were sent to individuals, including a copy of the interview guidelines. This was meant to encourage participants to familiarise themselves with the issues to be addressed in the interview, in advance of the interview. However, taking into account potential time restrictions on prospective respondents, the option of simply completing and returning the questionnaire was also offered.

In addition, with a view to the police background of this study, all 44 police forces in England and Wales were approached, to gain their input on the issues at hand. The Scottish Police Forces and the Police Service of Northern Ireland were not included in the study, because of significant differences in legislation and practices. Following the same procedure as described above, initial contact was made, explaining the background to the study. Subsequently, emails were sent to potential participants. Those respondents who felt unable to participate in a telephone interview were encouraged to complete and return the questionnaire independently.

One completed questionnaire was received from private sector organisations, three from consultancies and nine from police forces. Nine individuals from police forces were interviewed over the telephone, plus a further seven individuals in charge of career development within private sector organisations, four of whom were from consultancies. A summary of this information can be found in Table 5.1. Overall, this represents a response rate of 33% for the private sector organisations and 41% for police organisations.

Table 5.1 Demographic Information Career Development Experts

Format	Private Sector Organisation	Consultancy	Police Force
Interview	3	4	9
Questionnaire	1	3	9
Total	4	7	18

Interviews ranged from 30 minutes to an hour and a half. As mentioned above, the questionnaire contained a mixture of free response and closed questions. Its structure was especially adapted for telephone use, including prompting questions. Topics covered in the questionnaire included: the current use of competencies in career development; perceived advantages and disadvantages of such proceedings; factors perceived to be important for successful individual career development; the use of career development interventions and their evaluation. Following an approach taken by the CIPD (2003) in a study of 100 companies, interviewees were presented with a list of interventions and asked to indicate which were generally used by their organisation. Since the study overall had a particular focus police organisations, this issue was explored further with the police participants, asking them whether their force would link the interventions to competencies. A copy of the full questionnaire can be found in the Appendix A1.

5.2.4 Analysis

The data was content-analysed. Systematic inspection of the data corpus included the development of an open-ended indexing system, i.e. the generation of labels to describe emerging concepts and features. Subsequently, similar categories were linked together or new overarching categories were created at higher levels of abstraction. This included, in places, the reduction of passages by means of selection, exclusion of paraphrases with the same meaning, grouping and the integration of paraphrases. Finally, the categorical system was re-examined on the raw material.

Information on factors which influence individual career development was collected as supporting evidence for the framework of career competencies as defined by this study. A secondary aim was to establish concepts related to each of the three areas of knowing, with a view to informing subsequent item generation. A template approach was applied to analyse this data. The three areas of knowing were used as templates against which answers were categorised. Where there was no relevant category available, a new template was generated. Each factor was placed under the category that was felt to reflect it most closely.

For the closed questions, frequency analyses were conducted using SPSS.

5.2.5 Results

5.2.5.1 Competencies

Definition of competencies

When asked to define competencies, the answers of interviewees could be placed in four categories: behaviours, abilities and skills and knowledge, standards of performance and personal attributes.

Twenty-two of the 29 respondents used the term *behaviour* when defining competencies. Fourteen defined them exclusively in behavioural terms, e.g. as “behaviours to perform effectively”, while eight included other concepts in the definition.

Thirteen respondents defined competencies as *abilities, skills and knowledge*, e.g. “abilities to do the job” and as “the soft skills that underlie, inform, shape and determine quality of output”. However, only one respondent defined competencies exclusively as skills and knowledge. Eleven respondents also touched on the other categories.

Four respondents related competencies to traits or personality, i.e. *personal attributes*, e.g. “derivations of traits, as descriptors of behaviours underpinned by attitude and values”.

However, the majority of definitions connected competencies to *standards of performance*, i.e. the minimum level to which a person has to perform. This quantifying role of competencies seemed to be more relevant for police officers than for the other respondents.

The use of competencies in career development

A range of applications for competencies in career development were mentioned. These included:

- *performance assessment* (18) e.g. performance appraisals, or the assessment of performance portfolios
- *development planning* (14) i.e. provide formal structure for performance feedback and a basis for development plans
- *assessment for promotion* (7) e.g. competency-based application forms and interviews for promotion oriented towards the competencies of the aspired role;

as such, competencies play a role in succession planning, providing a structure for processes such as the HPDS

- *development discussions* (2) e.g. as part of a career chat structure used to provide career advice or guidance

The interviews uncovered some critical views regarding the use of competencies in career development. A few consultants opined that competencies were not appropriate for addressing individual career development issues. These should focus more on the individual, taking a holistic approach. It was stated that career development should emphasise personal preferences, interests and general strengths and weaknesses of the employee, areas generally not covered by competency structures.

Advantages and disadvantages of using competencies in career development

Respondents mentioned the following advantages of using competencies in career development. They said competencies would:

- *Provide consistent objective standards for assessment* (23); competencies would reduce subjectivity, and were said to provide “an equitable system that is capable of withstanding scrutiny”. Providing “a common language” they would promote uniformity and consistency.
- *Provide clarity and transparency* (15), e.g. “staff knows exactly what is expected and can therefore self-develop without depending on supervisor or manager.” Competencies were seen as “signposts” that provide clarity, by making information public and giving individuals the opportunity to learn what skills and abilities are necessary for the role.
- *Allow for and support workforce planning* (5), i.e. ensure that “the organisation has the competencies it needs in the future”
- *Instigate proactive behaviour* (4), i.e. support individuals in taking more responsibility for their careers.

The list of advantages was matched by a list of perceived disadvantages and shortcomings of the use of competencies in career development. Respondents stated that competencies and competency frameworks could:

- *Be Inflexible* (8), by not allowing for alternative behaviours and individual differences, since everybody would be assessed against the same criteria. Often used in a prescriptive rigid way, competencies would sometimes not leave room

- for adaptations. Thus, they may “delete contributions outside the framework that could be useful”, running the risk of building mediocrity and stifling development.
- *Not be comprehensive* (8); competencies sometimes would be narrow and often only valid for the objectives of the organisation, rather than the individual.
 - *Be too generic* (6), i.e. not be specific in terms of the actual tasks involved. Consequently, they might not always fit the role.
 - *Generate pressure* (5), putting individuals under pressure to collect evidence to demonstrate competency. This pressure was said to increase along with the need for opportunities to develop competencies.
 - *Be very complex*, (4) with a tendency to being “overly complicated”. As a result, it might take “...some time and effort to understand them in practice and job incumbents often struggle to understand and interpret these without regular support”.
 - *Be static* (3), failing to reflect changing job roles and market demands. The need for competency frameworks to be reviewed continually was stressed.
 - *Be time-consuming* (2) in their construction, but also “*very expensive* in their development and implementation”.

Three respondents from police forces did not perceive any disadvantages related to the use of competencies in career development.

5.2.5.2 Career development practices

This section looks at three issues: the definition of career development, the perceived responsibility for career development and the role of the organisation and the individual with regard to career development.

Definition of career development

Respondents had different perspectives when defining career development. Thirteen saw it from an individual’s point of view as:

- Development of experiences, skills and knowledge, with the aim of increasing individual effectiveness (9)
- Individual progression (7)
- Development of self-awareness (3),

Nine respondents focused on the organisational perspective, defining career development as succession planning, e.g. “getting the right people into the right places at the right time”.

Five respondents thought of career development as the organisation providing support and development opportunities for the individual.

Responsibility for career development

Eleven interviewees, nine of them from police forces, said that the ultimate responsibility for career development lay with the individual. However, more than half of the respondents (15) saw career development as a responsibility shared between the individual and the organisation. While the organisation needed to establish structures and processes, set out career prospects and provide “support mechanisms plus information of what is available” to individuals, individuals needed to own their careers and “take the chances given to them”. However, two respondents pointed out that supervisors or managers who should ideally be involved in this process, sometimes would neither have the time nor the knowledge to develop or coach their subordinates.

Asked whether the majority of officers in their force would share their point of view regarding responsibility for career development, four respondents gave an affirmative answer, while six felt unable to respond to this question. However, eight of the interviewed officers said that from their experience, officers would usually consider responsibility for career development to lie with the organisation, perceiving a lack of proactivity in police officers.

Role of the organisation

The role of the organisation was perceived to involve:

- *Providing support* (21), e.g. offering encouragement as well as resources e.g. time to study, money, information etc.
- *Providing access to development* (12), including developing and training staff, creating opportunities, such as secondments, career breaks, etc.
- *Providing structures* (7), e.g. creating career development systems and frameworks that individuals can use.

Role of the individual

The list of activities that interviewees ascribed to individuals was long and related to various aspects of career development. The overall tenor was that individuals needed to drive their own careers. The individual needed to:

- *Be self-aware* (4), identifying strengths and weaknesses to enable themselves to define career goals,

- *Create development plans* (6),
- *Make career decisions* (2),
- *Instigate career development* (6),
- *Identify opportunities* (3) for development,
- *Seek out and take advantage of assistance* (3)
- *Develop skills* (2),
- *Present themselves* (2), i.e. to make their aims and aspirations known to other people

5.2.5.3 Current use of career development activities and their evaluation

Aims of career development interventions

Analysis of the interview data showed that the reasons for conducting interventions were manifold, with some being loosely related to the definition of career development presented earlier. The aims of career development interventions mentioned included:

- *Workforce planning* (12), e.g. “make sure the organisation has people with the required competencies at the right time in the right posts”.
- *Empowering individuals to develop* (7)
- *Achieving employee satisfaction* (7), i.e. “create a happy workforce”
- *Training and development* (5)
- *Identifying development needs* (4)
- *Identifying potential* (4)
- *Providing information* (4), e.g. “what is available through the organisation and what support they can expect to receive”
- *Assessing performance* (3)
- *Ensuring employee retention* (2)

Current use of career development interventions

The results to this question can be found in Table 5.2, below.

The most frequently used formal interventions were open internal job markets and formal appraisal and development reviews. This was followed by external job markets, which applied less to the police forces than to the private sector organisations. Also high on the agenda was informal career support from immediate supervisors and HR or training functions. Secondments or attachments into other departments, or even other organisations, were often used in career development. It is notable that according to interviewees, informal mentoring took place more

frequently than formal mentoring. Development/assessment centres and career advice were frequently used. In addition, information on the intranet was widely available in organisations.

Other interventions were less frequently used, e.g. career coaching and succession planning were used by less than half of the companies interviewed.

Table 5.2: Frequencies of responses to question on use of career development interventions and their link to competency approach and ICF

Career intervention	Practitioners and Consultants (n=11)	Interviewees Police Forces (n=18)	Linked to competency approach	Linked to ICF
Open internal job market	10	18	8	11
Open external job markets	10	13	6	9
Formal appraisal or development review	10	16	10	13
Informal career support from immediate superior/other manager	7	16	6	6
Informal career support from HR or training function	3	16	8	10
Secondment/attachment	7	16	5	3
Career moves managed by the organisation	3	11	7	5
Succession planning	2	7	3	3
Formal mentoring	5	12	3	3
Informal mentoring	4	11	2	2
Career advice	6	13	3	4
External career coaching	4	6	-	-
Development or assessment centres	5	14	7	9
Career workshops	2	1	-	-
Career information/tools on the intranet or on paper	4	10	1	2
Other	1	-		

A few respondents from the group of practitioners and consultants pointed out that many interventions such as formal mentoring and career coaching would only be available to a small number of people within the organisation e.g. high-flyers or individuals in senior roles.

About two-thirds of the forces interviewed used formal appraisals that were linked to a competency approach and/or the ICF. Interventions such as open external and internal job markets, development/assessment centres and informal career support, were competency based in about half of the forces. Interventions such as mentoring,

informal career advice from supervisors, or career coaching, were only rarely or not at all linked to competencies.

Evaluation of career development interventions

Interviewees widely agreed that career development interventions were hardly ever evaluated, with the exception of development and assessment centres. The latter would often be evaluated through subsequent discussions with the people involved, analysis of the criteria used and the number of people who had gone through the process. Two respondents attributed the general lack of evaluation to the objectives of career development interventions often being unclear, thus not providing clear success criteria.

Respondents said that interventions were rarely evaluated on an individual level, e.g. asking participants whether they felt the intervention had helped them and whether they had applied what they had learned. The organisational level was hardly ever looked at.

5.2.5.4 Factors influencing individual career development

Six categories emerged from the analysis of responses to this question. Apart from the initial three templates (knowing-why, knowing-how and knowing-whom), three other categories became apparent, containing external factors, personality-related internal factors, and demographic factors. A full list of the results can be found in Table 5.3, below. Issues that were placed under one of the three areas of knowing, but had not been mentioned in the model described by Arthur and colleagues, are shown in italics.

Topics that could be placed under the knowing-why competency included: personal goals, career planning, self-awareness, self-knowledge and resilience. Resilience was placed in this category because it was described by London (1983) as an aspect of career motivation, a factor related to *why* a person is pursuing a certain career. Factors that could be identified as knowing-whom included: self-presentation and self-promotion, use of mentors, support from seniors, social competencies (e.g. soft skills), persuasiveness and networking/relationship building. Examples of knowing-how related topics were: abilities, capabilities, knowledge and skills, expertise and experience, information seeking, self-management and knowledge of politics. External factors were also mentioned. External factors can not be influenced by, or are only marginally influenced by, the individual. They included issues such as

opportunities, personal circumstances, life issues, luck, market situation, employer support and incentives.

Table 5.3 Results of template analysis - factors perceived to be important for successful individual career development

Template	Sub-categories
Knowing-why	<ul style="list-style-type: none"> - <i>Resilience (willingness to take risks, openness to experience)</i> - Personal goals - Self-awareness/self-knowledge - Career planning (setting timeframe)
Knowing-how	<ul style="list-style-type: none"> - Proactivity - <i>Knowledge of politics (organisational parameters)</i> - Abilities, capabilities and competencies to do the job - Exploration behaviour - Knowledge - Reacting on feedback - Skills and skill development - Task-orientation - Information seeking and gathering - Keeping up with external trends and developments - <i>Self-management</i> - Job-related performance effectiveness (expertise and experience)
Knowing-whom	<ul style="list-style-type: none"> - <i>Social competence (soft/people skills)</i> - <i>Emotional intelligence</i> - <i>Leadership abilities</i> - Social networks (networking and relationship building) - <i>Self-promotion/ self-presentation</i> - Support from seniors - <i>Being-highlighted</i> - Use of mentors
External factors	<ul style="list-style-type: none"> - <i>Luck</i> - <i>Personal circumstances</i> - <i>Rewards</i> - <i>Incentives</i> - <i>Encouragement</i> - <i>Support from organisation/ organisational culture</i> - <i>Requirements of organisation</i> - <i>Opportunities/market</i> - <i>Life issues</i>
Internal factors	<ul style="list-style-type: none"> - <i>Motivation/needs and drive</i> - <i>Self-confidence/self-esteem</i> - <i>Positive attitude</i> - <i>Self-belief</i> - <i>Energy and commitment</i> - <i>Ambition/ Need for achievement</i> - <i>Values</i> - <i>Attitudes</i> - <i>Interests and preferences</i> - <i>Need for control</i>
Demographic factors	<ul style="list-style-type: none"> - <i>Age</i>

Some respondents mentioned internal factors e.g. preferences, attitudes, self-esteem, confidence, the need for achievement and the need for control. One respondent saw the demographic factor of age as having an important influence on successful individual career development.

5.2.6 Discussion

The interviews aimed to collect information on current practices and issues that were perceived as important to this study.

5.2.6.1 Competencies

Definition of competencies

Even though there was no general agreement on what exactly constitutes competencies, participants were inclined to define them in behavioural terms and/or as skills, abilities and knowledge. However, some respondents also described them as performance standards, while others mentioned personality traits as components.

Overall, this reflects the confusion that surrounds the competency concept in the literature, including the division between the behavioural UK approach and the more personality-focused US approach. However, as Moloney (2000) pointed out, it is important not to confuse the two concepts of personality and activities, if one wants to use them effectively.

Use of competencies in career development

In general, the results demonstrated that the use of competencies in career development focused mainly on the assessment of performance effectiveness, geared towards development planning. In other words, competencies were generally used to assess individuals' capability to effectively perform their job, or their suitability for an aspired job, and as a tool to close development gaps. The applied criteria were mainly job-related and generally neglected individual issues such as interests, preferences, motivation, or the general assessment of strengths and weaknesses. They also neglected the overall skills and abilities individuals need to manage their careers (see Chapter 2).

Competencies were apparently often used as the basis for personal development reviews (PDRs). However, within the police, PDRs focus mainly on job performance. Even though a short section at the end of the PDR document asks individuals to reflect upon their development plans, this is restricted to job-related competencies.

This use of competencies in career development, focusing solely on knowing-how, has been criticised by Arthur et al. (1999, see Chapter 3). A more holistic approach must be taken, to cover the wide range of issues that affect successful individual career development.

The predominant use of competencies is as assessment tools and this may be directly related to their content. As shown in this study and outlined in previous chapters, competencies, as they are currently used, generally focus on behaviours related to job performance. They neglect other issues that are important for career development (see 5.2.5.4). This suggests that competencies do not necessarily lend themselves well as a basis for career development interventions, especially if the interventions seek to support and further individual career self-management.

Respondents also pointed out the need for competencies to be openly available to individuals, so they would know what was expected of them. Being hidden behind other HR processes, or otherwise not accessible, may impede successful use.

Advantages and disadvantages of using competencies in career development

Although the question regarding advantages and disadvantages of using competencies specifically focused on career development, the majority of answers are also applicable to competencies in general. The results suggested that competencies can be a useful tool in career development, providing a clear structure for progression and development and allowing objective assessment. Representing organisation-wide standards, they were seen to promote transparency and consistency. For organisations, they were said to support the development of employee potential, contribute to workforce planning and instigate proactive behaviour on the individual's part. The latter is of special importance for the present study, since it suggests that applying career competencies may instigate proactive behaviour with a view to individual career self-management. In addition, competencies were said to provide clear guidelines regarding the expectations and requirements of the job, information that can be used for self-assessment.

However, criticism that competencies could be inflexible, too generic and too complex, highlighted that these issues must be considered if competencies are to be used successfully.

Furthermore, the findings indicated that it was important to strike a balance between complexity and comprehensiveness. Competency frameworks should neither be too complex and therefore difficult to understand, nor too simple, not covering the most relevant aspects. The results could also be interpreted to the effect that, depending on the context of use, a compromise must be found with regard to the specificity of the competencies. If applied to a larger group of individuals, they should be generic. If applied only to certain jobs, they may be more specific. With respect to career competencies that are considered generally applicable, this suggests that they can be rather generic.

The results also lead to the conclusion that competencies must be presented in a clear and simple manner, so that they are accessible, easy to understand and individuals do not feel apprehensive about using them. To ensure understanding and correct interpretation, respondents said it was important to provide regular support to individuals. Furthermore, competencies should not be too rigid or strict, providing enough flexibility to appreciate individual differences.

Competencies were also criticised for often being static and dated and in need of constant reviewing. While the general framework of career competencies is rather static, in the future other career competencies may become relevant, due to continuous changes in career realities. However, these changes are expected to take place over the course of several years, making very frequent updates unnecessary. Nevertheless, the specific content of each career competency is expected to change through experience. The way each competency is employed depends on individual preferences and opportunities, and these are likely to change over time, making continuously evolving interpretations on an individual level necessary.

Overall, the interviews indicated that competencies were valid tools for measuring whether an individual performed to the standards required by the current or aspired role. This suggests that they may also be of value for assessing individuals' capabilities for managing their own careers. Comments suggest that some of the positive characteristics of competencies may provide a useful basis for career development interventions, e.g. their structure providing quality and their use for development planning. To ensure successful application of competencies, the limitations stated above must be taken into consideration and addressed appropriately.

5.2.6.2 Career development

Definition of career development

Participants in this study did not agree on the definition of career development. Some described it as individual development, while others saw it more as workforce planning, or the organisation providing support to the individual. Considering the definitions presented in Chapter 2, these statements reflect the confusion between the concepts of career development and career management. This problem of definition carries through to other issues such as the objectives of career development interventions.

Responsibilities and the roles of the organisation and the individual

The majority of respondents saw career development as a responsibility shared by the organisation and the individual. These results were in line with the perceptions of the majority of the 500 companies interviewed by Thomson, Mabey, Storey, Gray and Iles (2000, in Kidd, 2002). However, a large number of interviewees thought that the main responsibility would lie with the individual, reflecting the general shift from processes managed by the employer to activities managed by the individual (Kidd, 2002).

The majority of respondents from police forces focused on the individual's responsibility. This view may be a reflection of the desire within the police organisation to move towards a more individual-centred career self-management culture. Most officers currently see career development as the responsibility of the organisation. The terms and conditions under which people have been working within the police have been stable over the last few years. People were posted into roles, encouraging a general attitude that career development would happen to individuals (see Chapter 4).

To bring about a change in individuals' attitudes, the organisation will have to play an active role. As described above, simply handing over responsibility to the individual may not be enough to foster successful self-management (see Macaulay & Harding, 1996). Instead, the organisation needs to provide support, a view shared by the majority of respondents in this study.

Another important issue that arose from the findings was related to the role of the supervisor or line manager. The study found that supervisors and line managers were generally expected to play a part in the career development of their

subordinates. This confirmed findings by Crawshaw (2006), who showed that 98% of the 325 UK employees he interviewed saw their line managers as responsible for their career development. Line managers appear to be increasingly expected to take on responsibility, and to generally be more active in the arena of career management, by facilitating learning and career development. However, it was pointed out that they often had neither the time nor the skills to support individuals in this way. These comments are supported by a CIPD (2003) study, which found that by far the biggest obstacle to effective line manager involvement in career development is competing work pressures. The report also mentions the problem of insufficient training of line managers. In a study by Garavan (1990, in Dick & Hyde, 2006), line managers stated that they rarely got involved in the career development of their subordinates, because they did not feel competent enough, lacking the necessary qualities. This is something that should be addressed within organisations, especially in light of the fact that the PDR process, often the central intervention with regards to career development, is generally conducted by supervisors. If line managers are unable to support the individual effectively, the whole process is bound to be ineffective.

Aims of career development interventions

There was no general agreement about the aims of career development interventions. Aims were found to vary in their detail, from addressing specific issues, such as the assessment of the potential of an individual to perform effectively in an aspired role, to broad and unspecific aims, such as “workforce planning”.

Some of the aims mentioned by participants in this study can be placed under the purposes of career development interventions listed in Chapter 2. For instance: identifying potential is congruent with assessment of potential; workforce planning can largely be described as filling vacancies; assessment of performance is similar to assessment of skills, etc. The development of skills and competencies, when interpreted on an individual level, can also include empowering the individual. A more detailed list of the comparisons can be found in Table 5.4, below. Some aims highlighted by participants in this study, e.g. employee satisfaction and employee retention, did not find their counterparts in the list of purposes from Chapter 2. A possible explanation for this is that they represent secondary outcomes that are not immediately assessable, but which operate at an organisational level. Therefore, they may not have been perceived as the purpose of career development interventions. Implementing career plans was not represented in the aims mentioned

by participants. Respondents in this study appeared to focus on the outcome instead of the process, e.g. not taking into consideration the actions that should follow an assessment of needs.

Table 5.4 Comparison aims of career development interventions mentioned in this study and purpose of career development interventions as presented in Chapter 2.

Purpose of career development interventions	Aims of career development interventions mentioned in this study
Filling vacancies	- Workforce planning
Assessment of potential, competencies, skills or interests	- Identification of potential - Assessment of performance
Development of skills and competencies	- Identification of development needs - Training and Development - Empowering individuals
Identification of career options	- Provide information
Action to implement career plans	
	- Employee satisfaction - Employee retention

Current use of career development interventions and their evaluation

The study showed that a range of career development practices were used by organisations, from formal appraisals and development reviews to informal support by HR and line managers. It was found that interventions that focused explicitly on individual development were employed less than larger scale processes, such as internal and external job markets, performance appraisals, etc. For instance, career coaching was only offered by four organisations and career workshops by only two. In general, these findings were in line with the results of the CIPD (2003) study, which showed a similar distribution of the use of career development interventions in organisations. For example, open internal job markets and formal appraisals were used by 93% and 90% of the 100 companies interviewed, respectively, while only 52% offered formal mentoring.

The extent to which interventions are available to employees depends on the type and the size of the organisation. For instance, within the police force, external job markets are rarer than in other organisations, due to the closed career system described in Chapter 4.

Respondents agreed that, in most cases, career development interventions were not evaluated. This confirmed the statement by Arnold (1997a) that very little work has

been done on assessing the impact of career interventions. This shortage of information must be addressed, to gain a clear understanding of the added value of these interventions. Without evaluation, it is impossible to judge their effectiveness, or make qualified amendments to improve their efficacy.

Using Kirkpatrick's (1967) model of assessing training effectiveness (see Chapter 2), it was found that in the few cases where interventions were evaluated, the evaluation only focused on levels 1 to 3. This was attributed to the organisational level being very difficult to assess.

Participants suggested that the absence of evaluation was linked to unclear objectives in career development interventions. These in turn may be linked to the difficulty in defining the concept of career development. Without a clear definition of career development, it is difficult to know what career development interventions should focus on. As such, these interventions are lacking not only clear goals for development, but also clear criteria for evaluation. In summary, for career development interventions to be useful, their aims need to be clearly defined. This would enable the intervention to be constructed in a way that ensured individuals could meet their goals. It would also facilitate evaluation processes.

Competencies did not appear to form the basis of many career development interventions, despite their usefulness as proclaimed by participants and by the literature (see Chapter 3). This may be due to competencies being limited to what has been described above as the knowing-how career competency. This focus on performance effectiveness was especially prevalent in police forces. The attitude that career development was only of value when addressing job performance demonstrated a very task-focused understanding of career development. This task-focused understanding does not consider broader issues important for successful individual career development.

5.2.6.3 Factors influencing successful individual career development

Respondents provided a long list of factors that they felt would influence successful individual career development. These can be categorised into six areas: knowing-why, knowing-whom, knowing-how and external, internal and demographic factors.

A range of aspects could be categorised under the three areas of knowing as defined in this study. However, some of them had not been mentioned in Arthur's model,

e.g. resilience (here placed under knowing-why) and knowledge of politics (placed under knowing-how). Thus, this study provided some valuable input for the item generation process, populating the competency areas with appropriate cases and concepts, and laying the foundation for a more holistic assessment of the three areas of knowing.

The categorisation of factors was immensely facilitated by using broader definitions of the three areas of knowing than those suggested by Arthur and colleagues (e.g. DeFillipi & Arthur, 1994). For instance, social competence and soft skills were placed under knowing-whom. These interaction concepts would not have been included in this template if Arthur's definition had been strictly applied. In addition, the separate categorisation of knowing-why and personality aspects would have been difficult, since Arthur's definition of knowing-why included personality to some extent.

The responses highlighted the importance of personality factors, demographics and external factors for successful individual career development. This is supported by the literature, where these three categories were discussed as antecedents and/or correlates of career outcomes (see Chapter 2). This emphasises that these factors should be taken into consideration when analysing the influence of career competencies on career success. They may explain part of the variance in the outcome variable.

5.2.6.4 Limitations of the study

Even though transferability of the results was the main aim of this study, generalisability should not be dismissed. Overall, the findings may not be generalisable, especially since the number of participants from private sector organisations was very low. In addition, no other public sector organisations, apart from the police forces, were included. Future studies may therefore want to include a larger sample from a wider range of organisations, in order to obtain a more general idea of current practices.

It also has to be critically noted that the content analysis and data structuring was conducted by the researcher, which resulted in the process being internal, carrying a subjective element. Future studies may want to employ multiple analysts, to ensure objectivity of ratings.

Apart from this, with regards to template analysis, it was difficult to decide when a new code or a “category” was substantive. Therefore, in this study, every single comment was analysed and categorised, even though it may have been mentioned by only one participant. Future research may choose to apply a more stringent approach to analysing the data, without consulting the literature first and using a more externalised coding process.

5.3 Intelligent Career Card Sort Application

As introduced above, the intelligent career model presents a holistic approach to an individual's career, looking at three different areas of career investments: knowing-why, knowing-how and knowing-whom. As such, it appears to provide the ideal basis for development of a taxonomy of the career competencies needed for successful individual career management. As already described, the model finds its practical application in the ICCS, an instrument to help individuals explore their subjective career investments (Amundson et al., 2002).

The overall aim of the present study was to design a career development intervention that could be tailored to individual needs. Knowledge about why police officers do their jobs, how they go about it and who they work with, forms a background against which such an intervention can be developed. Therefore, an initial exploration of the three areas of knowing in police officers was considered important.

The aims of applying the ICCS were:

1. To investigate whether the basic concept of the three areas of knowing was applicable to the police context.
2. To provide insight into the factors which are important to police officers in their career development at different ranks.
3. To investigate whether the ICCS covered all the issues that are important to police officers and to identify any additional topics not covered in the card sort.

5.3.1 Method

Similar to the previous study, this second study was also of an exploratory nature. As described above, qualitative methods are extensively used in psychology to investigate contextual questions and study selected issues in depth.

A method widely used at the preliminary stages of a study is focus groups. Focus groups comprise an organised discussion with a selected group of individuals to gain information on their individual as well as shared views, attitudes, beliefs or experiences. Focus groups provide the researcher with a large amount of information in a short period of time, which would not be possible using other methods, e.g. observation, one-to-one interviewing, or questionnaire surveys.

However, there are problems associated with the use of focus groups and some of them are of a practical nature. For instance, certain individuals may not be able to

attend a focus group meeting, while others may not be willing to communicate their opinions in front of others. In addition, focus groups are not always easy for the researcher to control. Some participants may dominate the group, or group dynamics may influence some individuals' level of participation, or their responses. This makes the role of the moderator important and significant. Good levels of interpersonal skills are required to moderate a group successfully and counteract the negative dynamics described above. Furthermore, a structured approach is important, and a moderator can ensure that the objectives of the session are achieved.

5.3.1.1 Participants and procedure

Since at different career stages individuals are likely to face different problems and situations and therefore may make different career investments, the ICCS was applied to officers at different ranks.

The study investigated the factors that police officers at different ranks considered important in relation to their career development. It was deemed most appropriate to apply the ICCS in group settings and to discuss the results in focus groups. This approach proved feasible for Probationers, Sergeants and Inspectors. For convenience, a sample of officers who were already attending training courses was used. The training course leaders, previously briefed, introduced the study at the beginning of the course and invited trainees to complete the card sort and to attend the subsequent focus groups. Participation was voluntary and the card sort took place during officers' private time. Overtime money was paid to the group of Probationers. Only two sets of the ICCS were available for simultaneous use, restricting group size to six participants.

Application of the ICCS and discussion of the results took place in separate meetings on different days. In the first session, individuals were briefly introduced to the background of the study and then asked to complete the ICCS. These sessions took approximately 30 minutes. After this, the researcher inputted the data onto the ICCS website, created group summaries and printed the outcomes. Groups then met again, to discuss results in focus groups.

The overall aim of the focus groups was to elicit the reasons for selecting popular items and the job-specific factors that lay behind those choices. To achieve this, the meanings and experiences that officers associated with the items were explored. At

the end of the session, participants were presented with their individual summaries and access details for their results on the ICCS webpage. The focus groups each took approximately two hours.

For higher-level officers it was not possible to arrange group meetings, due to their small numbers, large workload and restricted availability. Therefore, Chief Inspectors and Superintendents were seen individually. Three Chief Inspectors and one Superintendent volunteered to participate in the study. They were approached following recommendations from the training department in the cooperating organisation.

Due to the very limited amount of time available with these higher level officers, completion of the card sort and discussion of the results were conducted in a single session, which took approximately 2 hours. As mentioned above, the main interest was in summarised data of the various rank groups. Therefore, to facilitate interpretation and generalisations, results from Chief Inspectors and the Superintendent were grouped together. For sample demographics see Table 5.5, below.

Table 5.5 Sample demographics of participants in ICCS application

Rank level	Female	Male	Total
Probationer	3	3	6
Sergeant	0	3	3
Inspector	0	5	5
Chief Inspector	1	2	3
Superintendent	1	0	1
Total	5	13	18

All participants were assured of confidentiality and asked permission for the meetings to be recorded on audio tape. Notes were taken during the sessions as well.

5.3.2 Analysis and results

The tape recordings were subsequently analysed and partially transcribed, extracting information that was relevant to the understanding of the items, selection of the items, or group perspectives. Summaries of the group results and explanations of the selected items were compared.

Most participants found the completion of the card sort straightforward. However, almost all officers reported difficulties in cutting down the items to the seven most important ones for each area. Some cards were said to be very similar to each other, even across the three areas, which made distinction difficult. This also became apparent in the discussion of the selected items, with many explanations overlapping in content. Other items were perceived as being too general and not necessarily related to police work. However, there was agreement regarding the interrelatedness of the three areas of knowing.

Participants accepted the three-fold structure of the intelligent career model. All officers agreed that the three areas of knowing made intuitive sense and they did not see anything essential missing from the concepts. While the importance of all three areas was generally acknowledged, two groups noted that, within the police force, knowing-how would receive more attention than the other two areas. Since career development was based on the competency framework and thus on knowing-how, knowing-why and knowing-whom were neglected and left to the individual to deal with. Some participants considered knowing-why to be a more personal issue than knowing-how and knowing-whom and stated that they would not expect the organisation to support them in this area.

Individual results were grouped together according to rank levels, resulting in the workshop summary reports presented in Appendix A2. The summaries list the most important ICCS selections from all four groups. The computer allocated weights to each selected item based on their relative importance, taking individual rankings into account. The reports also show the frequency with which each item was selected. Comparison of results of the different groups of officers showed that some topics were always present. Differences in the item selections could partly be explained by the different tasks and situations that officers at different ranks were confronted with. Appendix A3 presents a more detailed description of the results.

5.3.2.1 Knowing-why

Similarities between the groups were especially prevalent in this area of knowing.

With regards to knowing-why, the following issues were the ones most selected by the different groups:

- *Gaining a sense of achievement from work,*
- *Helping other people,*
- *Making a contribution to society,*
- *Wanting to be trusted at work* (of special importance to Probationers still undergoing training),
- *Receiving recognition and admiration for work,*
- *Ensuring financial security,*
- *Ensuring employment security,*
- *Being challenged in the job,*
- *Enjoying being a member of a high performing team,*
- *Creating the vision and the plan that others follow and liking to be directly responsible for results of own work* (both of special importance to Chief Inspectors and Superintendents).

5.3.2.2 Knowing-how

With regards to knowing-how, the following categories were most frequently selected by participants:

- *Seeking to learn from job situations experienced,*
- *Seeking to become more adaptable to different situations,*
- *Seeking to learn from the people I work with,*
- *Learning through being open to fresh ideas,*
- *Seeking training and development specific to my occupation*
- *Developing knowledge about own abilities,*
- *Pursuing qualifications and skills that make me distinctive,*

The following were important especially for higher level officers:

- *Seeking to become a better leader,*
- *Seeking to become a more strategic thinker,*
- *Seeking to integrate information from different sources.*

5.3.2.3 Knowing-whom

Some participants felt that selecting the knowing-whom cards was the most difficult task. This was partly attributed to the cards having wording very similar to each other. Furthermore, knowing-whom was identified as an area that people would generally not think about. Thus, when confronted with it, they needed more time to reflect on it. Of all three competencies, selections varied most widely with this one, with group lists extending to up to ten items. A detailed analysis of the most prominent results can be found in Appendix A3. Overall, the most frequently chosen items included topics such as:

- *Working with people from whom I can learn,*
- *Working with teams to help me being more effective in my work,*
- *Building relationships with people who are more experienced than me,*
- *Working with teams from whom I can learn,*
- *Building relationships with people who have a broad knowledge of my field,*
- *Giving support to people that I can help,*
- *Working with people who learn from me,*
- *Building relationships with people less experienced than me,*
- *Enhancing my own reputation with people I know,*
- *Looking for support from people who are interested in my career,*
- *Maintaining or developing relationships with family,*
- *Working to keep old friends.*

5.3.3 Discussion

Overall, this preliminary study provided support for the value of the intelligent career model and its three-fold structure. Officers accepted the model and were able to apply it to their personal circumstances.

The application of the ICCS shed light on issues that were of importance to police officers with regard to their career development. Comparing the results of the different rank levels, a certain consistency in the selection of items could be seen. This suggested that, independently of individual differences, there were some items that were important to all the consulted officers, e.g. sense of achievement, seeking to learn from experiences and working with people from whom one can learn.

However, the outcomes were not entirely congruent. In accordance with expectations, the results indicated that item selections depended on rank. Tasks, expectations and demands differed with roles, i.e. officers at different levels enacted different career investments. For instance, higher-ranking officers selected items that were directly linked to their positions at management level e.g. creating the vision and the plan that others follow, seeking to become a better leader.

Some issues emerged in all three areas, e.g. sense of achievement. This appeared to be one of the most important issues to police officers. It arose not only in relation to the specific item under knowing-why, but also with regard to other items from the other competency areas. In other words, many items were linked to sense of achievement. For instance, being a member of a high performing team was ultimately linked to a sense of achievement through the successful completion of a task.

Many selected items could be directly related to the nature of police work, e.g. working in a team, making a contribution to society or to the organisational background, e.g. ensuring financial security.

Furthermore, some items confirmed the findings of earlier studies. For example, the importance that family and friends have for police officers had already been pointed out (Kakabadse, 1984). Kakabadse also identified making oneself visible to others as being important for the progression of middle ranking officers. This was mentioned in the present study by Inspectors, with regard to building reputations.

The focus groups provided valuable information with a view to future conceptualisation of career competencies. They highlighted issues that are important for successful career development within the police. For example, networking and building a reputation appeared to be essential for progression. The same applied to learning from others and developing a wide range of skills in order to improve personal performance.

Analyses of the group summaries and discussions provided supporting evidence for the interrelatedness of the career competency areas. Explanations of items from different competencies overlapped in places and were sometimes very similar in content. Moreover, some items within the same competency areas were found to be similar, with overlapping interpretations. For example, "I work with people from

whom I can learn” was considered very similar to “I work with teams from whom I can learn” and “I build relationships with people who are more experienced than me”. This made distinctions between them difficult. In light of the discussion in Chapter 2 on the importance of clear differentiation between each competency, this overlap in content must be critically noted.

Despite the inter-relatedness of the areas, all participants acknowledged that each area of career investment would play an important role, and therefore all three should be considered.

The perceived importance of all three areas was not reflected in organisational practices. Two groups of officers pointed out that the police force focuses on knowing-how. This confirmed findings from the first preliminary study, highlighting the current limited approach to career development. This may impede the change towards a more individual-centred approach to career development. The narrow focus on performance, i.e. knowing-how may lead to individuals feeling unable to air their concerns regarding personal development needs (Kidd, 1989). This is reflected by individuals not expecting the organisation to support them on knowing-why and knowing-whom related issues. If the organisation desires a cultural change, the restrictions of being exclusively task-orientated will need to be addressed.

5.3.3.1 Limitations of the study

Focus groups are generally limited in terms of their ability to generate generalisable findings. This is mainly because of the small numbers of participants and the likelihood that they will not constitute a representative sample. Therefore, to evaluate the contextual data gathered in this study, further research involving larger groups of officers is required, especially using officers from higher ranks and ideally from different forces.

Summary

The preliminary studies showed that the difficulty in clearly defining the term competency, as discussed in the literature, is reflected in the world of practice. The first study in particular highlighted a range of advantages and disadvantages entailed in the use of competencies. The results supported the criticism that competencies currently focus almost exclusively on job-performance, neglecting other issues that

are important for successful career development, such as goal-setting or networking. The study further showed that, although it is widely accepted that the individual is responsible for career development, the process is often seen as shared endeavour between the organisation and its employees.

The second study showed that police officers accepted the three-fold structure of career competencies. It provided valuable contextual information, by identifying the issues important for different rank groups with regard to their career development. Career development in the police was found to focus mainly on knowing-how development. The problem of neglecting knowing-why and knowing-whom was discussed in light of the organisation's drive towards supporting officers to self-manage their careers.

Both studies contributed to the future item-development process, by extracting factors that participants considered relevant for successful individual career-management.

Chapter 6

Development of the Career Competencies Indicator (CCI)

“In order to be career self-managers, employees must take on new roles and responsibilities, engage in constant self-monitoring, and alter how they view their careers and accountabilities.”

(Kossek, Roberts, Fisher & Demarr, 1998, p. 937)

6.1 Introduction to the development of the CCI

It has been established that, overall, the competency approach appears to be valuable in supporting individual career development. It has also been established that the three areas of knowing, as introduced by DeFillip and Arthur (1994), cover most issues under an individual's direct influence which are important for successful career self-management. The next stage of the project focused on the operationalisation of the three career competency areas. This chapter describes the operationalisation, the development of a measure called the 'Career Competencies Indicator' (CCI), by means of quantitative methods.

6.1.1 Introduction to Classical Test Theory

Psychometrics is a subspecialty within behavioural and social sciences. It is concerned with the theory and techniques of measuring psychological and social phenomena (DeVellis, 1991). Measurement of these phenomena is never exact and is always contaminated by some amount of error.

Classical test theory is a body of psychometric theory that focuses on predicting the outcomes of psychological tests, to improve their reliability and validity. It is based on the assumption that observed scores comprise an aggregate of theoretically true scores plus errors of measurement (Bartram, 1990). The true score has a 'fixed' value for a particular individual at a particular time. Its measurement, i.e. the score obtained in response to an item, reflects this true score to some extent, but is never free of error. Classical test theory assumes that this error varies randomly and has a mean of zero, i.e. it cancels out when aggregated across a large sample (DeVellis, 1991).

The accuracy and consistency with which an instrument measures 'true' scores has been defined as reliability (Bartram, 1990). The more reliable or consistent an instrument, the smaller the random fluctuations (i.e. the random error variance), and the closer the observed scores are to the true score (Bartram, 1990).

The reliability of a scale also has important implications for its validity. Reliability is a prerequisite for validity, though not a sufficient condition on its own (Bartram, 1990). Validity is concerned with what is being measured, i.e. the underlying characteristics, and can be defined in a number of ways: as content validity, criterion-related validity, and construct validity (Bartram, 1990; Cronbach & Meehl, 1955).

Content validity is concerned with the appropriateness of the content of the measure. It can be established by showing that the items included in the measure are a sample of the universe in which the investigator is interested. Content validity can be established deductively by systematic sampling and through professional judgements of the items with regards to the aim of the instrument (Bartram, 1990). However, expert judgement does not warrant validity, and should be seen as part of the development process rather than as hard evidence.

Criterion-related validity can be measured in two main ways: predictively or concurrently. Both approaches are concerned with the relationship between the test-score and a criterion score; either assessing them at the same time (concurrently), or subsequently i.e. first the test score and then the criterion score (predictively). Various practical and technical problems are associated with predictive validity, e.g. waiting for people to reach the point at which criterion scores become available, attrition over time between measurements, etc. (Bartram, 1990). Therefore, concurrent validity is, often used to make inferences about the predictive validity of an instrument.

Construct validity refers to the extent to which inferences can be made from the measure about the theoretical construct on which the measure is based. It looks at what accounts for the variance in test performance. The quality of the measure is of central importance, not the test behaviour, nor the scores on the criteria (Cronbach & Meehl, 1955). Because the constructs which are measured tend to be abstract or related “to aspects of a wide range of behaviours in a variety of situations, there is no one piece of real-world evidence that will, on its own, prove the construct validity of a test” (Bartram, 1990, p. 77). Instead, there are various ways to demonstrate that the results are consonant with the psychological nature of the construct, where construct validity embraces every other type of validity (Kline, 1993). For example, evidence for construct validity can be accumulated through the assessment of the instrument’s relationship with other variables concerning convergent and divergent validity. The instrument would be expected to correlate highly with other methods of measuring the same construct (convergent validity) and lower with measures of different, unrelated constructs (divergent validity).

Overall, classical test theory aims to construct reliable and valid tests. There are two widely used methods of test construction both based on the classical model of test error: item analytic and factor analytic (Kline, 1993).

Test construction using factor analysis generally aims at producing a uni-factorial test. The advantage of this is that all scores always mean the same thing, i.e. scores are directly comparable (Kline, 1993). To achieve this, an established item pool measuring the construct of interest is presented to a trial sample and factor analysis is used to explore the latent structure of the items. However, some constructs comprise more than one single factor, making it appropriate to construct multi-factorial tests for their measurement. In fact, using factor analytic procedures it is easier to construct several tests at the same time rather than a single scale. Initial factoring procedures tend to produce a general factor and several smaller bipolars. However, the subsequent rotation to generate a replicable and elegant solution simply breaks up and reduces the variance of the general factor (Kline, 1993). When seeking to construct several tests, the break-up of the general factor is desired, i.e. the statistical analysis is in congruence with the objectives of the work. The results of factor analytic approaches, if carried out appropriately, come close to the psychometric ideal.

Item analysis also aims to produce a uni-factorial test. However, it differs from factor analytic approaches in that its main focus is on homogeneity. This is based on the assumption that each item should be measuring what the test measures. Item analysis generally involves the administration of an established pool of items to a trial sample. The correlation of each item with the total score is the criterion for homogeneity and, hence, item selection. One of the major drawbacks of item analysis is that homogeneity does not ensure factor purity, i.e. it does not ensure that items measure one factor. The correlation between items and the total score may, for instance, be caused by items tapping into different but related factors (Kline, 1993). Therefore, while item analysis can be useful for writing homogeneous items, factor analysis is essential to confirm that there is no hidden multifactorial structure.

In general, factor analysis and item analysis yield the same results. However, where they differ, it is informative for the test development (Kline, 1993). Kline (1993) suggests using both approaches on the same data.

6.1.2 Objectives and hypotheses

The CCI was being constructed under the theoretical assumption of a three-fold structure of career competencies, as suggested by Arthur et al. (1995): knowing-how, knowing-why and knowing-whom. However, there is so far no empirical evidence available to support this assumption. Therefore, apart from constructing the CCI,

another aim of this study was to assess the validity of the categorisation of career competencies into the three overarching competency areas. In the course of the study the following hypothesis was to be tested:

H1: Career competencies fall into three factors that can be labelled knowing-how, knowing-why and knowing-whom.

Another important issue that has been stressed by Arthur and colleagues is the inter-relationship of career competencies. Several authors have supported this assumption (see Chapter 4). Therefore, it was adopted by the present study for the definition of career competencies. Another aim of the present study was to provide empirical support for this so far solely theoretical assumption.

H2: Career competencies correlate positively with each other.

In light of the hypotheses and the expected structure of the CCI, a multi-factorial approach to the development of the indicator was required. Factor analysis and item analysis were used in combination in the development process; the former to establish the factor structure underlying the items and the latter to ensure homogeneity. It was also an objective of this chapter to provisionally analyse the convergent and divergent validity of the encountered scales and to explore the sub-scales in some detail.

The Career Competencies Indicator was developed in four stages:

- | | |
|---------|--|
| Stage 1 | 6.2 Initial item generation and refinement. |
| Stage 2 | 6.3 Refinement of initial items through consultation with experts. |
| Stage 3 | 6.4 Refinement of initial items through a small pilot trial. |
| Stage 4 | 6.5 Construction of final indicator using a factor analytic and item analytic approach on a large sample; testing of hypotheses. |

6.2 Stage 1: Initial item generation and refinement

The conceptualisation of career competencies focused primarily on the three-fold structure suggested by DeFillippi & Arthur (1994). However, as mentioned above, it was underpinned by a more traditional definition of competencies. Career competencies are defined in this study as skills, behaviours and knowledge relevant to successful individual career management as reflected in career success. Career success can be defined in objective and subjective terms (see Chapter 2). To operationalise the three areas of knowing, a theory-driven approach was chosen, since many of the other methods of competency development have been criticised with regard to their reliability and validity. Based on previous research, using concepts that have been shown to be reliable and related to career success should provide a solid base for the instrument. First, a review of the literature was conducted, and following suggestions by DeVellis (1991) and Kline (1993), an extensive list of concepts that related to the three areas was formulated. In addition, the results of the preliminary studies were examined, especially the factors that had been placed under one of the three areas of knowing in the template analysis, and the issues mentioned as important for career development by the officers in the application of the ICCS. This information was also used to inform the search and selection of concepts.

6.2.1 Selection of representative concepts

In this study, each competency was seen as a collection of related indicators representing skills, knowledge or activities. Following the advice by Whiddett and Hollyforde (2003), it was considered neither possible nor necessary to provide examples of all indicators that can be observed within a competency.

Above all, concepts were chosen on the grounds of their correspondence to one of the three career competency areas: knowing-why, knowing-how or knowing-whom. They also had to conform to the definition of career competencies as behavioural repertoires and knowledge instrumental in the delivery of desired career-related outcomes. This not only required that concepts were phrased in behavioural or knowledge terms, but also that they had an established relationship with career success. In addition, the requirements of the DOMI rule were used as criteria, e.g. that competencies should be easy to explain and changeable, i.e. trainable. Since the CCI was being created for use in self-development, these two aspects of the DOMI rule were considered of special importance. However, it was accepted that due to the definition of career competencies, not all concepts considered for inclusion

may represent directly observable behaviours, e.g. knowledge of politics. Therefore, it was deduced that the minimum criteria for consideration of concepts was that they had the potential to be converted into observable measures, e.g. exercises, checklists to assess actual knowledge etc. The last requirement of the DOMI rule - the measurability of competencies - represents one of the main goals of this study, i.e. the operationalisation of career competencies.

In summary, in order to be selected, concepts had to:

- Reflect one of the three areas of knowing
- Be formulated as behavioural repertoires, skills, knowledge or activities
- Be important for/significantly related to career outcomes
- Be defined in terms that are easy to understand
- Be trainable or influenceable by conscious behaviour
- Have the potential to be observable

After an in-depth literature analysis, the following concepts were chosen as sub-dimensions to operationalise the three career competency areas:

Table 6.1 Template for item selection

Career Competency Area: Knowing-why	
Sub-Dimension No	Concept
1	Goal setting and career planning
2	Self-knowledge
3	Career resilience
Career Competency Area: Knowing-how	
Sub-Dimension	Concept
1	Job-related performance effectiveness
2	Career-related skills
3	Knowledge of politics and opportunity structure
Career Competency Area: Knowing-whom	
Sub-Dimension	Concept
1	Establishment of mentoring relationship
2	Networking
3	Feedback seeking
4	Self-presentation

Most of the concepts had been mentioned, either directly or indirectly, in the writings of Arthur and colleagues, e.g. goal setting and self-knowledge in relation to knowing-why, mentoring in relation to knowing-whom, career-related skills and job performance in relation to knowing-how, etc. They were, therefore, included under their already established competency areas.

However, some concepts had not previously been included in the sub-scales of the areas of knowing, e.g. knowledge of politics and self-presentation. This is due to differences in the understanding of some of the career competency areas, as explained in Chapter 4.

In this study, networking was considered to be an essential aspect of knowing-whom. Feedback seeking and self-presentation involve direct interactions with other individuals. Therefore, these two categories were also placed under knowing-whom.

Knowledge of (office) politics and opportunity structure was placed under knowing-how, because it does not refer so much to interacting with other people, as it does to describing the knowledge of organisational structures, hierarchies and processes, i.e. knowledge about “how” the organisation works.

Knowing-why (i.e. why a person is pursuing a certain career) was said to stem from an individual’s overall commitment and the adaptability they bring to the employment situation (Arthur et al., 1995). Since career resilience was defined by London (1983) as part of career motivation, and included aspects such as adaptability, perseverance and risk taking, it was placed under the knowing-why dimension.

6.2.2 Item generation

The structure in Table 6.1 (above) served as a framework for the selection of items for the indicator. Existing scales were consulted in the search for items which described each concept. Items from the following studies were considered for inclusion: Bozionelos (1996), Bozionelos (2003), Callanan and Greenhaus (1990), Carson and Bedeian (1994), Chao et al. (1994), Claes & Ruiz-Quintanilla (1998), Eby et al. (2003), Gould (1979), Gould and Penley (1984), Kossek et al. (1998), London (1983), Mignonac and Herrbach (2003), Morrison and Phelps (1999), Nabi (2001), Noe et al. (1990), Noe (1996), Podsakoff, MacKenzie, Moorman and Fetter (1990), Stumpf et al. (1983), Sturges, Simpson and Altman (2003), Turban and Dougherty (1994) and Williams and Anderson (1991).

Only items from scales with acceptable reliability ($\alpha > .70$) were selected. Following DeVellis (1991), an over-inclusive approach was taken with regard to item selection, i.e. items similar in content were included. “Using multiple and seemingly redundant items, the content that is common to the items will summate across items while their

irrelevant idiosyncrasies will cancel out” (DeVellis, 1991, p. 56). Therefore, redundancy of items was tolerated at this stage.

In addition, new items were developed to represent aspects that were considered important, e.g. aspects which had been mentioned by participants in the preliminary studies, but had not been included in any of the existing scales. The design of these items was based on already existing items, definitions found in the literature and/or information from the preliminary interview studies.

6.2.3 Item refinement

Items were refined using the following procedures:

1. Items addressing multiple issues were changed to present only one issue, to avoid ambiguity and to ensure clarity for participants.
2. Items worded in a passive voice or in the third person were changed to the first person, so that participants would be more likely to relate to them.
3. Qualitative statements such as “effectively” or “adequately” were removed or replaced by neutral words.
4. Where items were not only similar but identical in content, the least ambiguous item was selected.
5. Negative items were changed into positive statements, to avoid confusion for participants and stress the positive approach to development taken by this study.
6. Items were rewritten to be consistent in tense, using the present tense to make them more salient for participants.
7. General statements regarding feelings or attitudes were changed, where possible, into expressions of behaviours, skills or knowledge.
8. Items relating to intra-organisational contexts were either subsumed by an identical item relating to extra-organisational contexts, or transformed into an organisation-neutral version, by dropping the context-reference, so as to account for the boundarylessness of some careers.
9. Effects of an acquiescence response set (i.e. individuals’ tendency to endorse the prepared statements presented to them in a questionnaire) were minimised by phrasing items in as balanced, clear and unambiguous a way as possible.

The goal of the item refinement was to create approximately the same number of items for each of the three areas of career competency. However, a greater number

of suitable items were available for some areas, leading to some deviation in the number of items.

Table 6.2 Overview of Career Competency Concepts and Item Numbers after Item Refinement

Career Competency Area: Knowing why		
Sub-Dimension No	Concept	No items
1	Goal setting and career planning	8
2	Self-knowledge	11
3	Career resilience	8
Total		27
Career Competency Area: Knowing how		
Sub-Dimension No	Concept	No items
1	Job related performance effectiveness	8
2	Career related skills	11
3	Knowledge of politics and opportunity structure	14
Total		33
Career Competency Area: Knowing whom		
Sub-Dimension No	Concept	No items
1	Establishment of mentoring relationship	8
2	Networking	11
3	Feedback seeking	6
4	Self-presentation	4
Total		29
Final total		89

The full item list as collated at the end of this stage can be found in Appendix B1.

6.2.4 Format of measurement

Determining the format of measurement is an important part of the scale development and should occur simultaneously with the item generation (DeVellis, 1991). Most scale items consist of two parts: the stem, generally a declarative statement expressing an opinion, and a series of response options, descriptors indicating the strength of agreement with the statement (DeVellis, 1991).

In the present study, all questions were formatted as statements, as were the items selected for inclusion.

With regard to the response format, there are various options available when using self-response scales. Some provide the respondent with a range of options, while others limit the options to simple yes/no responses. A desirable quality of a measurement scale is variability, because this allows for discrimination between subjects and facilitates the assessment of correlations with other measures (DeVellis,

1991). There are two ways to increase opportunities for variability: inclusion of a large number of scale items, or numerous response options.

If a large number of items is included, binary answers may yield sufficient variability when the items are aggregated to obtain a scale score. However, the more items included in a measure, the higher the risk of participant fatigue. In addition, some items do not lend themselves to the use of binary responses.

If only a limited number of items is included, more useful information will be gained from a response format which allows participants to make gradations of response. However, participants' ability to discriminate meaningfully between the options must be taken into consideration. Using numerous response options will not offer benefits if it does not reflect actual differences in the phenomenon being measured.

Another issue which should be considered is the question of whether the number of responses should be even or uneven. In the case of bipolar scales (i.e. one extreme indicating the opposite of the other), an odd number of response options generally allows for equivocation (e.g. neither agree nor disagree), while an uneven number usually forces respondents to make at least a weak commitment to one direction of the scale (DeVellis, 1991).

Since career competencies were thought to develop through experience, it was expected that different individuals would engage in them to different degrees. Therefore, binary yes/no response options were considered too simple to adequately represent the concept, or to effectively serve the idea of self-development. Instead, it was decided to employ a gradual response option format. It was deemed inappropriate to force participants' choices, considering that the CCI was to be used for self-development. Additionally, it was important not to overstretch participants' ability to discriminate between response options. Consequently, it was decided to use a 5-point Likert scale including a neither/nor option.

The Likert scale is the most frequently used scale format (DeVellis, 1991). It usually presents items in a declarative sentence, followed by response options that indicate, at roughly equal intervals, the extent to which subjects agree or disagree with the

statement. Wording the response options using vague quantity descriptors such as ‘few’ or ‘many’ may create problems, because individuals may interpret them in different ways. Presenting the response options with an obvious continuum can reduce some of this ambiguity (DeVellis, 1991). Therefore, depending on the phrasing of the item, one of the following two formats of 5-level response options was employed in this study: strongly disagree (5), disagree (4), neither agree nor disagree (3), agree (2) and strongly agree (1); or, to a very little extent (5), to a little extent (4), to a moderate extent (3), to a great extent (2), to a very great extent (1). Figure 6.1 illustrates the response format as used in this study.

Figure 6.1 Example Selected Response Format

	<i>Strongly agree</i>	<i>Agree</i>	<i>Neither agree nor disagree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
Item declarative statement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6.2.5 Potential response sets

There are potential problems associated with Likert scale measurements that may result in distortions of the data. Participants may, for instance, choose the neutral mid-point to avoid the extreme response categories (central tendency bias). The acquiescence response bias, i.e. the tendency of participants to agree to all questions regardless of their content, may invalidate the responses. In addition, respondents may try to portray themselves in a favourable light (social desirability bias). The latter was not expected to be a problem in the present study, since the survey focused purely on self-development and responses were anonymous. These issues were stressed in the introduction to the survey. The potential problems were addressed by avoiding vague item formulation and ensuring that items were as relevant to the individual as possible (e.g. by presenting them in 1st person and present tense).

6.3 Stage 2: Refinement of initial items through consultation with experts

A review of the initial item pool by experts is an important part of scale development. The review serves multiple purposes related to maximising the content validity of the scale (DeVellis, 1991). Therefore, the initial item set was presented to four experts, together with the definition of career competencies as proposed by this study.

In order to be able to make informed judgements on the items, experts not only had to have knowledge of the subject matter, but also the analytical skills to consider connections between the items and the competency areas. Therefore, the criterion for selection as an expert was having researched career theory. All experts, two of them male and two of them female, were active researchers in the field of career theory. Three of them held senior roles in university departments and had published widely in the field. The fourth was a PhD student. They represented different perspectives, one being from the US with a management background and three from the UK, with a background in psychology.

First, the experts were invited to comment on the relevance of each item to a) the respective sub-dimension/concept, and b) the respective career competency area. Second, the experts' interpretation of the items was assessed. If they understood an item in a way that did not agree with the intention, the respective item was rephrased or removed. Third, experts were asked to evaluate the items' clarity and conciseness. They were invited to point out awkward or confusing items and to suggest alternative wordings. Finally, the experts were asked to point out other concepts that they considered important, that were not already represented in the selected sub-dimensions.

According to the comments of the content experts, items were refined and modified as follows:

- Some items were divided into two different items. For instance, in the case of establishing a mentoring relationship, separate questions relating to formal and informal mentoring were developed.
- Some items were simplified and positively re-phrased, e.g. "I know what work tasks or projects I find boring" was replaced with "I know what work projects interest me"
- References to organisations and the workplace were personalised, e.g. "I keep up with developments in my organisation" instead of "I keep up with developments in the organisation"

In addition, discussions with the experts led to the separation of the knowing-how sub-dimension "Knowledge of politics and opportunity structures" into two separate sub-dimensions: "Knowledge of (office) politics" and "Keeping informed".

Also, one expert suggested consulting further studies on organisational citizenship behaviour (OCB) (e.g. Niehoff & Morrman, 1993; Podsakoff, MacKenzie, Paine & Bachrach, 2000) for item inclusion. Research on the topic of OCB had already been drawn upon for the initial item generation, as reflected by items such as 'I keep up with developments in my organisation' or 'I attend and participate in meetings regarding my organisation' representing the items from the OCB sub-scale of civic virtue used in studies by Podsakoff et al. (1990). There is some conceptual confusion with regards to OCB in the literature (Podsakoff et al., 2000). Different authors propose different forms of OCB, often ignoring important differences between the concepts. The suggested dimensions range from concepts such as conscientiousness and courtesy, to individual development and, as mentioned above, civic virtue (Niehoff & Moorman, 1993). It has even been suggested that without there being a comprehensive theoretical explication of the constructs and their measures, the stream of literature on the subject runs the risk of proving of little value to the field in the long run (Van Dyne, 1995 in Podsakoff et al., 2000). Looking at the range of different forms of OCB and the confusion surrounding the definition of the concept, it was decided, considering Whiddett and Hollyforde's (2003) advice that it was neither possible nor necessary to provide examples of all indicators within a competency, not to pursue the concept of OCB further for the conceptualisation of the three areas of knowing. In addition, a lot of the OCB forms appeared to measure concepts that are closely related to personality such as altruism and conscientiousness. Since this study sought to keep the concepts of competencies and personality separate, using these forms of OCB was thought not to fit the overall approach taken.

Appendix B2 presents a list of the competency items, 91 in total, after this stage.

6.4 Stage 3: Refinement of initial items through a pilot study

In the next step, a pilot study was carried out (n=31), to refine the items further and to assess the suitability of the chosen survey design. This trial aimed to check the readability and unambiguity of the items, as well as the accurate recording of the data (Oppenheim, 1992). It also sought to highlight and eliminate any potential problems which subjects may encounter when answering the questions. Furthermore, piloting the questionnaire allowed for an initial assessment of the content validity of the questions and the likely reliability of the items.

As shown above, each of the three career competency areas contained approximately 30 items. This was considered a satisfactory number because, as Kline (1994) pointed out:

- There should not be so many items in a questionnaire that they result in fatigue or boredom on the part of the participant.
- Reliable scales should ideally include at least 10 items (considering there are three career competency areas, there should be at least 30 items).
- The final number of items is likely to be half the number in the pilot study, i.e. the pilot study should contain at least 60 items.

6.4.1 Method

6.4.1.1 Procedure and sample

The theory underlying the development of the CCI and, hence, the operationalisation of the career competencies, is not police-specific, but applicable to careers in general. Therefore, it was not necessary to involve only police officers in the development stages, although their input was considered important. It was considered preferable to engage a range of individuals working in different contexts, to ensure a general applicability of the CCI.

Table 6.3 Demographics of Pilot Sample (n=31) compared to Main Sample (n=632)

Variable	Frequency pilot sample	Frequencies main sample
Gender		
Male	13	316
Female	18	304
Age		
16 - 25 years	10	82
26 - 35 years	9	184
36 - 45 years	8	208
46 - 55 years	3	120
56 - 65+ years	0	26
Educational level		
GCSE Level	3	209
A-Level	2	125
Degree Level	13	129
Postgraduate Level	11	114
Doctorate Level	2	28
Organisation		
Private sector	11	58
University	3	73
Police	12	447
Other public sector	3	38
Other	2	9

For reasons of availability, a convenience sample was consulted for the pilot study, and, therefore, complete congruence with the main study sample was not achieved (see Table 6.3). Participants were invited to take part in the pilot study via an Email message, which included a link to the survey. Police staff (from the training department), friends and work colleagues were all invited to participate

6.4.1.2 Measure

The 91 items retained and/or developed after consultation with experts were translated into an online survey. An online format was chosen because of a number of advantages over the traditional paper-and-pencil format, such as reduced time for data collection, lower cost, ease of data entry, flexibility of format and ability to capture additional response-set information (Granello & Wheaton, 2004). There are also limitations associated with the online format, e.g. lower response rates, technology errors and measurement errors.

Problems regarding response rates are common to all survey-based data collection methods and were addressed in two ways. First, all studies aimed to have higher level management endorse the survey, to encourage staff to participate. Second, reminder Emails were sent out, in the cases where survey invitations were distributed by Email. This will be described in more detail in the procedural section of each study.

Errors of measurement generally refer to the psychometric implications that result from changing a survey from traditional paper-and-pencil format to an electronic format. The data could be adversely affected, for instance, by respondents not knowing how to correct an error, i.e. a wrong selection. This was addressed through careful survey design. For instance, it was only possible to select one tick-box per question. Problems with technology were anticipated by providing very clear instructions and offering assistance in the case of problems. Therefore, the advantages of taking an online approach were seen to outweigh its disadvantages.

The survey was constructed so that items from different sub-dimensions were on different pages. An introduction page was created, introducing the survey and the aims of the pilot study. In addition, three pages were inserted to collect biographical details. As suggested by Bell (1999), the pilot questionnaire also included questions to collect information on the following:

- How long it took participants to complete the questionnaire

- The perceived clarity of instructions
- Which questions were unclear, ambiguous, or not easy to answer
- Whether the layout of the questionnaire was clear and attractive
- Whether respondents felt that there were major topic omissions.

6.4.2 Analysis and Results

To get an initial idea regarding the reliability of the measure, despite the small sample size, the internal consistency of each of the three areas of knowing was assessed. The results indicated acceptable levels of internal consistency, above the recommended level of .70 (Tabachnick & Fidell, 2001), for all three areas: knowing-why ($\alpha=.81$), knowing-how ($\alpha=.86$), and knowing-whom ($\alpha=.94$). The impact that the deletion of any of the items would have had on the value of the Cronbach alpha was assessed. It could be seen that only a couple of items would have increased Cronbach alpha by their removal, and then only negligibly. This suggested that reliability of the measure could be expected.

Next, the length of time taken to complete the questionnaire was analysed using descriptive statistics in SPSS. Subjects took between 5 and 30 minutes to complete the questionnaire (mean of 12 minutes, standard deviation (SD) of 5 minutes). Since only one participant took 30 minutes (an outlier), the completion time was considered an acceptable length.

Analysis of comments from respondents and further scrutiny of the survey by the researcher resulted in the following changes to the content:

- References to work places and professions were made more explicit e.g. “field of work” was replaced by “work”.
- Some items were further simplified e.g. “I attend and participate in meetings regarding my organisation” was changed to “I take part in meetings about my workplace”.
- A missing response option regarding years of work experience was included.
- Four items were removed that had been found to be too close in content to other items.

In addition, the layout of the questionnaire was slightly altered:

- Questions on the survey pages were put closer together, ensuring people would not have to scroll down the page.

- A bar was included at the bottom of each page, indicating progress regarding completion of the questionnaire.
- Response options were changed, so that only the 5-point Likert scale ranging from “strongly agree” to “strongly disagree” was used.

Participants were asked whether any topics, which they considered important with regard to the three career competency areas, had been overlooked. No input was received, indicating that all the major issues had been covered in the questionnaire. Table 6.4 presents an overview of the concepts following the pilot study, including the number of associated items, plus examples of the items. In total, 87 items were retained.

A full list of the refined items after consultation with content experts and the pilot trial can be found in Appendix B3.

Table 6.4 Overview of Career Competency Concepts and Item Numbers after Pilot Study

Career Competency Area: Knowing why			
<i>No</i>	<i>Concept</i>	<i>No items</i>	<i>Example item</i>
1	Goal setting and career planning	8	I have detailed written career goals.
2	Self-knowledge	10	I know what work tasks or projects I find boring.
3	Career resilience	9	I make suggestions to others even though they may disagree.
Total		27	
Career Competency Area: Knowing how			
<i>No</i>	<i>Concept</i>	<i>No items</i>	<i>Example item</i>
1	Job related performance effectiveness	7	I fulfil the responsibilities specified in my job description.
2	Career related skills	11	I remain current on the trends and developments in my profession.
3	Keeping informed	6	I keep up with developments and changes in my organisation.
4	Knowledge of (office) politics	7	I know what to do to get the most desirable assignments in my area.
Total		31	
Career Competency Area: Knowing whom			
<i>No</i>	<i>Concept</i>	<i>No items</i>	<i>Example item</i>
1	Establishment of mentoring relationship	8	I seek to become acquainted with higher-level managers.
2	Networking	11	I establish professional contacts outside the organisation.
3	Feedback seeking	6	I seek feedback on opportunities I have identified for future career development.
4	Self-presentation	4	I make others aware of the assignments I want.
Total		29	
Final total		87	

6.5 Stage 4: Construction of final measure using a factor analytic and item analytic approach on a large sample

Apart from the development of the CCI, this study aimed to assess the validity of the categorisation of career competencies in three overarching competency areas, as well as the positive correlation between these areas.

6.5.1 Method

6.5.1.1 Procedure and Sample

As mentioned before, the study attempted to engage not only police officers but a wide range of individuals from different organisational backgrounds, to ensure the generalisability of the results. Sampling, however, proved difficult. Four police forces, who had agreed in the preliminary study (see Chapter 5) to be contacted again, were invited to contribute to this stage of the development. Two forces accepted the invitation. In both forces, the project was endorsed by Heads of Departments. The Heads agreed to send the communication regarding the survey to prospective participants, using their names and positions as endorsement of the survey. This was important for overcoming the problem of low response rates that surveys face. One force made their participation dependent on the inclusion of five additional questions on career development issues that related specifically to their organisation. This made it necessary to launch a second survey on a separate site, so that only individuals from this organisation could access it. Emails were sent to a random sample of 1000 individuals in this force, including police officers as well as police staff. The communication provided potential participants with an introduction to the study and a brief description of the survey. It also affirmed confidentiality and the anonymity of participants. Apart from a link to the survey, the Email also contained a deadline for the submission of responses. 365 responses were received.

In the second force that participated, restrictions regarding access to external websites made a different method of data collection necessary. Again, a random sample of individuals from an internal database was contacted via Email. The total number of the sample is unknown to the researcher. However, instead of a link to the survey, participants received the survey as an attachment to the Email, in a html format. This method enabled participants to complete the survey on their computers, and Email it to an external website that anonymised responses. 80 completed surveys were received.

The link to the general survey was also distributed, via Email, to employees in two private sector organisations. From one, a business leader in the design, development and production of rocket motors, gas generators etc., 35 responses were received. The other private sector organisation was an international re-insurer from whom 20 responses were received. As above, Emails included information about the study and a link to the survey. In addition, the link to the general survey was posted on an external website which advertised research and promoted research surveys. Overall, 187 responses to the general survey were received. No information is available regarding the number of individuals who were contacted in the private sector organisations or who accessed the survey via the research website. Therefore, no statement can be made regarding the overall response-rate.

Individuals were given a three-week deadline for receipt of responses. A reminder Email was sent out, where appropriate, a week before the deadline, to encourage a higher response rate (Granello & Wheaton, 2004). In total, 632 responses were received. Sample characteristics are shown in Table 6.5. There are some missing values with regard to the demographic questions and, therefore, values in these categories may not add up to a total of 632.

6.5.1.2 Measure

The survey was launched on a dedicated website through a private provider. The first page of the survey introduced participants to the study and provided information on the structure of the survey and the questions they would be asked. Participants were guaranteed anonymity and assured that no individual data would be published, only aggregated data. It was stressed that the data would be treated confidentially and would only be used for the purposes of this study. It was also pointed out that this study focused on self-development and participants were encouraged to be as honest in their answers as possible. They were asked to answer the questions in respect to their current or latest job only. Participants were at this point also given the Email address of the researcher, in case they had questions regarding the survey, or the research in general. Subsequent pages focused on the collection of demographic information, e.g. gender, age, educational level, years of work experience, organisation (private sector, university, police force, other public sector, or other) and tenure in the organisation. This information was collected for comparison analysis between different groups of participants. These pages were followed by a presentation of the items selected in the above-described development

stages. On the final page of the survey, individuals were thanked and again provided with the researcher's Email address.

Table 6.5 Demographics of Main Sample (n=632)

Variable	Frequency
Gender	
Male	316
Female	304
Age	
16 - 25 years	82
26 - 35 years	184
36 - 45 years	208
46 - 55 years	120
56 - 65+ years	26
Educational level	
GCSE Level	209
A-Level	125
Degree Level	129
Postgraduate Level	114
Doctorate Level	28
Organisation	
Private sector	58
University	73
Police	447
Other public sector	38
Other	9
Years of work experience in total	
Under 1 year	7
1 - 5 years	101
6 - 10 years	89
11 - 15 years	65
16 - 20 years	92
21 - 25 years	110
25 - 30 years	86
Over 30 years	71
Tenure	
Under 1 year	74
1 - 5 years	293
6 - 10 years	103
11 - 15 years	60
16 - 20 years	40
21 - 25 years	29
25 - 30 years	15
Over 30 years	3

6.5.2 Analysis

6.5.2.1 Introduction to Factor Analysis

Factor analysis is used to uncover the latent structure of a set of variables. There are several types of factor analytical approaches, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) being the main procedures. EFA seeks to uncover an underlying structure in a large set of measured variables, the initial

assumption being that every variable may be associated with every factor. In CFA, the researcher has an a priori assumption about the association of variables and factors and selects the variables based on this theory. CFA is used to assess whether the loadings conform with the prediction. In summary, while with EFA the researcher allows the observed data to determine the underlying factor model a posteriori, with CFA a factor model is derived a priori and then evaluated against the goodness of fit to the data (Bryant & Yarnold, 1995). The two techniques are often used in tandem. With samples split randomly in half, EFA can be used on one half to find the underlying factor structure, and CFA can be used subsequently on the other half to refine and confirm the model (Bryant & Yarnold, 1995).

For EFA, there are different factoring methods that usually yield similar final results, especially with large matrices (Kline, 1993). There are two main approaches to identify the underlying dimensions of a data set: principal component analysis (PCA), and factor analysis (FA) (e.g. principal axis factoring). PCA focuses on data reduction. It aims to obtain a relatively small number of dimensions that account for the variability between the items and maximise the amount of the total variance (Bryant & Yarnold, 1995). In FA, “the variance associated with scores on a variable is decomposed into common variance [...] and unique variance” (Briggs & Cheek, 1986, p. 108). FA assumes that responses are based on underlying factors and seeks the least number of factors that maximise the amount of common variance. It is recommended to use FA when one is interested in identifying dimensions that are responsible for a set of observed responses. Since this reflects the aims of the study, FA was applied.

Suitability of data for factor analysis

Before using FA, it needs to be established if the data lends itself to factor analysis. FA is based on correlation analysis and correlation coefficients fluctuate depending on sample size (Field, 2005). That is, sample size is very important if reliable factors are to be obtained (Kline, 1993). Generally, it can be said that larger samples are better than smaller samples, because they tend to minimise the probability of errors, maximise the accuracy of population estimates and increase generalisability of results (Osborne & Costello, 2004). Guilford (1956, in Kline, 1993) argues that 200 participants is the minimum sample size for a good analysis. Other groups of researchers e.g. Guadagnoli and Velicer (1988, in Osborne & Costello, 2004) argue that 300 represents a good sample size, 500 a very good sample size, and 1000 or more an excellent sample size.

One point that leading authorities in the field agree upon is the necessity of having more subjects than variables (Osborne & Costello, 2004). However, there are no generally agreed exact guidelines on subject item ratios for factor analysis (Osborne & Costello, 2004). However, there is a widely-cited rule of thumb from Nunally (1978, in Osborne & Costello, 2004) that the subject-to-item ratio for exploratory factor analysis should be at least 10 to 1. This is a very conservative approach. Barrett and Kline (1981, in Kline, 1993) found that at a ratio of 2 to 1 the main factors were clear and that a ratio of 3 to 1 did not yield an improvement.

Guadagnoli and Velicer (1988, in Stevens, 1992) found that the component saturation and absolute sample size were most important, and not the subject-item-ratio. They stated that components with four or more loadings over .60 in absolute value would be reliable, regardless of sample size.

Osborne and Costello (2004) showed that there is an interaction between sample sizes and subject-to-item ratio and that both concepts influence the “goodness” of exploratory factor analysis or principal component analysis.

However, it is not only sample size and subject-item ratio which are important when deciding if the data is suitable for factor analysis. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is also important (Field, 2005). The KMO indicates the degree of common variance among the variables. The value of KMO varies between 0 and 1. A value of 1 indicates that patterns of correlations are relatively compact (i.e. the variables measure a common factor) and, therefore, factor analysis should yield distinct and reliable factors (Field, 2005). Kaiser (1974, in Field, 2005) states that values greater than .5 are acceptable, .5 - .7 are mediocre, .7 - .8 are good, .8 - .9 are great and above .9 are superb.

Another statistical measure to assess the factorability of the data is Bartlett's test of sphericity, which has to be significant ($p < .05$) for factor analysis to be appropriate. For factor analysis to work, it is important that the original correlation matrix is not an identity matrix, i.e. that there are some relationships between the variables included in the analysis. This is guaranteed by a significant result of the Bartlett's test of sphericity.

Factor Rotation

It is important to obtain a simple structure of factors, as this simplest explanation for the correlations between factors will make them easily interpretable and replicable (Kline, 1993). Simple structure factors have a few high loadings, while the others are zero or close to zero, and are obtained through rotation. Factors can be rotated orthogonally, meaning that they are uncorrelated. However, it has been argued that oblique factor rotation is generally more desirable at early stages of scale development, because it allows for factors to take up any positive relation to each other, imposing fewer constraints (Ferris et al., 2005). Using oblique rotation, factors can be rotated to their simplest position (Kline, 1993). There are numerous oblique rotations available, with direct oblimin being one of the most frequently used methods. Direct oblimin has been shown to get very close to ideal simple structure and to replicate factor structures (Kline, 1990).

Number of factors to be rotated

A common approach is to rotate all the factors with eigenvalues greater than one. However, Cattell (1978, in Kline, 1993) has shown that this leads to an overestimation of the number of significant factors, especially with large matrices. Another method that was demonstrated to provide a reliable criterion for factor selection, especially in samples $N > 200$ (Stevens, 1992), is the scree test (Cattell, 1966, in Kline, 1993). The scree test plots a graph of each eigenvalue against the factor with which it is associated. The point of inflexion on this curve should be used as the cut-off point for the selection of factors, i.e. eigenvalues in the sharp descent before the levelling off should be retained. Identification of the cut-off point requires subjective judgement.

Importance of factors

Generally, researchers consider loadings of .3 and above to be important. Therefore, in the present study loadings of more than .3 were considered significant. Taking into consideration the fact that oblique rotation was conducted, the maximum iterations for convergence (specifying the number of times that the computer will search for an optimal solution) was set to 30, to allow for the large data set (Field, 2005).

Missing values

The data had some missing values. It is important to handle this data correctly, so as not to distort analysis. The problem with missing data is not so much that it reduces

the sample size, but that it may differ in analytically important ways from cases where values are present. There are different ways of treating missing values, e.g. deleting cases or variables, or estimating missing data (including substitution by mean or expectation maximisation) (Tabachnick & Fidell, 2001). However, Tabachnick & Fidell (2001) state that “if only a few data points, say, 5% or less, are missing in a random pattern from a large data set, the problems are less serious and almost any procedure for handling missing values yields similar results” (p. 59). Because the data set was not very big in respect to the subject-item ratio, listwise deletion (as offered by SPSS) was not considered. Pairwise deletion, where cases, which have no data on the variable, are omitted, means that different calculations will utilise different cases (i.e. sample sizes will be different), which is an undesirable effect. Therefore, replacement by mean, the most common method of imputation of missing values used by researchers (Garson, 2005), was used in this study.

Split sample

As mentioned above, if the development sample is large enough, it can be split into two sub-samples. One sample is used as the primary development sample (to conduct factor analysis, compute alphas, evaluate items and arrive at a final version of the scale that appears optimal), and the other to cross-validate the findings (DeVellis, 1991). DeVellis states that formal confirmatory methods are not required to confirm the factor structure on the second sub-sample. Instead, conventional factoring methods can be used, to derive groupings which can be compared to the a priori item groupings the scale developer had in mind. DeVellis suggests that confirmation of an item structure using this approach was more reassuring, because the analysis had not been instructed to look for a specific pattern. In addition, if the alpha values across the two sub-samples remain fairly constant, it can be assumed that these values are not distorted by chance, i.e. that the derived scales are relatively stable (DeVellis, 1991).

6.5.2.2 Factor analysis and results

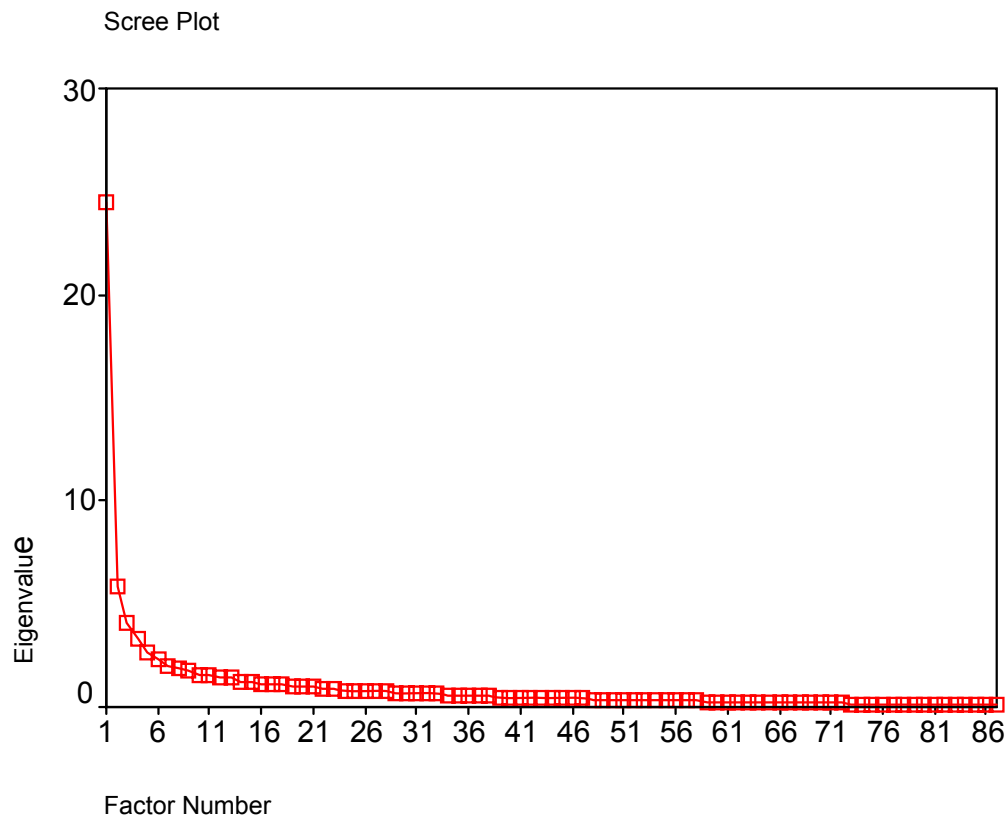
The sample of 632 was split randomly into two groups, G1 and G2. This allowed for a good sample size of 316 subjects and an acceptable subject-item ratio of 3:1.

Chi-square tests were carried out to establish that there were no significant differences between G1 and G2 with regard to the demographic data collected, i.e. age, gender, ethnic minority background, years of work experience, organisational background etc. No significant differences between the groups were found.

Independent-sample t-tests were conducted on all 87 items, to assess whether there were any differences between the two groups in responses to the items. Only 6 of the 87 items showed statistically significant differences across groups ($p < 0.05$). Therefore, it was concluded that the sample had been split in a random yet unbiased way.

The data for G1 was subjected to principal axis factoring using SPSS. The Bartlett test of sphericity was significant ($p = .000$) and the KMO measure of sampling adequacy was .919, suggesting that the data was suitable for factor analysis. The eigenvalue distribution of the scree plot suggested that either 6 or 7 factors should be extracted (see Figure 6.2).

Figure 6.2 Scree Plot Group 1 Factor Analysis



Since the three career competency areas were claimed to be theoretically correlated, oblique rotation was chosen as the rotation method. The factors were extracted using direct oblimin rotation and the factor solutions were examined. The pattern

matrix that contains information about the unique contribution of a variable to a factor was used as the basis for the interpretation of the sub-dimensions. In addition, the structure matrix that takes the relationships between the factors into consideration was consulted, to cross-check if the same factors emerged.

The derived correlation matrix showed that the factors were interrelated, justifying the oblique rotation approach and suggesting that the constructs were also interrelated. The 6- and the 7-factor solutions were compared. The 7-factor solution was chosen because it accounted for more common variance (i.e. 48% instead of 46%). The 7-factor solution also offered a clearly identifiable factor structure, hence providing more diversified information on career competencies. Table 6.6 indicates the variance explained by each factor and Table 6.7 presents the loadings of the items on the respective factors. Looking at the items that loaded on each factor, the factors were described as follows: feedback seeking and self-presentation (FSSP), job-related performance effectiveness (JPER), goal setting and career planning (GSCP), self-knowledge (SELF), career guidance and networking (GNET), career-related skills (CRS), knowledge of office politics (POL).

Table 6.6 Total Variance Explained by Factors (G1)

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	24.123	27.413	27.413	23.636	26.859	26.859
2	6.619	7.521	34.934	6.139	6.976	33.835
3	4.403	5.003	39.937	3.977	4.519	38.354
4	3.307	3.758	43.696	2.783	3.163	41.517
5	2.554	2.902	46.597	2.037	2.315	43.832
6	2.199	2.499	49.097	1.735	1.972	45.804
7	2.135	2.426	51.523	1.612	1.832	47.636

Extraction Method: Principal Axis Factoring.

The first five factors had at least four variable loadings of above .6 which, according to Guadagnoli and Velicer's (1988, in Stevens, 1992), indicates their reliability.

Overall, Hypothesis 1 was not supported. Instead of the expected three-factor structure, a seven-factor structure emerged.

Table 6.7 Pattern Matrix Principle Axis Factoring G1 (n=316)

	Factor						
	1 FSSP	2 JPER	3 GSCP	4 SELF	5 GNET	6 CRS	7 POL
whom4.2	.714						
whom4.3	.706						
whom4.1	.684						
whom4.4	.681						
whom3.6	.644						
whom3.4	.630						
whom3.5	.613						
whom3.3	.569						
whom3.2	.554						
whom3.1	.511						
whom2.10	.466						
whom2.7	.405						
whom2.9	.395				.384		
whom2.11	.382						
whom1.7	.327						
whom1.8	.322						
why3.4							
how1.5		.841					
how1.6		.838					
how1.2		.794					
how1.7		.745					
how1.4		.715					
how1.1		.712					
how1.3		.588					
why3.5		.485					
why3.6							
why1.3			.863				
why1.6			.850				
why1.2			.828				
why1.5			.812				
why1.8			.669				
why1.4			.646				
why1.7			.627				
why1.1			.604				
why2.10			.355	.313			
whom1.1			.304				
why2.9				.684			
why2.1				.667			
why2.2				.661			
why2.8				.656			
why2.7				.580			
why2.5				.565			
why2.3				.522			
why2.4				.500			
why2.6			.328	.394			
why3.8							
whom2.3					.644		

whom2.5				.640		
whom1.5				.608		
whom1.4				.595		
whom2.8				.541		
whom2.4				.510		
whom2.2				.463		
whom2.1				.452		
why3.7				.418		
whom1.3				.417		
whom2.6	.345			.416		
whom1.6				.361		
whom1.2				.303		
why3.3						
how3.1					-.651	
how2.5					-.614	
how2.7					-.589	
how2.6					-.556	
how3.4					-.551	
how3.2					-.542	
how2.10					-.529	
how2.9					-.528	
how3.5					-.517	-.302
how2.1					-.472	
how2.11					-.461	
how3.3					-.459	
how2.4					-.449	
how2.2					-.395	
how2.8					-.380	
how4.7					-.359	
how2.3					-.330	
how4.1						
how4.6						-.627
how4.3						-.627
how4.5						-.570
how4.4						-.545
how4.8						-.498
how4.2						-.349
why3.2						-.320
why3.9						
why3.1						

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

Only loadings >.3 displayed

6.5.2.3 Introduction to the scale development approach

Item analyses (including reliability analyses) were used in the scale development.

While the term ‘factor’ refers to all the items that load on it, the term ‘scale’ refers to the items retained in the analysis with loadings of .3 and above on the respective factor. In the context of this study, scales consist of items that indicate the level of the construct, i.e. indices of the respective competency dimensions.

Item analysis uses two indices to determine item-selection: the p-value for each item and the item-total correlation.

Discriminatory value

The p-value is concerned with the discriminatory value of an item. It is the proportion of participants passing the item, i.e. getting the item correct. Items are rejected if they are poor discriminators between good and poor performers. In situations such as this one, where there are no right and wrong answers, and where responses are expected to be normally distributed, using the p-value for item selection would not be appropriate. However, the discriminatory value of an item can also be inferred from its degree of variance. A relatively high degree of variance indicates a good spread of responses from participants on the item, i.e. good discrimination. Low variance, on the other hand, suggests that the item will not discriminate well among individuals and, therefore, would not be of much value (DeVellis, 1991).

Homogeneity

The item-total correlation is concerned with the homogeneity of an item set and can be calculated using the Pearson product moment correlation coefficient. However, it has been pointed out that a larger range than the commonly used five-point scale is a requirement for this method to yield meaningful results (Kline, 1993). Another approach to establish homogeneity is through item-scale correlations. There are two methods of assessing item-scale correlations. The corrected item-scale correlation compares the item to the remaining set of scale items, excluding the item itself. In an uncorrected item-scale correlation, the item is correlated to all the items in the scale, including itself. However, the inclusion of the item in the scale can inflate the correlation coefficient. Therefore, examining the corrected item-total correlation is advised (DeVellis, 1991).

Another index that provides valuable information about the item homogeneity of a scale is internal consistency. This is most important in scale development. Internal consistency answers the question of whether the scale consistently reflects the construct it is measuring, i.e. it gives an indication of the proportion of variance in the scale scores that is attributable to the true score. As mentioned above, the more reliable a measure, the lower the random error. Internal consistency is usually measured using Cronbach's alpha (α). This assesses within-scale item intercorrelation. As briefly mentioned above, it is generally agreed that for a psychometric measure to be considered reliable, Cronbach's α should be above .7 (Tabachnick & Fidell, 2001). However, this reliability measure has been criticised for various reasons. First, it depends on the number of items in the scale - α will increase as the number of items increases. Second, it is prone to become an exaggerated specific when redundant items are used (Boyle, 1991). Third, while it incorporates the portion of measurement error that is due to item sampling, it ignores other potentially important sources of measurement error (Gerhart, Wright, McMahan & Snell, 2005). Overall, internal consistency measures may yield incomplete and overly optimistic estimates of reliability. Therefore, they should be interpreted with caution (Bartram, 1990), taking other issues (such as number of items) into account.

Scale length

As mentioned above, the internal consistency reliability of a scale is influenced by the number of items in the scale. While shorter scales are usually recommended, because they place less of a burden on the respondents (DeVellis, 1991), longer scales are generally more reliable. Therefore, an optimal balance between brevity and reliability must be achieved. If the item-scale correlations are about equal to the average inter-item correlation, adding more items will increase coefficient alpha while removing them will lower it.

6.5.2.4 Scale development

First, the discriminatory value of each item was assessed and items were deleted if they exhibited little variance (SD below .50). Then, the final sub-scales were developed, using the above-introduced criteria regarding scale length and consistency in an iterative procedure. The homogeneity indexes were computed in tandem with item removal, until an acceptable trade-off between coefficient alpha and scale length was achieved.

The coefficient alpha of each sub-scale was initially calculated based on the total number of items loading above .3 on each factor. Then, items were removed following the procedure described below:

1. The number of items in each sub-scale was scrutinised
2. The item-scale correlation was assessed
3. The alpha coefficient was computed using SPSS
4. The weakest item was identified i.e.
 - a. The item whose omission had the least negative or most positive effect on the coefficient alpha and/or
 - b. The item with low corrected item-scale correlations and/or
 - c. The item very similar in content to other items in the sub-scales and whose omission had the least negative impact on the coefficient alpha
5. Steps 1 to 4 were repeated until an acceptable trade-off between length and reliability was achieved, i.e. until the alpha coefficient no longer increased/decreased significantly. The final alpha levels of the sub-scales can be found in Table 6.8, below. They show acceptable levels, comparable to the equivalent scales introduced in Chapter 2.

Table 6.8 Cronbach alpha Reliabilities of final Sub-Scales (n(G1)=n(G2)=316)

Sub-scale	G1 Cronbach α	G2 Cronbach α
Goal setting and career planning	.91	.89
Self-knowledge	.81	.86
Job-related performance effectiveness	.89	.90
Career-related skills	.86	.86
Knowledge of (office) politics	.83	.77
Career guidance and networking	.89	.89
Feedback seeking and self-presentation	.92	.91

After the removal of the items, the factor analysis was run again, to ensure that the deletion of the items had not affected the factor structure (Field, 2005). The final CCI, containing 43 items, can be found in Appendix B4.

6.5.2.5 Construct validity

Replication of Factor Structure

A next step sought to replicate the factor structure, in order to provide evidence of the construct validity of the CCI. G2 was subjected to an identical factor analysis to G1. Comparisons between the two analyses were made, following an approach presented by Hashemi (1981, in Kline, 1994). He compared the factor structure of the EPQ in four samples. The average percentage of items with their highest loading on keyed scales was 94%, which was deemed acceptable. The average percentage of items loading with their highest loading on keyed scales in this study is 97%, which according to this criterion, is an acceptable value. Apart from two dimensions (knowledge of politics, and self-presentation and feedback seeking) that were missing one item each, the structures of the sub-scales were replicated by the factor analysis of the responses of G2 (see Table 6.9). Hashemi also looked at the mean absolute factor loading of scale items and found a minimum of 0.37 and a maximum of 0.51, with a mean of 0.43. In the present study, the minimum factor loading was 0.49 and the maximum was 0.80, with a mean of 0.65. Using these criteria, the factor structure of the scales can be said to have been well replicated in G2.

The internal consistency values of the sub-scales for sample G2 were also computed. They remained fairly constant compared to sample G1 (see Table 6.8), suggesting that these values were not distorted by chance, i.e. that the derived scales are relatively stable (DeVellis, 1991).

Table 6.9 Number and Percentage of Items with their Highest Loading on Keyed Scale

Scale	No of items	Group 1	Group 2
1. Self-presentation and feedback seeking	8	8 (100%)	7 (87.5%)
2. Job-related performance effectiveness	5	5 (100%)	5 (100%)
3. Goal setting and career planning	5	5 (100%)	5 (100%)
4. Self-knowledge	5	5 (100%)	5 (100%)
5. Career guidance and networking	8	8 (100%)	8 (100%)
6. Knowledge of (office politics)	5	5 (100%)	4 (80%)
7. Career-related skills	7	7 (100%)	7 (100%)

Table 6.10 Mean Loadings of the Represented Sub-Scale Items

Scale	Group 1	Group 2
1. Self-presentation and feedback seeking	0.62	0.62
2. Job-related performance effectiveness	0.79	0.80
3. Goal setting and career planning	0.80	0.75
4. Self-knowledge	0.65	0.71
5. Career guidance and networking	0.50	0.50
6. Knowledge of (office politics)	0.59	0.60
7. Career-related skills	0.49	0.61

Convergent and divergent validity

As described above, convergent and discriminant validity are both aspects of construct validity. The career competency areas measure similar concepts and are, therefore, expected to share an amount of covariation (i.e. be positively correlated) as stated in Hypothesis 2. If this proved to be the case, this could be seen as evidence for the construct validity of the CCI. The correlations would provide evidence of similarity between the sub-scales as measures of theoretically related constructs and, therefore, be indicative of convergent validity.

To test for covariance, a comparison of the inter-correlations between the factored scales was carried out. The values of items within a sub-scale were summed and divided by the number of items in the sub-scale. This gave an overall sub-scale score on a common range between 1 and 5. Table 6.11 (below) shows the individual and mean correlations between the scales. Almost all the sub-scales were significantly correlated in both G1 and G2. The inter-correlations between the sub-scales in G1 and G2 were similar, with a mean scale inter-correlation of 0.31 for G1 and 0.37 for G2. These findings were in accordance with the underlying theory of interdependence between the career competencies and supported Hypothesis 2.

If the sub-scales measured one overarching concept of career competency, they could be expected to converge conceptually and statistically into a higher order construct (i.e. the sum of the sub-scales should be interpretable as an indicator of overall career competency). One way to assess this is through conducting a second-order factor analysis (Briggs & Cheek, 1986). This procedure assesses the common variance shared by the first order factors, obtained in the initial factor analysis using oblique rotation.

Table 6.11 Individual and Mean Correlations between the Sub-Scales in G1 (n=316) and G2 (n=316).

		GSCP	SELF	JPER	CRS	POL	GNET
SELF	G1	0.23**					
	G2	0.22**					
	<i>Mean</i>	0.23					
JPER	G1	0.12*	0.35**				
	G2	0.10	0.31**				
	<i>Mean</i>	0.11	0.33				
CRS	G1	0.40**	0.38**	0.45**			
	G2	0.47**	0.33**	0.34**			
	<i>Mean</i>	0.44	0.36	0.40			
POL	G1	0.23**	0.41**	0.36**	0.39**		
	G2	0.34**	0.38**	0.26**	0.43**		
	<i>Mean</i>	0.29	0.40	0.31	0.41		
GNET	G1	0.40**	0.23**	0.13*	0.54**	0.45**	
	G2	0.55**	0.29**	0.21**	0.61**	0.44**	
	<i>Mean</i>	0.48	0.26	0.17	0.58	0.45	
FSSP	G1	0.46**	0.27**	0.24**	0.62**	0.42**	0.74**
	G2	0.53**	0.33**	0.24**	0.60**	0.43**	0.74**
	<i>Mean</i>	0.50	0.30	0.24	0.61	0.43	0.74

GSCP – Goal setting and career planning, SELF – Self-knowledge, JPER – Job performance, CRS – Career skills, POL – Knowledge of (office) politics, GNET – Career guidance and networking, FSSP – Feedback seeking and self-presentation

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

It is hypothesised that all seven career competency sub-scales will have substantial loadings on a single second-order factor, representing the general career competency construct. Initial principal axis factoring of the G1 sub-scales revealed the presence of two factors with eigenvalues exceeding 1, explaining 42.7 per cent and 7.7 per cent of variance respectively. However, an inspection of the factor matrix showed that all sub-scales loaded highly (above .4) on the first factor, suggesting that they measure one over-arching concept. Therefore, in a second step only this factor was extracted. The loadings of the sub-dimensions on the extracted single factor are presented in Table 6.12.

Table 6.12 Second-Order Factor Loadings for Career Competency Sub-Scales

Sub-scales	Loading
Goals setting and career planning	.55
Self-knowledge	.44
Job-performance	.38
Career skills	.78
Knowledge of (office) politics	.59
Career guidance and networking	.79
Feedback seeking and self-presentation	.83

If the career competency sub-dimensions are measuring different aspects of career competency, they would also be expected to show a degree of discrimination

between them. Discriminant validity of the sub-scales can be assumed if the individual scale reliabilities are meaningfully higher than the average inter-scale correlations. Discriminant validity was analysed, assessing the respective values for the original G1 sample data. The average inter-scale correlation of .31 differs substantially from the average Cronbach α of .88, indicating good discriminant validity between the sub-scales.

6.5.2.6 Exploration of the sub-scales

To explore the sub-scales further, the overall score on the CCI was calculated as a sum of all the sub-scales divided by the number of sub-scales. Means, standard deviations and ranges are provided in Table 6.14 for the whole sample (G1 and G2 combined; $n=632$), broken down by age, gender and organisation. The relationship between the sub-scale scores and the overall calculated career competency score was investigated using Pearson product-moment correlation coefficient. There was a strong positive correlation (p (one-tailed) $<.01$) between the variables and the overall CCI score (see Table 6.13).

In the next step, the differences between the sub-scales across age-groups, gender and type of organisation were analysed. Comparing groups of individuals on a range of different but related characteristics (e.g. the career competency sub-scales) can best be conducted using multivariate analysis of variance (MANOVA). MANOVA looks at the mean differences between the groups, assessing whether they have occurred by chance. It also provides univariate results for each of the dependent variables (i.e. career competency sub-scales) by means of creating a new summary dependent variable (a linear combination of each of the original dependent variables) and conducting an analysis of variance using this new combined dependent variable.

Table 6.13 Correlation between the Sub-Scales and the overall CCI Score ($n=632$)

Sub-scale	Correlation with overall CCI score
Goal setting and career planning	.68**
Self-knowledge	.51**
Job-performance	.46**
Career skills	.78**
Knowledge of (office) politics	.65**
Career guidance and networking	.82**
Feedback seeking and self-presentation	.85**

** $p<.01$ (1-tailed)

Table 6.14 Descriptive Statistics of CCI Factor derived Sub-Scales (n=632)

	GSCP	SELF	JPERF	CRS	POL	GNET	FSSP	Total CCI
<i>Descriptives</i>								
<i>whole sample</i>								
Mean	2.63	1.85	1.70	2.40	2.11	3.36	3.03	2.44
No of items	5	5	5	7	5	8	8	43
SD	0.89	0.45	0.54	0.73	0.60	0.89	0.90	0.51
Range	1.00-5.00	1.00-3.60	1.00-4.00	1.00-5.00	1.00-5.00	1.00-5.00	1.00-5.00	1.03-3.89
<i>By gender</i>								
Male	2.63	1.87	1.74	2.42	2.18	3.53	3.09	2.51
Female	2.52	1.82	1.64	2.39	2.05	3.15	2.95	2.36
<i>By age in years</i>								
16 – 25	2.43	1.91	1.72	2.33	2.10	2.92	2.78	2.31
26 – 35	2.43	1.83	1.72	2.35	2.13	3.16	2.79	2.34
36 – 45	2.83	1.87	1.66	2.42	2.12	3.54	3.17	2.52
46 – 55	2.78	1.79	1.67	2.45	2.14	3.60	3.24	2.52
56 – 65+	2.61	1.83	1.89	2.69	1.90	3.48	3.43	2.51
<i>By organisation</i>								
Private sector	2.72	1.84	1.74	2.41	2.04	3.12	2.84	2.39
University	2.25	1.71	1.75	2.15	1.94	2.89	2.82	2.22
Police	2.74	1.89	1.69	2.49	2.17	3.53	3.14	2.52
Other public sector	2.11	1.76	1.68	1.96	1.92	2.64	2.47	2.10
Other	2.33	1.73	1.47	1.98	2.03	2.75	2.60	2.13
<i>By tenure in years</i>								
Under 1	2.14	1.70	1.62	2.11	1.99	2.75	2.54	2.12
1 – 5	2.52	1.87	1.70	2.42	2.10	3.09	2.84	2.36
6 – 10	2.64	1.85	1.75	2.25	2.11	3.35	2.91	2.40
11 – 15	2.81	1.92	1.62	2.55	2.10	3.57	3.22	2.55
16 – 20	2.82	1.90	1.71	2.53	2.17	3.78	3.36	2.60
21 – 25	2.78	1.79	1.72	2.30	2.17	3.60	3.15	2.50
25 – 30	2.80	1.82	1.66	2.56	2.18	3.72	3.23	2.58
Over 30	2.64	1.82	1.88	2.49	2.01	3.37	3.31	2.53

Using MANOVA instead of a series of univariate analyses of variance (ANOVAS) which compare groups on a single dependent variable has the advantage that it reduces the risk of an inflated type 1 error. In other words, running multiple ANOVAS is more likely to find significant results, even though there are no real differences between the groups. MANOVA adjusts for this increased risk of type 1 error. In addition, MANOVA takes into account the relationship between the outcome variables, information that would be lost if using separate ANOVAs for every variable. However, MANOVA is a more complex procedure, which requires a number of additional assumptions to be met.

A three-way between-groups multivariate analysis of variance was performed to investigate sex, age and organisational differences in career competency. The seven sub-scales, goal setting and career planning, self-knowledge, job-performance, career skills, knowledge of (office) politics, career guidance and networking, and feedback seeking and self-presentation, were used as dependent

variables. Sex, age and organisation were used as independent variables. Preliminary assumption testing showed that normality and linearity of the data could be assumed.

MANOVA is very sensitive to cases that differ substantially from the main trend of the data. Therefore, the data was checked for univariate and multivariate outliers. First, Mahalanobis distances, i.e. the distance of cases from the mean(s) of the dependent variables (i.e. the career competency sub-scales), was calculated. The results indicated multivariate outliers in the data. These were identified using the explore function in SPSS. Tabachnick and Fidell (2001) point out that, compared to univariate outliers, the influence of multivariate outliers is more difficult to reduce, because they respond less well to transformation and score alteration. Since only eight of the 632 cases were found to present multivariate outliers, they were deleted from the data set. Subsequently, the assumption of multicollinearity was tested, and no serious violations were noted.

Levene's Test of Equality of Error Variance showed severe violations of this assumption for the variables of goal setting and career planning, job-performance and knowledge of (office) politics. Violations of homogeneity can be corrected by transformation of the dependent variable scores. However, this limits the interpretation of these scores. To avoid this limitation, untransformed scores can be used with a more stringent alpha level to determine the significance for that variable in the univariate F-test. In the case of severe violations, Tabachnick and Fidell (2001) suggest using an alpha of .01 instead of a nominal .05. An alpha of .01 was used in this study.

There are various multivariate test statistics available that provide information on the significance of the differences among the groups on a linear combination of the dependent variables. The test of significance recommended for use in the case of violations of assumptions is Pillai's Trace, because of its power and robustness (Tabachnick & Fidell, 2001). Only if multivariate effects are found is it useful to examine univariate differences. Higher order (interaction) effects are analysed first, before lower order (main) effects are examined.

There was a significant difference between males and females on the combined dependent variable: $F(7, 519)=3.10$, $p=.003$, Pillai's Trace=.04; partial eta squared=.04. Furthermore, there was a significant difference between the types of

organisations on the combined dependent variable: $F(7, 519)=1.81$, $p=.006$, Pillai's Trace=.10; partial eta squared=.03. No interaction effects were found between the age groups. In order to analyse the group differences in more detail, separate multivariate analyses of variance for gender and organisation were conducted.

Using the criteria of a Bonferroni adjusted alpha level of .01 for gender, only the differences in networking and mentoring reached statistical significance: $F(7, 519)=22.50$, $p=.000$, partial eta squared=.02. The latter value indicates the effect size. Using Cohen's (1988, in Field, 2005) widely accepted guidelines for interpreting this value ($r=.10$ = small effect, $r=.30$ = medium effect and $r=.50$ = large effect), the result indicates a small effect. An inspection of the mean scores indicated that females reported slightly higher career guidance and networking behaviours, knowledge and skills ($M=3.16$, $SD=0.89$) than males ($M=3.52$, $SD=0.86$).

Analysing the differences between organisations for the career competencies separately, all dependent variables except job-related performance effectiveness reached statistical significance, $p<.01$ (see Table 6.15).

Post-hoc comparison of the significant findings using the Tukey HSD test highlighted a range of significant differences between organisations with regard to the career competencies. Below, only the significant differences relating to the police forces are described. Additional details on organisational differences can be found in Appendix B5.

Table 6.15 Results MANOVA Analysis Regarding Organisational Differences (n=632)

Dependent Variable	df	F	Sig.	Partial Eta Squared
GSCP	4	7.591	.000	.054
SELF	4	3.481	.008	.025
JPER	4	.727	.574	.005
CRS	4	7.396	.000	.053
POL	4	3.726	.005	.027
GNET	4	16.525	.000	.110
FSSP	4	6.797	.000	.049

The results of the Tukey HSD showed that for each of the analysed career competencies, the mean scores for police forces differed significantly from one or more of the other organisational groups. With regard to goal setting and career

planning, the police ($M=2.72$, $SD=0.86$) appeared to differ from university ($M=2.24$, $SD=0.77$) and other public sector organisations ($M=2.12$, $SD=0.86$), indicating that the police group engaged less in goal setting and career planning than the other two groups. Looking at self-knowledge, the police group appeared to be significantly less self-aware ($M=1.89$, $SD=0.43$) than the university group ($M=1.71$, $SD=0.46$). Also, the results suggested that the police group demonstrated significantly fewer career-related skills ($M=2.48$, $SD=0.69$) than the university group ($M=2.15$, $SD=0.63$) and respondents from other public sector organisations ($M=1.97$, $SD=0.57$). With regard to knowledge of (office) politics, the police group ($M=2.15$, $SD=0.54$) appeared to differ significantly from respondents from other public sector organisations ($M=1.86$, $SD=0.53$). The results also indicated that with regard to career guidance and networking, the mean score for the police group ($M=3.54$, $SD=0.85$) was significantly different from private sector organisations ($M=3.13$, $SD=0.82$), universities ($M=2.89$, $SD=0.89$), and other public sector organisations ($M=2.65$, $SD=0.68$). This suggested that respondents from police forces engaged less in career guidance and networking activities than participants from the other organisations. The police ($M=3.13$, $SD=0.88$) also appeared to differ significantly from other public sector organisations ($M=2.45$, $SD=0.81$) with regard to their engagement in feedback seeking & self-presentation. Most of these differences, though significant, had a small effect size (eta squared $<.02$), except for career-related skills and career guidance and networking (eta squared $>.06$).

6.6 Discussion

The studies presented in this chapter resulted in the development of the CCI. The attempt to provide support for the proposed three-factor structure of career competency (Hypothesis 1) failed. Instead, the following 7-factor structure emerged: goal setting and career planning, self-knowledge, job-performance, career-related skills, knowledge of (office) politics, career guidance and networking, and feedback seeking and self-presentation (see Table 6.16).

Table 6.16 Description of Seven CCI Sub-Scales

Sub-scale	Description
Goals setting and career planning	This competency looks at how clear you are about your career goals and your strategy to achieve them. It reflects the extent to which you revise your career goals based on new information you receive about yourself or your situation. It also looks at the extent to which you are aware of what you need to do to achieve your career goals, and the plan you develop to do so.
Self-knowledge	This competency describes your level of self-awareness. It refers to the extent to which you know your strengths and weaknesses, as well as the things you can and cannot do well. Self-knowledge also looks at your awareness of your personal interests and values. It describes how well you know what features of a job are important to you, and what tasks and projects are of particular interest to you.
Job-performance	This competency looks at your performance in your job. It describes the extent to which you fulfil the responsibilities specified in your job description. It includes the fulfilment of the duties required by your role, and your performance in the activities listed in the competency framework. Furthermore, job performance also refers to your ability to meet deadlines and to deliver high quality work.
Career-related skills	This competency looks at your investments into the development of skills and expertise. It describes how far you are engaged in the expansion of a work-related knowledge base, that may be needed in future positions, and which makes you distinctive. It also refers to the extent to which you engage in development activities, seek training opportunities, and take job-related courses. Furthermore, this competency refers to how informed you keep yourself on developments in your profession.
Knowledge of (office) politics	This competency looks at your awareness and knowledge of the influencing structure in your workplace. It gives an account of the extent to which you can identify the people who are most influential in your workplace, as well as those who are important for getting the work done. It also refers to your understanding of the motivation behind other peoples' actions and your ability to influence people at work.
Career guidance and networking	This competency relates to the relationship side of career development. It describes the extent to which you establish relationships with others who are able to support you with your career development. It looks at behaviours such as introducing yourself to individuals who can influence your career, and keeping in contact with people who hold important positions. This networking aspect is not restricted to individuals and groups inside your organisation, but includes external sources and contacts. Furthermore, this competency describes how far you are seeking guidance on career-related issues from your supervisor or others.
Feedback seeking and self-presentation	This competency describes your active engagement in a two-way process with other people which aims to support your personal career development. On the one hand, it looks at the extent to which you present yourself and your work to others. This involves making others aware of the work you have done, drawing their attention to the work you would like to do, and making them aware of your aspirations. This competency also describes the extent to which you invite feedback from others. Specifically, it looks at the feedback you seek on issues such as your career progress, job performance, and training and development needs. It also considers the input you invite from others on opportunities you have identified for future career development. The person approached for feedback can be your immediate supervisor, or other individuals such as colleagues or friends.

Some of the concepts expected to load onto one of the three career competency areas remained as single factors (i.e. as career competency sub-scales in their own right) e.g. job-related performance effectiveness, and goal setting and career planning. This suggested that the items representing these concepts were not similar enough, with regard to what they measured, to load onto one factor. Instead, they appeared to belong to different clusters of variables. For instance, items measuring goal setting and career planning and self-knowledge, while conceptually similar, were not similar enough to load onto one factor.

Conversely, some items expected to measure different concepts loaded onto one factor and were subsumed accordingly e.g. establishment of mentoring relationship and networking.

A possible explanation may be found in the choice of concepts to represent knowing-why, knowing-how and knowing-whom. On the one hand, some concepts may have been too dissimilar, or may not have fitted their proposed career competency area. However, this is unlikely, since the selection was based on the conceptual definition of the career competency areas and confirmed by subject matter experts. On the other hand, the loading of items from different concepts onto the same factor suggested some concepts to be very similar. For instance, networking and mentoring both relate to very similar behaviours, i.e. interacting with others with the aim of obtaining information or support. This would explain the loading of the respective items onto one factor. Similar to this, feedback seeking and self-presentation are concepts that build on personal assertiveness, which might be the reason for them emerging as one factor. However, the activities underlying these four concepts are different which would explain why they do not emerge as one “knowing-whom” factor. Career guidance and networking do not automatically increase individuals’ likelihood of advancing within the organisation. For instance, Eby et al. (2005) found that formal mentoring does not necessarily enhance protégés’ promotability and visibility.

In addition, some of the concepts chosen did not feature at all in the sub-scales developed on the basis of the factor analysis e.g. career resilience, keeping informed. Concept and/or item selection might be responsible for this. The items chosen to represent career resilience, for instance, might not have been clear cut enough to emerge as one factor, i.e. the inter-relationships between the items might not have been high enough. Furthermore, the fact that career resilience did not

cluster together with other concepts selected to represent knowing-why suggested conceptual differences. This is not to say that career resilience is not of importance for career development, but that its items do not correlate as a concept with any of the other selected concepts. As such, it does not appear to measure aspects of career competency as conceptualised in this study. Following the advice by Whiddett and Hollyforde (2003) that it was not necessary to include all aspects of competency, these concepts were, therefore, excluded from further use.

Overall, the emergent 7-factor structure may suggest that the concept of career competencies is too complex to be grouped into three broad areas of knowing.

There are some issues related to the use of a factor analytic approach that must be taken into consideration when interpreting the results of this study (Kline, 1990). The main potential problem is more an issue of interpretation than statistical artefact. Factor analysis does not provide unequivocal results, but is subject to interpretation (Kline, 1990). The researcher's judgement regarding factor extraction and subsequent explanation of the factors has a direct impact on the outcomes of the analysis. This can be compounded by tautologous factors. If some items are essentially paraphrases of other items, a factor analysis will produce a set of related factors that are simply repeats of the same factor. With only paraphrases and no other items loading on them, the factors are merely 'bloated specifics' (Cattell, 1957, in Kline, 1990). In the present study, factor analysis and subsequent scale development resulted in some sub-scales containing only five items, all similar in content. To rule out the possibility of bloated specifics and to cross-validate and confirm the factor-structure as emerged here, further replication studies (possibly involving a larger set of items, representing all seven identified competency areas) are necessary.

From a theoretical perspective, since the intelligent career model emphasises the inter-relationship of the three areas of knowing, taking a factor analytic approach may appear restrictive. The theoretical assumption of inter-relatedness of the career competency dimensions has been supported by the results of this study. In line with Hypothesis 2, the career competency dimensions have been found to be positively correlated with each other. In factor analysis, factors attempt to account for correlations between items. Even oblique rotation, which allows for the factors to be interrelated, forces the data into a certain format. Constructing the CCI using a factor analytical approach does not make allowances for the fact that the relationship

between factors may change over time. Instead, it is assumed that the multicollinearity between the sub-scales is lasting. All this suggests that the findings of this study and the factor analysis should not be interpreted strictly. As mentioned earlier, career competency areas that were rejected on the basis of the results of the analysis are not necessarily of less importance than those which were accepted. The rejected career competency areas were simply not needed to describe the present data.

Another issue that deserves mention is the scale length. Kline (1993) suggested that a reliable scale should consist of at least ten items. The initial item generation was geared towards meeting this requirement, taking an over-inclusive and generous approach to item selection. However, the seven-factor structure which emerged from the scale development did not meet this criterion. On the other hand, several studies, consulted during the item generation stage, used scales consisting of less than ten items. These scales had been shown to be of value in the contexts in which they had been applied (e.g. Callanan & Greenhaus, 1990; Kossek et al., 1998). Given that the scales fulfilled other criteria (e.g. internal consistency and item-scale correlation), it was considered acceptable to retain the seven-factor structure.

The study did provide initial evidence for the construct validity of the CCI. The factor structure could be replicated using a split-sample approach. Furthermore, evidence for both convergent and divergent validity was presented. However, these focused mainly on the CCI itself. Therefore, further evidence of construct validity must be provided, using other measures (i.e. a multi-trait approach). This will be the focus of the next chapter.

With regard to a normative analysis of the data, the results suggested that there was no noticeable effect size between gender and age groups. Whilst no firm conclusions can be drawn from this, since this study used cross-sectional data, it suggests that the employment of career competencies is relatively stable over time. It has to be noted though that the older age groups were not as well represented as the younger age groups (see Table 6.5). This may partly be due to the fact that some of the samples may have contained a slight age skew due to their organisational nature and characteristics (e.g. see discussion age of police officers in Chapter 4). The analysis of potential age skews in the different samples was not part of this study. Should there have been an age skew, its influence would have been reduced by the combination of the different samples to a larger group that presented

close to normal-distribution characteristics. In addition, as mentioned above, age was found not to affect the scores on the CCs. However, this only reflects the quantity of the respective behaviour but not its quality. It is expected that individuals with more working experience engage in career competencies on a different level than novices. It remains for future studies to analyse any qualitative differences between age groups, looking into the potential impact age skewing in different organisations may have on the results.

Significant differences of small to moderate effect were found between organisational groups. On closer inspection, results indicated that the police respondents rated themselves lower on all career competencies except job performance, compared to other organisations (such as private sector organisations, universities, or other public sector organisations). This may suggest that police officers do not employ, or have not developed, career competencies to the degree that individuals from other organisations have. This may be due to the organisational culture, and the way career management has been conducted in police forces (see Chapter 4).

In employing the CCI, several cautions are in order. First, since the majority of respondents worked in a police setting, the sample was limited and biased, i.e. not representative of the general population. However, comparisons of responses from police and non-police participants using independent sample t-tests showed no differences. In addition, the mixed-split-sample confirmatory approach to establishing the factor structure should have counteracted potential biasing effects. Furthermore, the internal consistency reliability of the scales was analysed again at a later point of the research, to ensure results were not due to chance (See Chapter 7.2).

Second, it cannot be guaranteed that the concepts and items included in the development of the CCI represent the whole range of possible career competencies. They were selected to represent the three areas of knowing, on the basis of a literature review and results from the preliminary studies. As such, they may not include all the career-relevant skills used by individuals since only fitting concepts/items were selected. For instance, some authors may argue that more OCB-related items, such as altruism and courtesy might have added additional value to the measure. By not considering these aspects of OCB, the CCI omits issues such as helping others and not abusing the right of others. Due to the confusion surrounding the concept of OCB, it was not considered to a large extent in this study. A more extensive inclusion of OCB behaviours might have had an impact not only on

the structure of the CCI but also on its predictive value for career success as analysed in Chapter 7. However, comparison of the emergent competency areas with the results by Hackett et al. (1985) provides support for the structure identified in this study. Future studies may want to look at the CCI as developed here and its relation to OCB behaviours and explore the impact that the omission of certain concepts had on the value of the instrument.

Hackett and colleagues found eight areas to be of importance for successful career development: communication skills, interpersonal skills, political skills, organisational skills, general-career planning and management skills, career-advancement skills, job-specific skills and adaptive cognitive strategies. The seven career competency areas identified in this study conceptually accommodate the majority of the above career competencies. For instance, the competency of adaptive cognitive strategies, which involves aspects such as realistic and internal self-appraisal, can be placed under the sub-scale of self-knowledge. Furthermore, the competency of political skills touches on a wide range of issues, including promoting oneself and knowing the system, and as such is reflected in the sub-scales of feedback seeking and self-presentation, and knowledge of (office) politics. Only communication skills are not explicitly covered by the career competencies found in this study. In the context of the present study, communication skills is considered to be a meta-competency that is indirectly involved in all of the career competency areas. Table 6.17 (below) maps the career competency areas identified in this study to the career competencies established by Hackett and colleagues.

Table 6.17 CCI Sub-Scales Compared to Career Competencies by Hackett et al. (1985)

CCI Sub-scales	Career Competencies (Hackett, Betz, & Doty, 1985)
Goals setting and career planning	General-career planning and management skills. Career-advancement skills
Self-knowledge	Adaptive cognitive strategies
Job-performance	Job-specific skills Organisational skills
Career skills	Career-advancement skills
Knowledge of (office) politics	Political skills
Career guidance and networking	Interpersonal skills
Feedback seeking and self-presentation	Political skills e.g. promoting oneself

DeVellis (1991) asked 592 police officers from different ranks in the Canadian police to list the three factors they thought were most important for getting promoted beyond the rank of constable. The top six factors mentioned by officers were: performance on the job, job-related knowledge, positive attitude, seniority, relationship with other

officers and additional courses/training/education. The seven career competency areas discovered in this study represent the majority of these factors, for example: job-performance is equivalent to performance on the job; career skills are equivalent to job-related knowledge, additional training; networking is equivalent to relationship with other officers. This can be seen as support for the content validity of the CCI.

The indicator was developed by focusing on individual career-management. It did not take external factors that are important for successful career development, such as labour market, etc., into consideration. Future research exploring the application of career competencies may want to consider these factors.

The use of an online survey instead of a traditional postal survey may have had an impact on responses and response rates. It is likely that only individuals who felt comfortable working with computers volunteered to participate in the study. The survey was also posted on a website that advertises research projects and questionnaires. This may have contributed to the relatively large number of individuals in the sample who worked for universities. Unfortunately, the impact that this self-selection may have had on the results of this study cannot be determined.

Another potential problem that bears mentioning is the response bias of Likert scale measurements. Response bias may have influenced how individuals rated themselves and may need to be addressed in future studies. Item reversal is a common method to counteract response bias (Chapman & Campbell, 1959). Another way to assess the impact of bias is through the inclusion of a social desirability measure or impression management scale. These scales generally assess individuals' tendencies to project favourable images of themselves during social interactions (Podsakoff & Organ, 1986). In summary, future studies may want to address the issue of response bias by reversing some of the items in the CCI, or including a social desirability scale to check for response bias.

Summary

In summary, this chapter described the development of the CCI, a measure to assess career competencies. Following an extensive literature review, a comprehensive item generation process involving consultation with subject matter experts, a pilot study and a factor analytic study on a large sample yielded a seven

factor structure, instead of the expected three-fold structure. The sub-scales were introduced and reasons for their emergence were discussed. The chapter also provided provisional support for the validity and reliability of the CCI. However, more research is necessary to substantiate these findings and this is the focus of the following chapter.

Chapter 7
Testing for reliability and validity

“Within classical psychometrics, two of the most important aspects of a test are its reliability and its validity.”

(Rust & Golombok, 1989, p. 64)

7.1 Introduction

To ensure that the CCI is an effective and valuable career management tool, further evidence of its reliability and validity is required. While Chapter 1 outlined that most of the concepts used in the development of the CCI are related to career outcomes, with regard to the career competencies as defined in this study, the above statement remains to be empirically confirmed.

Chapter 6 provided an introduction to the concepts of reliability and validity. It also presented first evidence of the reliability, and the content and construct validity of the CCI. The present chapter continues the analysis of the psychometric properties of the CCI. It is divided into four sections. First, it seeks to confirm the evidence of reliability of the career competency dimensions as presented in Chapter 6. Second, it examines the construct validity of the CCI, and third, it analyses the criterion-related validity of the CCI dimensions, using career outcomes as dependent variables. The fourth section is rather general. It looks at contextual information that was assessed as part of the overall survey.

7.2 Method

7.2.1 Procedure and sample

A self-completion survey in an online format was presented to participants during December 2005 and January 2006. With a view to generalisability, the study initially aimed to involve not only police officers but also individuals working in other sector organisations. However, it proved difficult to get organisations involved in the study. Therefore, a convenience sample was used. To satisfy concerns about confidentiality, responses to the survey were electronically anonymised before being received. In addition, demographic information presented in the tables below does not specify the exact percentage of respondents, if the response level was equal to or fewer than five people. This ensures that no individual is identifiable from the published results.

7.2.1.1 Police sample

The main group of participants were police officers from the collaborating police organisation. The link to the questionnaire was sent in an Email to a random sample

of 1000 officers within the force. The Email was sent by the Head of the Training Department, endorsing the project and encouraging recipients to participate in the study. The communication included a short introduction to the project, and an affirmation of confidentiality and anonymity of participation. Individuals were given a three week deadline to complete the survey. To increase response rates, a reminder Email was sent out a week before the closing date (Granello & Wheaton, 2004). 296 responses were received, representing a response ratio of 29.6%.

227 of the respondents were male and 69 female. For further information on the demographics of the police sample, see Table 7.1. It was not possible to match the responses categorised by rank/job level for both organisations, because of differences in the hierarchical structure. In the table below, the categories were linked solely as means of representing the information, without implying equivalence e.g. Inspector and Professional. Therefore, no overall sample frequency for this variable is provided.

7.2.1.2 University sample

In addition, an Email with the link to the questionnaire was also sent to all members of staff (approximately 650) at a small University in England. Following the same procedure as described above, the Email introduced individuals to the study and assured them of confidentiality and anonymity of participation. Individuals were given a three week deadline to complete the survey. A reminder Email was sent one week before the closing date to enhance response rates. 110 responses were received, 31 of which from men and 79 from women, presenting a response ratio of approximately 16.9%. Table 7.1 shows more detailed information on the demographics of the university sample.

For the data analysis, both the University and the Police sample were combined, leading to an overall sample size of n=406.

Table 7.1 Sample Characteristics: Frequencies and Means

Variable	Police Sample Frequency	University Sample Frequency	Overall Sample Frequency
Gender			
Male	227	31	258
Female	69	79	148
Years of work experience in total	Mean=21.3, SD=9.01	Mean=22.66, SD=10.98	Mean=21.69, SD=9.56
Tenure	Mean=14.8, SD=9.02	Mean=7.06, SD=5.86	Mean=10.95, SD=8.69
Age	Mean=39.6, SD=7.71	Mean=43.2, SD=10.77	Mean=40.57, SD=8.77
Rank/Job Level			
PC/Clerical	202	21	
Sgt/Manual	50	<5	
Insp/Professional	28	51	
Chief Insp/ Junior Mgmt	8	11	
Supt/ Middle Mgmt	<5	11	
Chief Supt/ Senior Mgmt	<5	5	
Educational level			
GCSE Level	120	7	127
A-Level	86	9	95
Degree Level	66	30	96
Postgraduate Level	21	43	64
Doctorate Level		20	20
Marital Status			
Single	27	17	44
Cohabiting	50	18	68
Married	196	65	261
Divorced	20	9	29
Widowed	<5	<5	<5

7.2.2 Measures

The measures contained in the survey are described below.

7.2.2.1 Control variables

All the variables listed in this section have been found to be related to career outcomes (see Chapter 2). It was, therefore, considered necessary to control for their influence when analysing the predictive validity of the CCI with regard to career success, so as to account for any confounding impact they may have.

Demographic information

To control for experiential influence on career outcomes, information was collected on: age and gender, using single-item questions as well as education, ethnic background and marital status, using a multiple response format. In addition,

information on years of work experience in total and years of working with the organisation (tenure) was also gathered through single-item questions.

An initial scanning of the data showed that the majority of participants were of White-British background (85.7%). Only nine individuals in the university sample were from a White-Other background. All the other minority groups were represented by less than five individuals each. Due to the very small number of cases in each of the categories, it was decided not to consider this variable as predictor, since it would not yield statistically meaningful results.

Career salience (CS)

The importance of career/work in life, i.e. career salience, needs to be analysed to put career satisfaction into perspective (Steiner & Truxillo, 1987). As mentioned in Chapter 2, Greenhaus (1971) originally defined the construct of career salience as “the importance of work and career in one’s total life” (p. 210). However, Greenhaus’ work has attracted critical review (Allen & Ortlepp, 2002). A number of authors criticised the lack of congruence between the definition of career salience and Greenhaus’ conceptualisation of the concept, i.e. the items included in the career salience scale. As a result, various alternative conceptualisations have been tested. Most of these, according to Allen & Ortlepp (2002), neglect some of the valuable ideas in Greenhaus’ original construct. The authors suggest that most of the newly developed measures are contaminated with an associated but unrecognised construct, work salience. Consequently, they developed and validated a specific, 11 item career salience scale, using a large sample of 1078 office workers (Allen & Ortlepp, 2002). This scale ($\alpha=.91$) was applied in the present study. Participants were asked to rate the extent to which they agreed with statements, such as “The most important things I do in life involve my career”, using a 5-point Likert scale (1=strongly agree to 5=strongly disagree).

Personality (Big Five)

As outlined in Chapter 1, there is general agreement that personality can be described in terms of the Big Five (Goldberg, 1990). Various questionnaire versions are available to measure the Big Five. Some of these are rather lengthy and time-consuming e.g. NEO (Costa & McCrae, 1992). In response to the need for a simple measure of the Big Five, Goldberg (1992) developed a 100 unipolar adjective inventory. For reasons of simplicity and economy, Saucier (1994) reduced Goldberg’s inventory even further to a set of “Mini-Markers”, a 40-item adjective

checklist that contains fewer difficult and negating terms. Saucier's inventory has been found to have a robust factor structure (Mooradian & Nezlek, 1996) and an acceptable degree of reliability (Saucier, 1994). In addition, its criterion-related validity has been demonstrated to be comparable to Goldberg's 100 adjective inventory (Dwight, Cummings & Glenar, 1998). Furthermore, its psychometric properties overall have been found to be similar to those of the NEO-FFI (Mooradian & Nezlek, 1996).

Therefore, to control for the influence of personality, Saucier's (1994) "Mini-Markers" representing Extraversion ($\alpha=.82$), Agreeableness ($\alpha=.76$), Conscientiousness ($\alpha=.66$), Emotional Stability ($\alpha=.77$) and Intellect ($\alpha=.79$) were applied. Individuals were asked to rate how accurately the 40 adjectives described them, using a 9-point scale ranging from 1=extremely accurate to 9=extremely inaccurate.

Due to a technical problem with the website on which the questionnaire was hosted, only 183 of the 296 police responses included answers to all the questions. 113 questionnaires were received without information on the personality and career salience scales. This had an impact on the data analysis. Wherever possible, the full sample ($n=406$) was used. However, where testing of the hypotheses required the inclusion of personality data and/or career salience data, only the respective 293 entries were used.

7.2.2.2 Career Competencies (CCs)

To assess career competencies, the seven CCI dimensions as developed in Chapter 6 were used: 1) goal setting and career planning (GSCP, 5 items), 2) self-knowledge (SELF, 5 items), 3) job related performance effectiveness (JPER, 5 items), 4) career related skills (CRS, 7 items), 5) knowledge of (office) politics (POL, 5 items), 6) career guidance and networking (GNET, 8 items), and 7) feedback seeking and self-presentation (FSSP, 8 items). Individuals were asked to rank the extent to which they agreed with the respective statements on a 5-point Likert scale, ranging from 1=strongly agree to 5=strongly disagree.

Overall scale-scores were calculated for all career competencies as well as the career salience and the personality scales. These were calculated by dividing the sum of raw scores on each scale by the number of items on the scale.

7.2.2.3 Career outcomes

It has been outlined in Chapter 2 that career success has two aspects, objective and subjective, both of which should be considered when looking at career outcomes. Consequently, information on both was collected in this study.

Objective career success, describing an external perspective on individuals' careers, is generally assessed by means of pay, promotion or position (see Chapter 2). Since pay and position are generally closely linked to each other, it was not considered necessary to collect information on both. However, in the police service payment is not strictly linked to rank. Individuals who have been with the force for a long time, work in certain specialist areas or work certain shift-patterns, can enhance their income and earn more than individuals in the next higher rank level. In other words, under special circumstances, it is possible that a Constable earns more than a Sergeant. Consequently, payment was considered a more descriptive indicator of OCS than rank. It was, therefore, measured in this study by asking participants to state their current pay band (e.g. Chênevert & Tremblay, 2002). Apart from this, the number of promotions received since joining the organisation was also assessed. A promotion was hereby defined as a job move that involves more than one of the following: significant increase in scope of responsibility, annual salary, changes in level in the employing company and/or becoming eligible for bonuses, or incentives. This broader understanding of promotion was applied to ensure that not only movements up the hierarchical/rank ladder, but also into lateral, more specialist roles were considered.

As mentioned previously (see Chapter 2), SCS describes individuals' own perceptions of their careers measured against personal standards. Often, it is not clear what to assess these individual standards upon. There are not only differences between individuals' conceptualisations of career, but also the question of the reference group arises (Heslin, 2005). Various measures of SCS guide the respondent to answer in exclusively intra-organisational terms, by asking questions such as "Compared to your co-workers how successful is your career?" (Turban & Dougherty, 1994). However, with regard to the present career realities, where frequent job changes between organisations are very common and career success comparison groups outside the organisation gain in importance, the inclusion of peer comparison has been called for (Arthur, Khapova & Wilderom, 2005). One of the most widely used measures of career satisfaction is the 5-item scale developed by Greenhaus et al. (1990). This scales does not restrict individual answers to certain

reference groups and has been demonstrated to possess acceptable levels of reliability ($\alpha=.88$).

However, authors such as Arthur et al. (2005) have expressed concern about the one-dimensionality of most SCS measures. They suggest that looking solely at career satisfaction might not suffice. Gattiker and Larwood (1986) present a SCS measure that considers five aspects: individuals' perception of their job success, hierarchical success, financial success, interpersonal success and life success. Job success includes items such as "I am receiving positive feedback about my performance from all quarters" and "I am in a position to do mostly work that I really like". It looks at an individual's perceived satisfaction with the responsibilities, feedback and management in a work role. Hierarchical success looks at whether the individual feels they are reaching their goals with regards to hierarchical progress, including items such as "I am pleased with the promotions I have received so far" and "I am reaching my goals within the timeframe I have set for myself". Items such as "I am receiving fair compensation compared to my peers" and "I am earning as much as I think my work is worth" seek to measure a person's perception of their financial success. Interpersonal success looks at an individual's perceived relationship with their peers and supervisors, using items such as "I am accepted by my peers" and "I am respected by my peers". Lastly, life success focuses on an individual's satisfaction with life in general and their private life in particular, e.g. "I am satisfied with my life overall" and "I am happy with my private life". This measure responds to the argument that SCS is a multidimensional construct. Additionally, it also complies with the demand to expand the comparison group from intra-organisational to extra-organisational, by including peers as well as co-workers as reference groups.

Consequently, both of these measures were applied in the present study. SCS was assessed using the 5-item general career satisfaction scale (CSS) by Greenhaus et al. (1990, $\alpha=.85$) including items such as "I am satisfied with the success I have achieved in my career" and "I am satisfied with the progress I have made towards meeting my overall career goals". In addition, an adapted version of the SCS measure by Gattiker and Larwood (1986), containing scales on job-success (JS, 5 items, $\alpha=.62$), financial success (FS, 3 items, $\alpha=.72$), hierarchical success (HS, 3 items, $\alpha=.62$), interpersonal success (IS, 3 items, $\alpha=.76$) and life success (LS, 3 items, $\alpha=.74$). Responses to all scales were collected using a 5-point Likert scale (1=strongly agree to 5=strongly disagree).

The internal consistencies of the job success and the hierarchical success scale fall below the recommended 0.7 level (see Tabachnick & Fidell, 2001). However, according to Kline (1993) they are still acceptable. Kline states that when dealing with psychological constructs, even alpha values below 0.7 can realistically be expected because of the diversity of the constructs. Lowenthal (1996) also argues that for scales with ten or fewer items, a reliability of 0.6 is acceptable.

Correlation analysis showed that Gattiker and Larwood's (1986) SCS scales all correlated significantly ($p < .01$) with each other as well as with Greenhaus et al.'s (1990) career satisfaction scale (see Table 7.2). In particular, the hierarchical success scale was very highly correlated with the career satisfaction scale, suggesting that it measures a very similar construct. This was supported by multicollinearity analysis. Therefore, the HS measure was assumed redundant and consequently excluded from further analysis.

Table 7.2 Correlation Analysis Career Satisfaction Scale and Five Career Success Scales

	CSS	FS	HS	IS	JS	LG LS	Income	SQR Promotion
CSS	1	.451**	.778**	.249**	.622**	.407**	.234**	.183**
FS		1	.395**	.229**	.456**	.207**	.175**	.149**
HS			1	.342**	.639**	.289**	.130*	.269**
JS					1	.308**	.107*	.167**
LG LS						1	.124*	.112*
Income							1	.278**
SQR Promotion								1

* $p < .05$, ** $p < 0.01$ (2-tailed).

In addition to this, correlation analysis was also conducted to assess the relationship between the SCS and the OCS measures. As expected, number of promotions and income were significantly positively correlated with each other as well as with the measures of SCS.

Additionally, all measures of SCS and OCS were subjected at scale-level to a component analysis, to assess their interdependencies. Principal component analysis was, in this instance, chosen over principal axis factoring because it transforms the original variables into a smaller set of linear combinations, using all the variance in the variables. Principal axis factoring looks at the shared variance to estimate the underlying factors of a data set, using a mathematical model. This makes it the preferred method for scale development. Principal component analysis,

on the other hand, establishes which linear components exist within the data and how a particular variable might contribute to that component (Field, 2005). This makes it the most suitable approach for assessing similarities between theorised dimensions.

Two factors with an Eigenvalue above 1 emerged, explaining 56.2% of the variance. On extraction, using Direct Oblimin due to the inter-correlations between the variables, the pattern presented in Table 7.3 appeared. All SCS measures loaded onto one factor, while all the OCS measures loaded on another.

Table 7.3 Principal Component Analysis with Direct Oblimin Rotation of SCS and OCS Measures

	Component	
	1	2
JS	.879	-.068
HS	.839	.061
CSS	.795	.143
IS	.661	-.183
FS	.598	.131
LG LS	.465	.042
Income	-.071	.849
SQR Promotion	.145	.696

7.2.2.4 Additional Questions

In addition, five general questions on career development were added to the questionnaire for the police sample. The aim of this was to provide the participating police force with additional information on employees' perception of career management processes, and the format and extent to which they would like to see them provided. Individuals were asked to rate the extent to which they agreed with the following five statements on a 5-point Likert scale (from 1=strongly agree to 5=strongly disagree): 1) Career development is clearly signposted in the organisation, 2) I know which unit is responsible for career development in the organisation, 3) I would feel comfortable obtaining career guidance from my line manager, 4) I would welcome the opportunity to have career coaching and 5) I do not want any career guidance or development.

7.3 Preliminary analyses and results

Before combining the two sample groups, it was assessed whether there were any substantial differences between them with regard to demographics, responses to career salience, personality, CCs and career outcomes.

Independent sample t-tests and χ^2 tests were conducted to compare the responses from both sample groups. When interpreting the results below, it needs to be considered that the variables were measured on scales ranging from 1=strongly agree to 5=strongly disagree. Significant differences were found between the police and the university respondents with regard to the CCs of JPER ($M=8.74$, $SD=2.45$ vs $M=7.92$, $SD=2.24$) and POL ($M=10.89$, $SD=2.59$ vs $M=10.18$, $SD=2.81$), indicating that police officers rated themselves lower on job-related performance effectiveness and knowledge of office politics than university employees. However, the magnitude of these differences was small (eta squared = .025 and .015 respectively). Significant differences were also found with regard to the personality dimensions of extraversion ($M=30.03$, $SD=9.23$ vs $M=33.49$, $SD=12.12$) and agreeableness ($M=22.59$, $SD=7.24$ vs $M=20.09$, $SD=7.03$). This suggests that police officers rated themselves higher on Extraversion but lower on Agreeableness than university employees. Again, the magnitude of these differences calculated as eta squared was only small (.022 and .031 respectively).

With regard to the career outcomes, a difference was found on job success. The scores for perceived job success were lower for police officers ($M=14.00$, $SD=3.09$) than for university employees ($M=12.30$, $SD=3.37$). This difference was of moderate magnitude (eta squared = .06).

Looking at the demographics, police officers were significantly younger ($M=39.46$, $SD=7.64$) than the university employees ($M=43.20$, $SD=10.82$). However, the effect size of this difference was again negligibly small (eta squared = .038). Apart from this, police officers had been working with their organisation for much longer ($M=13.96$, $SD=9.22$) than the university respondents ($M=7.07$, $SD=5.88$). The magnitude of this difference in means was large (eta squared = .17).

χ^2 analysis showed the two groups to differ significantly with regard to gender ($\chi^2(1)=65.23$, $p<.001$). The police sample contained significantly more males than the university sample, while the university sample included more woman than in the police sample. Apart from this, differences were also found with regard to the level of

education ($\text{Chi}^2(4)=110.59, p<.001$). Significantly more officers had been educated to GCSE and A-level and more university employees reported significantly more postgraduate and doctorate qualifications.

7.4 Reliability analysis and results

This section looks at the scaling structure of the CCI. It analyses whether the items of each of the CC sub-scales are linked to the latent variable they measure.

Before conducting the reliability analysis, the complete data set ($N=406$) was analysed for missing values with regard to the CC scales. SPSS Missing Values Analysis showed that none of the CC scales had more than 5% missing values and that these values were missing randomly. As mentioned above, if less than 5% of the data points are missing in a random manner, all methods of dealing with missing values yield similar results (Tabachnick & Fidell, 2002). Therefore, the missing values were replaced with the sample mean, using SPSS.

7.4.1 Replication of the Factor Structure

Following the same procedure as described in Chapter 6, the 43 career competency items for the whole sample ($N=406$) were subjected to an exploratory factor analysis. Principal axis factoring was used to assess whether the factor structure could be replicated. In a first step, the suitability of the data for factor analysis was tested. The Kaiser-Meyer-Olkin value was .92, exceeding the recommended value of .6 (Kaiser, 1970, 1974, in Tabachnik & Fidell, 2001). The Bartlett's Test of Sphericity (Bartlett, 1954, in Tabachnick & Fidell, 2001) reached statistical significance, supporting the factorability of the correlation matrix. Seven factors explaining a total of 47.7 per cent of the variance were extracted. To aid the interpretation of the seven factors, Direct Oblimin rotation was performed. Direct Oblimin was used to allow for the hypothesised intercorrelation of the CCs sub-scales. The rotated solution partially replicated the seven-factor structure, i.e. the majority of the variables loaded substantially on the respective factors (see Table 7.4). Some of the CC sub-scales were perfectly reproduced, while others only found partial reproduction. The lowest concordance was found for knowledge of (office) politics, with 60% of items replicated.

7.4.2 Analysis of internal consistency

In a next step, the internal consistency of each of the seven CC scales was analysed in form of the coefficient alpha. Looking at the whole sample (N=406), the alpha values were found to range from .69 to .87 (see Table 7.5). Only the competency dimension of knowledge of (office) politics fell just below the .70 alpha level suggested by Tabachnick and Fidell (2001) as a desirable minimum for constructs in early stages of formulation. Overall, the internal consistency of the CC sub-scales can be seen as demonstrated.

Table 7.4 Percentage Replication of Factor Structure

CCI Sub-Scale	No of items in CCI	No of items replicated (n=406)
1. Feedback seeking and self-presentation	8	5 (62.5%)
2. Job-related performance effectiveness	5	5 (100%)
3. Goal setting and career planning	5	5 (100%)
4. Self-knowledge	5	4 (80%)
5. Career guidance and networking	8	6 (75%)
6. Knowledge of (office) politics	5	3 (60%)
7. Career-related skills	7	5 (71.4%)

Table 7.5 Internal Consistencies of Career Competency Sub-scales

CCI Sub-Scale	Whole sample (N=406)
Feedback seeking and self-presentation	.87
Job-related performance effectiveness	.84
Goal setting and career planning	.78
Self-knowledge	.71
Career guidance and networking	.84
Knowledge of (office) politics	.69
Career-related skills	.79

7.5 Analysis of construct validity using other self-report measures

Chapter 6 has already presented some evidence of construct validity of the CCI. However, this was mainly derived from comparisons of the CC dimensions with one another. A different means of demonstrating construct validity is through multi-trait analysis, comparing the scores on the CC dimensions with other self-report scales. As mentioned in Chapter 6, convergent validity would be demonstrated if different methods measuring a similar construct achieved the same results, while divergent validity would be demonstrated if they differed in their findings.

7.5.1 Hypotheses

It has been critically discussed (see Chapter 3) that most competency concepts in general, and career competencies as introduced by Arthur et al. (1995) in particular, include personality aspects. However, CCs in this study have explicitly been defined in distinction to characteristics of the person, namely as skills, knowledge and behaviour. In other words, this study proposes that CCs are not simply measuring personality aspects but unique characteristics. This does not mean that the concepts are expected to be uncorrelated. On the contrary, as explained in Chapter 3, personality characteristics are assumed to influence the development of CCs and are, therefore, expected to be related to them.

To estimate the degree to which any two measures are related to each other, generally the pattern of intercorrelation between them is calculated in form of the correlation coefficient. Correlations between theoretically similar measures would be expected to be high, while correlations between theoretically dissimilar measures would be expected to be low. There are no exact rules as to how “high” or “low” the correlation should be, to demonstrate convergent or discriminant validity respectively (DeVellis, 1991). However, the DeVellis refers to the general guideline that convergent correlations should always be higher than discriminant correlations.

Francis-Smythe and Robertson (1999) point out that, based on average alpha coefficients of 0.7, the maximum correlation between two measures of the same construct is 0.72. Hence, the proportion of variance these measures might have in common is 0.52. Accepting a minimum of 33% of overlap as indicative of more than chance similarity, Francis-Smythe and Robertson argue that a minimum correlation of 0.41 (squared root of 1/3 of 0.52) can be taken as a criterion of similarity. Correlations below this value can be seen as indication for chance similarity.

Assuming that both CCs and personality characteristics are different constructs, the cross-construct correlations were expected to be low, i.e. below 0.41, demonstrating discriminant validity. On the other hand, the intra-construct correlations were expected to be high, i.e. above 0.41, demonstrating convergent validity. Consequently, the following hypotheses were proposed:

H7.1: The career competency dimensions are significantly correlated with each other above 0.41, indicating above chance similarity (convergent validity).

H7.2: The career competency dimensions are correlated with the personality dimensions below 0.41, indicating below chance similarity (divergent validity).

7.5.2 Correlation analysis

Before conducting the correlation analysis, the data for the personality variables (n=293) was analysed for missing values, using SPSS Missing Values Analysis. Only two items, one on openness and one on agreeableness, showed more than 5% missing data. Missing Values Analysis was further used to ensure that the data was missing randomly, i.e. that there was no systematic relationship between the missing data on Openness and Agreeableness and any of the other variables ($p > .05$). The data was found to be missing randomly. Following recommendations by Tabachnick and Fidell (2001), the missing values were, therefore, replaced with the sample means.

Outliers can severely bias correlation coefficients. Therefore, the data set that included information on CCs as well as personality dimensions (n=293) was at first analysed for cases with values well below and/or above the majority of other cases, using SPSS analysis of extreme values.

The box-plots of the variables indicated a few outliers in the data. To assess the impact of the outliers on the distribution of each CC and personality dimension, the mean calculated for the responses on each variable was compared to the 5% trimmed mean, i.e. the recalculated mean after removing the top and bottom 5 per cent of cases. There was no difference greater than .10 between any of the two means for any of the CCs. With regard to the personality dimensions, the mean and the trimmed mean differed between .07 and .26. These findings suggest that the influence of the outliers was not large and that the respective cases can safely be retained in the data file (Field, 2005).

This study assumed, per definition, that the career competencies were correlated (see Chapter 4). This was confirmed by the correlation analysis (see Table 7.6). All career competency dimensions were significantly correlated (p (two-tailed) $< .01$). Analysing the correlation coefficients more closely with respect to the above introduced criteria of 0.41, it was found that most of the CCs showed above chance similarity with each other. Hence, Hypothesis 7.1 was partially supported.

Table 7.6 Correlation Analysis Career Competencies and Big Five Personality Dimensions (n=293)

	FSSP	JPER	GSCP	SELF	GNET	POL	CRS	Extra- version	Agree- ableness	Conscien- tiousness	Emotional stability	Intellect or Openness
FSSP	1	.276**	.622**	.376**	.734**	.494**	.671**	.319**	.101	.169**	-.003	.220**
JPER		1	.336**	.514**	.142*	.363**	.442**	.174**	.223**	.515**	.210**	.299**
GSCP			1	.527**	.553**	.513**	.591**	.287**	.099	.246**	.168**	.207**
SELF				1	.282**	.518**	.554**	.289**	.173**	.321**	.203**	.273**
GNET					1	.508**	.574**	.337**	.103	.129*	.028	.128*
POL						1	.543**	.372**	.112	.277**	.199**	.221**
CRS							1	.314**	.117*	.285**	.154**	.264**
Extraversion								1	.193**	.301**	.240**	.176**
Agreeableness									1	.299**	.383**	.266**
Conscientiousness										1	.335**	.276**
Emotional stability											1	.144*
Intellect or openness												1

** p< 0.01 (2-tailed). * p< 0.05 (2-tailed).

In a next step, a correlation analysis of the seven CC sub-scales and the Big Five personality dimensions was conducted. The results are also presented in Table 7.6 Overall, Extraversion, Conscientiousness and Intellect were significantly correlated (p (two-tailed) $<.01$ with one exception at p (two-tailed) $<.05$) with all of the CC dimensions. Emotional stability was also significantly correlated (p (two-tailed) $<.01$) with all of the CCs, except career guidance and networking (GNET) and feedback seeking and self-presentation (FSSP). Agreeableness was only significantly correlated (p (two-tailed) $<.01$) with job-related performance effectiveness (JPER), self-knowledge (SELF) and career-related skills (CRS). Examining the correlation coefficients with regard to the .41 criteria, only JPER showed above chance similarity with Conscientiousness. All the other CC dimensions showed less than chance similarity with the personality dimensions, providing evidence of discriminant validity, and thus support for Hypothesis 7.2.

7.5.3 Component Analysis

To further analyse the interdependencies of the two constructs, in a second step the CC and the personality dimensions were subjected at scale-level to principal component analysis, using Direct Oblimin rotation. For the same reasons as discussed above with regard to the analysis of OCS and SCS factors, principal component analysis was chosen to establish which linear components exist within the data.

Three factors with an Eigenvalue above 1 emerged, explaining 49.9% of variance. On extraction, the factor loadings shown in Table 7.7 appeared. The pattern matrix is presented, because it contains information about the unique contribution of a variable to a component.

The CCs of GNET, FSSP, CRS, GSCP and POL were found to form one component, while Agreeableness, Emotional stability and Extraversion formed another. The CCs of JPER and SELF formed a third factor, together with Conscientiousness and Intellect. Thus, it appeared that Conscientiousness and Intellect shared some communality with some of the CCs.

Table 7.7 Principal Component Analysis with Direct Oblimin Rotation of Career Competency and Personality Dimensions (n=293)

	Component		
	1	2	3
GNET	.926	.058	.217
FSSP	.896	-.061	.025
CRS	.716	-.070	-.296
GSCP	.714	-.038	-.207
POL	.616	.051	-.256
Agreeableness	-.028	.754	-.057
Emotional stability	-.088	.747	-.106
Extraversion	.451	.507	.102
JPER	.011	-.071	-.886
Conscientiousness	-.073	.326	-.622
SELF	.362	-.075	-.614
Intellect or Openness	.053	.164	-.454

It has been mentioned above that construct validity embraces validity of every type. This includes criterion-related validity, which is the focus of the next section.

7.6 Analysis of criterion-related validity

Compared to the other forms of validity, criterion-related validity is of more practical nature, because it is not concerned with understanding a process but with predicting it (DeVellis, 1991). As mentioned in Chapter 6, criterion-related validity looks at the strength of the empirical relationship between two events. These two events are represented by predictive and dependent variables. The dependent variable generally takes the form of a concrete, “real-world” criterion, such as job success. There are two approaches to assessing criterion-related validity: predictive and concurrent. Concurrent validity analysis was chosen as an approach to measuring criterion-related validity in this study. This was due to the above-mentioned problems associated with predictive validity analysis, such as extensive time and resource requirements. In other words, the predictive and the dependent variables were collected at the same time from the same sample.

7.6.1 Hypotheses

Criterion-related validity analysis is used in this study to determine the utility of the CCs for predicting career outcomes. Hence, CCs were the predictive and career outcomes, i.e. OCS and SCS, were the outcome variables. Individuals, who engage

actively in the acquisition and application of CCs, were expected to be more successful in their careers. Using CCs is thought to help individuals reach their career goals, defined in objective or subjective terms. To establish statistical support for the definition of career competencies as 'behavioural repertoires and knowledge that are instrumental in the delivery of desired career-related outcomes', the following hypotheses were tested:

H 7.3 The seven career competency dimensions will jointly predict a statistically significant proportion of the variance in a person's subjective career success, measured as a) Career satisfaction, b) Job success, c) Financial success, d) Interpersonal success and e) Life success.

H 7.4 The seven career competency dimensions will jointly predict a statistically significant proportion of the variance in a person's objective career success, measured as a) Income and b) Number of promotions received.

As previously discussed, there are a range of variables that have an impact on career outcomes (see Chapter 2 and Chapter 5). Their influence needs to be controlled for when analysing the prediction of career outcomes by CCs, to ensure that the conclusions drawn from the analysis are meaningful.

Demographics, in particular age, gender, education, marital status, years of work experience in total and tenure have been shown to be related to career outcomes. Therefore, they are expected to be related to the career outcomes assessed in this study.

H7.5 Demographics will predict a statistically significant proportion of the variance in a person's a) subjective as well as b) objective career success.

Career salience is another of these control variables. Career salience refers to the importance of career to an individual, i.e. it is a motivational factor. Career motivation has been related to productive training behaviours (Wolf et al., 1995, in Day & Allen, 2004) and participation in developmental activities (Jones & Whitmore, 1995, in Day & Allen, 2004). Following from this, motivational aspects were also expected to influence the use of competencies (see Chapter 3).

H7.6 Career salience will predict a significant proportion of the variance in a person's a) subjective as well as b) objective career success.

Additionally, individuals to whom career is very important were expected to develop and use CCs to a greater extent to achieve desired career outcomes, than individuals who are not very career-focussed. Consequently, CCs were expected to mediate the relation between career salience and career outcomes. A mediator variable is defined as a variable that explains the relation between a predictor and an outcome variable, i.e. it represents the mechanism through which a predictor influences an outcome (Baron & Kenny, 1986).

H7.7 Career competencies will mediate the relationship between career salience and a) subjective as well as b) objective career success.

Personality is another important variable that has been shown to be related to career outcomes (Bozionelos, 2004). Therefore, it was also assumed to predict career outcomes in this study.

H7.8 The Big Five personality scales will jointly predict a significant proportion of the variance in a person's a) subjective as well as b) objective career success.

As mentioned above, personality can be described as the predisposition towards certain behaviour, i.e. it influences the extent to which individuals will develop certain behaviours and competencies. Personality is generally seen to be stable over time. It is, therefore, thought to precede the development of behaviours or competencies, which may then be instrumental in the achievement of career success (e.g. Turban & Dougherty, 1994). Consequently, it is thought that personality will affect career outcomes through CCs. In other words, CCs were expected to mediate the relationship between personality and career outcomes.

H7.9 Career competencies will mediate the relationship between personality and a) subjective as well as b) objective career success.

In a final step, this study sought to assess the instrumentality of CCs in the prediction of career outcomes, when controlling for the influence of demographics, career salience and personality. Since CCs were assumed to mediate not only the relationship between career salience and career outcomes but also between

personality and career outcomes, they were expected to contribute significantly to the prediction of SCS and OCS over and above the influence of demographics, career salience and personality. Therefore, the last hypotheses to be tested were the following.

H7.10 The seven career competencies will jointly explain a significant amount of variance in a) subjective as well as b) objective career success, after controlling for personality, career salience and demographics.

7.6.2 Introduction to Multiple Regression Analysis

Regression analysis describes a set of statistical techniques used to assess the relationship between a dependent variable (DV) and one (bivariate regression) or more (multiple regression) independent variable(s) (IVs), mainly with the intent of prediction (Tabachnick & Fidell, 2001). Correlational research seldom controls the IV to measure the effect on the DV. Instead, it generally measures both simultaneously and without strict control, thus rendering the description of the regression variables in the above way incorrect. However, for reasons of simplicity, the terms were adopted from Tabachnick and Fidell (2001) and used henceforth.

When conducting regression analysis, careful selection of the predictor variables is necessary because the value of the regression coefficient depends on the variables in the model (Field, 2005). Predictors should be selected based on past research findings, following the general rule, the fewer the better. If new variables are added, this should be based on their theoretical importance.

Apart from this, it is important to decide on the manner in which the variables are to be entered into the regression model. Only if the predictors are entirely uncorrelated, has the order of variable entry no effect on the coefficients calculated. However, in social sciences this is generally not the case, and then the method of predictor inclusion is crucial. Three approaches to variable entry can be distinguished: sequential, standard and stepwise. In sequential or hierarchical entry, the researcher decides on the order in which predictors are entered into the model, based on past work. Known predictors should be entered at the beginning, in the order of their importance with regard to predicting the outcome. After this, any new predictors can be entered. The standard entry method forces all predictors into the model simultaneously. Variables are still selected according to past research, but the experimenter makes no decision on the order of their entry. In stepwise regression,

the order in which the predictors are entered into a model is based on a purely mathematical criterion.

Tabachnick and Fidell (2002) describe the standard multiple regression approach as atheoretical and recommend it for simple assessments of relationships between variables only. Moreover, if there is theoretical literature available and hypotheses to be tested, they advise using sequential regression. Stepwise regression should only be used for exploratory model building, to eliminate variables that are superfluous.

In multiple regressions, the ability of different IVs to predict the outcome variable is expressed in the value of multiple R and R^2 . Multiple R conveys the correlation between the predicted and the observed values of the outcome. The closer multiple R is to 1, the better the model predicts the observed data. R^2 indicates the variability in the outcome that is accounted for by the predictors of the model. The multiple regression output also provides information about the significance of these results, i.e. whether the predictors contribute significantly to a change in R^2 , using a standard F-Test. Additionally, an ANOVA analysis is conducted to assess whether the model is a significant fit of the data overall.

In the case of hierarchical multiple regression, the contribution of the predictors entered later in the analysis is calculated as R^2 change. This value indicates the additional amount of variance that the variable(s) entered later in the model explain over and above the variance that had already been explained by previously entered variable(s). It is generally tested for significance by a standard F-test.

Multiple regression analysis also allows an evaluation of the contribution of each independent variable. This is generally assessed through the Beta (B) values. Each of these B-values has an associated standard error (SE B) that indicates the extent to which they would vary across different samples. This standard error is used to determine whether the B-values differ significantly from zero, indicating that the respective variable contributes significantly to the regression model. The standardised versions of the B-values, the Beta-values, are often used for interpretation because they do not depend on the units of measurement of the variables and are directly comparable. As such, they provide a better insight into the importance of a predictor in the model.

7.6.3 Data Analysis and Results

Before conducting the regression analyses, the data for all the involved variables was examined for missing values, using SPSS Missing Values Analysis. As mentioned earlier, only two items, one related to the personality dimension of Openness and one to Agreeableness showed missing cases above 5%. However, since these cases were missing randomly, all missing values on these two items and on the variables that were missing less than 5% of cases, were replaced by the mean using SPSS (Tabachnick & Fidell, 2001).

However, the situation was different for the dependent variable of income, where 36.5% of the data was missing. Tabachnick and Fidell (2001) suggest that a dummy variable be created, to establish any differences between individuals who chose to provide versus those who chose not to provide information with regard to a question. Consequently, cases with existing values on income were put into group 1 (G1) and cases with missing values in group 2 (G2). Chi² tests were carried out to establish whether there were any significant differences between G1 and G2 with regard to the demographic data collected categorically. Significant differences between individuals who provided information on payment and those who did not were found with regard to gender (Chi²(1) = 10.96, $p < .001$), organisation (Chi²(1) = 76.10, $p < .001$) and education (Chi²(1) = 37.28, $p < .001$). Significantly more males than females abstained from giving information. Almost all respondents working for the university provided information on income, while about 50% of the police sample refrained from doing so. Those participants who had gone on to further education were more willing to provide information on payment than those with GCSE and A-Level qualifications.

Apart from this, independent sample t-tests revealed significant differences in scores for individuals who provided information on income compared to individuals who did not provide this information with regard to years of work experience ($M=20.91$, $SD=9.93$ vs $M=23.08$, $SD=8.74$) and tenure ($M=10.5$, $SD=8.11$ vs $M=16.65$, $SD=9.62$). The results indicated that individuals who did not answer the question had more work and organisational experience than individuals who answered the question. However, these differences were only of moderate (eta squared = .09) and small (eta squared = .013) effect. In addition, no differences were found between G1 and G2 with regard to the scores on the CCs, career salience or personality questions.

Therefore, it was decided to use income as an OCS variable. Only the information from G1 (n=258) was considered and special attention paid to the potential risk of range restrictions (see Table 7.8) of this sample.

Table 7.8 Characteristics of restricted sample compared to overall sample: frequencies and means

Variable	Overall Sample Frequency	Restricted Sample Frequency
Organisation		
Police	296	150
University	110	108
Gender		
Male	258	148
Female	148	110
Years of work experience in total	Mean=21.69, SD=9.56	Mean=20.91, SD=9.93
Tenure	Mean=10.95, SD=8.69	Mean=10.95, SD=8.11
Educational level		
GCSE Level	127	63
A-Level	95	53
Degree Level	96	67
Postgraduate Level	64	55
Doctorate Level	20	19

Tables presenting the results of the correlation analysis of all the IVs involved in the various analyses can be found in Appendix C1 for the whole sample (n=406) and Appendix C2 for the restricted sample (n=293).

7.6.3.1 Career competencies will jointly predict subjective career success (Hypothesis 7.3)

To analyse the relationship between CCs and SCS, a standard multiple regression approach was used. The hierarchical importance of the different competencies was thought to vary over time and from individual to individual, depending on the career issues faced at different points. Therefore, no overall hierarchical order was thought to exist amongst them. Consequently, all seven career competency sub-scales were entered into the equation simultaneously, without any particular order, for the whole sample of N=406.

First, Hypothesis 7.3a) was tested, conducting a multiple regression with the career competencies as IVs and career satisfaction as DV.

Regression analyses in general and multiple regression in particular make a few assumptions about the data that need to be attended to in order to ensure solutions are meaningful (Tabachnick & Fidell, 2001). Therefore, prior to analysis, the

variables were examined through various SPSS programmes for fit between their distributions and the assumptions of multivariate analysis.

First, the cases-to-IV ratio was assessed. This needs to be substantial for the results to be meaningful. There is a simple rule of thumb to assess this when testing multiple correlations: $n \geq 50 + 8m$ with m being the number of IVs (Tabachnick & Fidell, 2001). For testing individual predictors, the following rule of thumb has been suggested: $n \geq 104 + m$. The authors recommend calculating both, if interested in the overall correlation as well as the individual IVs, and choosing the largest number of cases. In the present study, the maximum number of variables to be included as IVs at any time was 22 (including dummy variables created for categorical data, see Section 7.6.3.3). Since both overall and individual correlations were to be analysed, both rules of thumb were applied. The largest number of cases was then selected as criteria, suggesting that at least 226 cases were required. This condition was met in this study, with $n=293$ and $n=406$ in analyses that did not require taking personality and career salience into consideration.

After this, the data was analysed for the absence of multicollinearity. No substantial correlations ($R > .9$) were found between the predictor variables. However, the collinearity statistics for each predictor showed that both career guidance and networking, and feedback seeking and self-presentation had high variance proportions on the same eigenvalue, indicating dependency between these variables. Considering the relatively high correlation of .75 between these two variables, they were combined at this stage of the analysis.

The assumption of independent errors was assessed using the Durbin-Watson statistic. This was found to be 2.014, i.e. between 1 and 3, indicating that the residuals in the model were independent.

As an additional step, an analysis to discover outliers that might cause the model to be biased was conducted. With a sample size of 406, it was reasonable to expect 95% of the cases to have standardised residuals within ± 2 and 99% within ± 2.5 (Tabachnick & Fidell, 2001). Residuals describe how well a model fits the sample data, based on the difference between the values of the outcome predicted by the model and the values of the outcome observed in the sample. Casewise diagnostics showed that 17 (4.2%) cases had standardised residuals within ± 2 and five (1.2%) cases within ± 2.5 . The affect of these cases on the regression model was further

analysed by looking at the Mahalanobis distances. Five cases had values above 22.46, which is the acceptable $p < .001$ criterion for samples with six IVs (Tabachnick and Fidell, 2001). This indicated that they were multivariate outliers. These cases were removed from the sample, leaving a total sample size of $n=401$.

Apart from this, the histogram and normal probability plots were consulted. They indicated normality of the residuals and showed no sign of heteroscedasticity in the data, i.e. the residuals had equal variances at each level of the predictor variables.

After assuring that all assumptions had been met, the derived model was evaluated. The results of the model testing are presented in Table 7.9. R for regression was significantly different from zero, $F(6, 394)=11.3$, $p < .001$, providing support for Hypothesis 7.3a that CCs would predict CSS. Four IVs contributed significantly to the prediction of career satisfaction: why1, how 4, how 2 and the variable of whom12 and whom34 combined. Altogether, 15% of variability in career satisfaction was predicted by knowing the scores on the CCs.

After this, standard multiple regression analyses were conducted to test whether CCs predicted the other measures of SCS, namely job-success, financial success, interpersonal success and life success. For each analysis, the assumptions were evaluated first. This led to the logarithmic transformation of the variable of life success (lg life success) to reduce skewness and improve the normality (Tabachnick & Fidell, 2001). Analysis of Mahalanobis distances using a $p < .001$ criterion showed the same outliers as above. These were subsequently removed from the data set, leaving a sample size of $N=401$. Each analysis indicated multicollinearity for the IVs of feedback seeking and self-presentation and career guidance and networking. Therefore, a score combining the two variables was calculated and used in the analyses.

The results of the analyses can be found in Table 7.9. R for all the regressions was significantly different from zero: financial success, $F(6, 394)=3.46$, $p < .01$, job success, $F(6, 394)=16.64$, $p < .001$, interpersonal success, $F(6, 394)=22.67$, $p < .001$ and lg life success, $F(6, 394)=11.64$, $p < .001$. CCs jointly predicted 5%, 20%, 26% and 15% of the variability in financial success, job success, interpersonal success and life success respectively. However, different IVs contributed significantly to the prediction of the different aspects of SCS, as highlighted in Table 7.9. Overall, the

results suggest that CCs are significant predictors ($p < .00$) of SCS, thus providing support for Hypothesis 7.3.

Table 7.9 Standard Multiple Regression Analysis Career Competencies predicting SCS (n=401)

	CSS Beta	FS Beta	JS Beta	IS Beta	LG LS Beta
JPER	-.063	-.032	.033	.165**	.107
CGCP	.304***	.051	.035	-.052	-.033
SELF	-.044	-.094	-.017	.176**	.124
POL	.160**	.246***	.200**	.209***	.160**
CRS	.192**	.099	.271***	.149*	.226**
GNET & FSSP	-.211**	-.151*	.006	-.023	-.183**
R ²	.15***	.05***	.20***	.26***	.15***

* $p < .05$, ** $p < .01$, *** $p < .001$

7.6.3.2 Career competencies will jointly predict objective career success (Hypothesis 7.4)

To test this hypothesis, a standard multiple regression analysis was performed between the OCS measures as DVs and CCs as IVs. Correlation analysis showed income to be significantly positively related to all CCs except how1. Number of promotions, on the other hand, was only significantly positively correlated with why1 (see Appendix C1).

First, income was used as DV. The assumptions were evaluated and the obtained model was analysed. The results can be found in Table 7.10. R for regression was significantly different from zero, $F(6, 251)=5.07$, $p < .001$, providing support for Hypothesis 7.4a. Only one IV, why1, contributed significantly to the prediction of income. Altogether, 11% of variability in income was predicted by knowing the scores on the CCs.

Second, a standard multiple regression was performed between the number of promotions received and the CCs as IVs. The analysis of the assumptions led to transformation of the DV to reduce skewness and improve normality. A square root transformation was used on number of promotions (sqr promotion), because it was moderately positively skewed (Tabachnick & Fidell, 2001). Three univariate outliers were found. However, they were kept in the data set as the analysis of Cook's distances indicated that they had no undue influence on the model. With the use of a $p < .001$ criterion for Mahalanobis distance, four multivariate outliers among the cases were found. These were removed from the data set, leaving 402 cases for analysis.

The results of the evaluation of the model can be found in Table 7.10. R was significantly different from zero, $F(6, 395)=2.82$, $p<.05$, providing support for Hypothesis 7.4b. Career competencies explained 4% of the variability of the (square root of) number of promotions. Again, only one IV, how4, contributed significantly to the prediction.

Table 7.10 Standard Multiple Regression Analysis Career Competencies predicting OCS (n=402)

	Income Beta	SQR Promotion Beta
JPER	-.105	.083
GSCP	.276**	.144
SELF	.006	-.088
POL	.157	.136*
CRS	-.074	-.033
GNET & FSSP	.019	-.039
R ²	.11***	.04*

* $p<.05$, ** $p<.01$, *** $p<.001$

7.6.3.3 Demographics will predict a) subjective and b) objective career success (Hypothesis 7.5)

Standard multiple regressions were conducted, using the demographic variables of age, gender, education, marital status, years of work experience and tenure as predictors and the SCS and OCS measures as outcomes. As can be seen from the assumptions, the variables used to compute regression analyses need to be continuous or categorical, with only two categories. Some of the demographic information, however, was measured using more than two categories e.g. marital status. To include these variables in the analysis, they were dummy coded and the respective dummy variables were used.

Testing the assumptions, it was found that age and years of work experience were highly correlated (.90). They also had high variance proportions on the same eigenvalue, indicating dependency between them. Therefore, it was decided to remove one of the variables. Age was kept in the analysis because most studies on career outcomes used it as a variable to represent experiential influences on careers (e.g. Bozionelos, 2004; Nabi, 2003).

The results of the evaluation of the regression models can be found in Table 7.11. R was significantly different from zero for job success, $F(11, 378)=3.11$, $p<.001$, with demographics explaining 8% of the variability of this outcome variable. With regard

to lg life success, demographics explained 10% of its variability. R was significantly different from zero, $F(11, 378)=3.83$, $p<.001$. Demographics did not contribute significantly to the variability of career satisfaction, perceived financial success and interpersonal success.

Looking at the OCS measures, demographics were found to explain 30% ($F(11, 234)=9.12$, $p<.001$) of the variance of income. With regard to the sqr promotion, R was also significantly different from zero, $F(11, 378)=3.52$, $p<.001$. Demographics explained 9% of the variable's variance.

Overall, the analyses provided partial support for Hypothesis 7.5a. Demographics significantly predicted part of the variance of job success and life success. However, they had no impact on the other SCS measures. Hypothesis 7.5b was fully supported. Demographics were shown to significantly predict both income and sqr promotion.

Table 7.11 Multiple Regression Analyses Demographics predicting Career Outcomes (n=406 apart from n=258 for income)

	CSS Beta	FS Beta	JS Beta	IS Beta	LG LS Beta	SRQ Promo Beta	Income Beta
Your gender	-.083	-.074	-.204***	-.032	-.136*	-.013	-.227***
Your age	-.022	-.052	-.022	-.015	-.004	.015	-.016
Tenure	-.107	-.098	-.036	-.119	-.086	.256***	.351***
GCSE vs A Level	.017	-.038	.047	-.031	-.025	.122*	.046
GCSE vs Degree	.008	-.054	-.024	-.052	-.050	.181**	-.056
GCSE vs Postgrad	-.075	-.028	-.095	-.057	-.052	.218***	.271***
GCSE vs Doc	-.076	-.026	-.089	-.125	-.012	.029	.328***
Single vs Cohab	-.043	.047	-.074	-.039	-.259***	.133	.014
Single vs Married	-.116	.008	-.142	-.104	-.374***	.154	-.035
Single vs Divorced	-.023	.019	-.045	-.096	-.037	.040	-.049
Single vs Widowed	.048	.091	.052	.027	.064	.036	-.041
Model R ²	.04	.03	.08***	.04	.10**	.09***	.30***

* $p<.05$, ** $p<.01$, *** $p<.001$

7.6.3.4 Career salience will predict a) subjective and b) objective career success (Hypothesis 7.6)

A simple multiple regression analysis was conducted to test this hypothesis. Career salience (CS) was used as predictor and the respective career success measures as outcome variables. CS was found to significantly predict career satisfaction, job success, interpersonal success and income (see Table 7.12). However, with regard

to financial success, life success and sqr promotion, R was not significantly different from zero. Overall, the results provided partial support for hypotheses 7.6a and 7.6b.

Table 7.12 Standard Regression Analysis Career Salience predicting Career Outcomes (n=293)

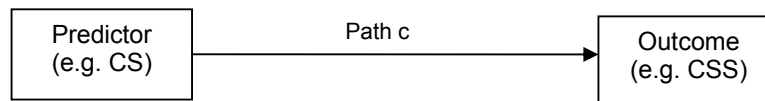
	Beta	R ²	Significance
Career Satisfaction	.12	.01*	F(1, 291)=4.46
Job Success	.28	.08**	F(1, 291)=24.48
Interpersonal Success	.22	.05**	F(1, 291)=15.09
Income	.19	.03*	F(1, 191)=6.78

7.6.3.5 Career competencies will mediate the relationship between career salience and a) subjective and b) objective career success (Hypothesis 7.7)

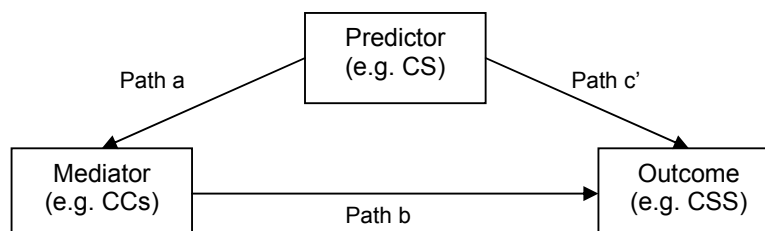
This hypothesis was tested following a procedure suggested by Baron and Kenny (1986). The authors state that to show a mediator effect, four steps have to be performed with three regression equations: step 1) show that there is a significant relation between the predictor and the outcome (Path c in Figure 7.1 A), step 2) show that the predictor is related to the presumed mediator (Path a in Figure 7.1 B), step 3) show that the mediator is related to the outcome (Path b in Figure 7.1 B) and step 4) show that the strength of the relation between the predictor and the outcome is significantly reduced when the mediator is added to the model (compare Path c in Figure 7.1A with Path c' in Figure 7.1 B).

Figure 7.1 Diagram of paths in mediation models.

A.



B.



If the variable is a complete mediator, the relation between the predictor and the outcome will not differ significantly from zero after the mediator was included in the model B. If it is a partial mediator, the relation between predictor and outcome will be significantly smaller when the mediator is included, but it will still be greater than zero (Frazier, Tix & Barron, 2004).

To demonstrate that CCs mediate the relation between CS and career outcomes, it was first necessary to demonstrate that CS predicted career outcomes (step 1). The respective analysis had already been performed in the section above and the results are presented again in Table 7.14. Only the career outcomes of career satisfaction, job success, interpersonal success and income, which were significantly predicted by CS, were considered for further analysis. After this, the relation between CS and CCs (step 2) was analysed. Variations in the level of CS were found to significantly account for variations in the presumed mediator, i.e. the CCs (see Table 7.13).

Table 7.13 Multiple Regression Analysis Career Salience predicting Career Competencies (Path a) (n=293)

	Beta	Model R²
JPER	.18**	.03, F(1, 291)=9.34
GSCP	.41***	.17, F(1, 291)=60.01
SELF	.24***	.06, F(1, 291)=17.50
POL	.38***	.11, F(1, 291)=34.75
CRS	.41***	.18, F(1, 291)=61.78
GNET & FSSP	.51***	.26, F(1, 291)=103.06

*p<.05, **p<.01, ***p<.001

The condition that CCs predict career outcomes (step 3) was already shown to be met in the analyses presented above (see Tables 7.9 and 7.10). Consequently, a hierarchical regression was conducted to assess whether the strength of the relation between CS and career outcomes was reduced by adding CCs to the model (step 4). The results of this analysis can be found in Table 7.14. As can be seen, the relation between CS and the four career outcome measures was not significantly different from zero after CCs were included in the model. This suggests that CCs are a complete mediator of the relation between career salience and the SCS measures of career satisfaction, job success and interpersonal success and the OCS measure of income. Overall, the results provided partial support for Hypothesis 7.7a and b.

Table 7.14 Multiple Regression Analysis Career Salience and Career Competencies predicting Career Outcomes (Path c and Path c') (n=293)

	Effect CS on CSS	Effect CS & CCs on CSS	Effect CS on JS	Effect CS & CCs on JS	Effect CS on IS	Effect CS & CCs on IS	Effect CS on Income	Effect CS & CCs on Income
	Beta	Beta	Beta	Beta	Beta	Beta	Beta	Beta
JPER				.024		.144*		-.145
GSCP		-.038		-.019		-.003		.247*
SELF		.283***		-.052		.132		.034
POL		-.118		.209**		.217**		.181*
CRS		.133		.153		.051		-.069
GNET & FSSP		.108		.100		-.049		-.007
CS	.12*	-.037	.28**	.11	.22**	.099	.19*	.089
Model R ²	.01*	.12***	.08**	.18***	.05**	.20***	.03*	.13***

*p<.05, **p<.01, ***p<.001

7.6.3.6 The Big Five personality dimensions will jointly predict a) subjective and b) objective career success (Hypothesis 7.8)

Multiple hierarchical regression analyses were conducted to test this hypothesis. The Big Five personality scales were used as predictors. They were entered into the equation in one step. The SCS and OCS measures were used as outcome variables.

Variations in the levels of personality did not significantly account for variations in the outcome variables of career satisfaction, financial success and job success. However, R was significantly different from zero when regressing interpersonal success ($F(5, 287)=5.55, p<.001$) and lg life success ($F(5, 287)=7.63, p<.001$) on personality with the latter explaining 9% and 12% of the variability respectively.

With regard to OCS, the Big Five were found to jointly predict income ($F(5, 187)=3.88, p<.01$), explaining 9% of the variance of this outcome variable. However, with regard to promotion, no such relation was found.

These findings, of which only the significant ones are presented in Table 7.15, provide partial support for hypotheses 7.8a and 7.8b.

Table 7.15 Multiple Regression Analyses Personality predicting Career Outcomes (n=293)

	IS Beta	LG LS Beta	Income Beta
Extraversion	.095	.188**	.269***
Agreeableness	.085	.064	-.143
Conscientiousness	.121	.030	-.026
Emotional Stability	.071	.193**	.142
Openness	.089	-.003	.019
R ²	.09***	.12***	.09**

*p<.05, **p<.01, ***p<.001

7.6.3.7 Career competencies will mediate the relation between personality and a) subjective and b) objective career success (Hypothesis 7.9)

These hypotheses were tested following the above-introduced procedure suggested by Baron and Kenny (1996). The analyses were only conducted for the career outcomes that had been found to be predicted by personality (see Table 7.15). The relationship between CCs and career outcomes had already been shown before. Therefore, the first analyses to be computed were standard multiple regressions of the CCs on personality. The results of these analyses can be found in Table 7.16. Personality significantly predicted all of the six career competency dimensions: how1 ($F(5, 287) = 23.87, p<.001$), why1 ($F(5, 287)=8.57, p<.001$), why2 ($F(5, 287)=12.38, p<.001$), how4 ($F(5, 287)=13.36, p<.001$), how2 ($F(5, 287)=11.61, p<.001$) and whom ($F(5, 287)=10.26, p<.001$).

Table 7.16 Multiple Regression Analyses Personality predicting Career Outcomes (n=293)

	JPER Beta	GSCP Beta	SELF Beta	POL Beta	CRS Beta	GNET & FSSP Beta
Extraversion	-.003	.215***	.182**	.297***	.232***	.337***
Agreeableness	.036	-.044	.007	-.054	-.038	.043
Conscientiousness	.453***	.135*	.193**	.140**	.165**	.052
Emotional Stability	.021	.069	.066	.082	.031	-.118
Openness	.162**	.134*	.176**	.133**	.183**	.117*
R ²	.29***	.13***	.17***	.19***	.17***	.15***

*p<.05, **p<.01, ***p<.001

Subsequently, hierarchical regressions including both CCs and personality subscales as predictors and the SCS and OCS measures as outcome variables were computed. This was to analyse whether the inclusion of CCs had an effect on the contribution of personality to the regression model. The personality dimensions did not significantly contribute on an individual basis to the regression model of interpersonal success (see Table 7.17). Therefore, no mediation effect can be deduced with regard to the inclusion of CCs into the model. With regard to lg life

success and income, the influence of the personality dimensions was slightly reduced by the inclusion of the CCs. Therefore, a partial mediation might be assumed. Overall the results provide only very limited support for Hypothesis 7.9.

Table 7.17 Multiple Regression Analysis Big5 and Career Competencies predicting Career Outcomes (n=293)

	Effects Big5 on IS Beta	Effects Big5 & CCs on IS Beta	Effects of Big5 on LG LS Beta	Effects of Big5&CCs on LG LS Beta	Effects of Big5 on Income Beta	Effects of Big5&CCs on Income Beta
Extraversion	.095	-.001	.188**	.145*	-.269***	-.163*
Agreeableness	.085	.094	.064	.070	.143	.123
Conscientiousness	.121	.002	.030	-.064	.026	.019
Emotional Stability	.071	.039	.193**	.174**	-.142	-.120
Openness	.089	.010	-.003	-.062	-.019	.016
JPER		.121		.117		.118
GSCP		.008		.013		-.237**
SELF		.118		.053		-.025
POL		.213**		.024		-.127
CRS		.063		.169*		.057
GNET & FSSP		-.014		-.046		-.005
R ²	.09***	.20***	.12***	.17***	.09**	.16**

7.6.3.8 Career competencies will predict a) subjective and b) objective career success over and above demographics, personality and career salience (Hypothesis 7.10)

This was tested by means of hierarchical regression analyses. Demographics were used as control variables and entered in the first step. They controlled for experiential influences on career over the course of life. Personality and CS were both entered in the second step, controlling for dispositional influences on career outcomes and career competencies were entered in the third step. The respective SCS and OCS measures were used as outcome variables. The results of the analyses can be found in Table 7.18.

The regression models indicated that the CCs significantly predicted career satisfaction, job success, interpersonal success and lg life success over and above demographics, career salience and personality.

For both, career satisfaction and interpersonal success, R was significantly different from zero at the end of step 2 and 3. Adding demographics to the two models did not reliably improve R². However, adding career salience and personality in a second

step ($F_{\text{incCSS}}(6, 263)=2.75, p<.05$ and $F_{\text{inclS}}(6, 263)=6.11, p<.001$) and CCs in a third step ($F_{\text{incCSS}}(6, 257)=3.86, p<.01$ and $F_{\text{inclS}}(6, 257)=3.31, p<.01$), resulted in each case in a significant increment in R^2 . After step 3, with all the IVs in the equation, $R^2=.18, F(22, 257)=2.51, p<.001$ for career satisfaction and $R^2=.22, F(22, 257)=3.32, p<.001$ for interpersonal success.

For job success and lg life success, R was significantly different from zero at the end of each step: step one, $F_{\text{incJS}}(10, 269)=3.18, p<.01$ and $F_{\text{inclGLS}}(10, 269)=2.95, p<.01$, step two, $F_{\text{incJS}}(6, 263)=4.88, p<.001$ and $F_{\text{inclGLS}}(6, 263)=6.89, p<.001$ and step three, $F_{\text{incJS}}(6, 257)=6.75, p<.001$ and $F_{\text{inclGLS}}(6, 257)=3.32, p<.01$. Apart from this, the addition of each set of variables reliably improved R^2 . With all the predictors added to the model, $R^2_{\text{JS}}=.25, F(22, 257)=5.12, p<.001$ and $R^2_{\text{LGLS}}=.22, F(22, 257)=4.48, p<.001$.

Neither demographics, nor career salience and personality nor CCs were related to financial success in this sample. R was not significantly different from zero for any of the predictors nor did the addition of any of them reliably improve R^2 . Overall, the results provide partial support for Hypothesis 7.10a.

With regard to the OCS measures, R was found to be significantly different from zero after all three steps. Having included all predictor variables, $R^2_{\text{SQRPromotion}}=.14, F(22, 256)=1.81, p<.05$ and $R^2_{\text{Income}}=.39, F(22, 160)=6.20, p<.001$. Adding demographics to the regression models reliably improved R^2 in both cases, $F_{\text{incSQRPromotion}}(10, 268)=3.05, p<.01$ and $F_{\text{incIncome}}(10, 172)=9.88, p<.001$. The inclusion of career salience and personality into the models in step 2 also resulted in a significant increment of R^2 for income, $F_{\text{inc}}(6, 166)=2.82, p<.05$ but not for sqr promotion. Adding CCs, however, did not reliably improve R^2 . Therefore, no support was found for Hypothesis 7.10b.

Table 7.18 Multiple Hierarchical Regression Analysis Demographics, Career Salience, Personality and Career Competencies predicting Career Outcomes (n=293)

	CSS Beta	R ² /ΔR ²	FS Beta	R ² /ΔR ²	JS Beta	R ² /ΔR ²	IS Beta	R ² /ΔR ²	LG LS Beta	R ² /ΔR ²	SQR Promo Beta	R ² /ΔR ²	Income Beta	R ² /ΔR ²
Gender	-.064		-.109		-.249***		-.071		-.108		.017		.229**	
Age	-.056		-.025		-.058		.033		.045		-.052		-.000	
Married vs single	.004		.026		.091		.065		.240***		.150*		-.025	
Married vs cohabitating	.035		.070		.002		.026		.036		-.006		.001	
Married vs divorced	-.007		-.001		-.059		-.059		.108		-.013		.060	
GSCE vs A Level	-.021		-.039		.071		-.069		-.027		-.121		-.046	
GSCE vs Degree	-.079		-.045		-.009		-.097		-.176*		-.192*		-.064	
GSCE vs Postgrad	-.108		-.004		-.022		.039		-.085		-.250**		-.326***	
GSCE vs Doctorate	-.084		.022		.008		-.066		-.023		-.058		-.388***	
Tenure	-.079	.05	-.056	.03	.023	.11**	-.110	.05	-.036	.10**	-.232**	.10**	-.379***	.37***
Career salience total	-.036		.077		.107		.134		-.157*		.057		.050	
Extraversion	.062		-.134		-.027		.036		.175**		-.000		.136	
Agreeableness	.040		-.007		.019		.094		.062		-.022		.009	
Conscientiousness	-.127		-.187*		-.088		.010		-.043		.102		.062	
Emotional stability	.104		.091		-.010		.047		.160*		-.111		.050	
Intellect or openness	-.134*	.10*/ .06*	-.066	.07/.04	-.117	.20**/ .09***	.007	.16***/ .12***	-.073	.22***/ .12***	.020	.12**/ .02	-.097	.42***/ .06*
JPER	-.007		.047		.045		.120		.097		.031		-.108	
GSCP	.294**		.021		-.001		-.008		.034		.121		.140	
SELF	-.116		-.063		-.019		.122		.090		-.094		-.019	
POL	.084		.231**		.261***		.160*		.027		.053		.043	
CRS	.084		-.004		.147		.054		.150		-.103		-.127	
GNET & FSSP	-.003	.18**/ .07***	.035	.11/.04	.110	.31***/ .11***	-.076	.21***/ .06**	.004	.28***/ .06**	-.027	.14*/ .02	.141	.46***/ .04

* p<.05, ** p<.01, *** p<.001

7.7 Exploration of additional questions

This section presents the results of the general questions on career development that were presented to police officers (n=185). Even though the answers do not contribute to the validity and reliability information, they are presented at this point because they were collected in the same survey. Their presentation is important as they are of informative value for the participating police organisation and the concluding recommendations drawn from this study.

For some questions, there were missing values in the data. Since less than 5% of the data points were missing and this in a random manner, they were replaced by the mean (Tabachnick & Fidell, 2001).

Almost half of the respondents (45.3%) disagreed or strongly disagreed with the statement that career development was clearly signposted within WMC. 30.4% neither agreed nor disagreed, while 24.3% found career development clearly signposted.

41% of respondents did not know which unit within the organisation was responsible for career development, while 40.5% knew where the respective responsibilities lay. 18.5% of respondents neither agreed nor disagreed with the statement.

The majority of respondents (54.7%) stated that they would be comfortable receiving career guidance from their line manager, while 20.1% were indifferent with regard to this question and 25.2% would object to this.

54.4% of officers said they would welcome the opportunity to have career coaching, while 13.5% would not be interested and 32.1% did not have an opinion on this question.

Overall, 57.1% of participants stated that they were interested in career guidance or development, 23% were neither interested nor disinterested and 19.9% said they were not interested in it at all.

7.8 Discussion

This study had three main aims: 1) to re-confirm the evidence of reliability of the CCS, 2) to examine the construct validity of the CCI and 3) to analyse the criterion-related validity of the CCI.

First, the results of each of these three sections will be discussed in detail. Second, the responses to the general career development questions and some more general limitations of this study will be reviewed.

7.8.1 Reliability analysis

The factor structure of the Career Competency Indicator was partially replicated by this study. Furthermore, all the career competency sub-scales except knowledge of (office) politics were shown to have acceptable levels of reliability.

It could be criticised that this evidence of reliability is exclusively based on internal consistency without considering other alternatives, such as alternate form reliability and test-retest reliability. Alternate form reliability assesses the correlation between two strictly parallel forms of a scale completed by the same sample. It was at this stage not possible to analyse alternate form reliability, as the seven CCI sub-scales contained not enough items to warrant a split into two versions. Future research, however, could aim to develop parallel scales to the CCI scales to analyse this type of reliability. Test-retest reliability looks at how constant scores on a scale remain from one occasion to another. Due to time restrictions, it was not assessed at this point. However, future studies could seek to administer the CCI to the same sample at two points in time to analyse this form of reliability.

7.8.2 Construct validity

The analyses presented in this section provided supporting evidence for the construct validity of the CCI. First, the majority of the career competency sub-scales was found to be significantly correlated with each other above a chance level of similarity, indicating convergent validity.

Does the fact that the CCs were significantly correlated with each other mean that they measure the same? Looking at the effect size r^2 of each of the correlations i.e. the proportion of variation within the data that is explained by the relationship between two variables, it became apparent that they varied from $r^2_{(JPER,GNET)}=.02$ to $r^2_{(GNET,FSSP)}=.55$. These findings suggest that, even though the CCs are positively

correlated, they are not identical, i.e. there is always a large extent of variability in one dimension that is not attributable to another.

Secondly, the CCs showed less than chance similarity with the Big Five personality dimensions, indicating discriminant validity. Only job-related performance effectiveness (JPER) showed an above chance similarity with Conscientiousness. JPER looks at whether a person meets deadlines, completes all the tasks that are expected of them etc. Individuals who comply with this might be described as organised, careful, thorough and efficient, adjectives used to represent Conscientiousness. As such, the two variables appear to have much in common.

Further analysis of the interdependencies between CCs and personality, using principal component analysis, extracted three components. The first component represented only CCs and the second only personality variables. However, the third combined a mixture of CCs and personality variables, namely job-related performance effectiveness, self-knowledge, Conscientiousness and Intellect.

To explore possible reasons why these variables loaded onto one component, a closer inspection of their content at item-level is necessary. Thoroughness and effectiveness have already been discussed as possible similarities between Conscientiousness and job-related performance effectiveness. Self-knowledge looks at issues such as self-awareness, knowledge of strengths, weaknesses and preferences, all of which require a certain degree of reflection and introspection. Intellect is described through adjectives such as bright, reflective and complex, indicating that intellectual individuals are more introspective and deep. Therefore, being thorough and reflective might be the descriptive characteristics that form the communality of these four variables.

Consequently, the results can be interpreted as evidence of discriminant and convergent validity of the CCI. They imply that the seven CCs measure a similar construct, which is different from personality characteristics. As such, they provide support for the argument by Woodruffe (1992) to keep the two concepts, competencies and personality, separate.

However, it could be criticised that the results do not evidence that the CC sub-scales and the personality scales actually measure career competency and personality. The analysis solely showed that the seven CC sub-scales appear to

reflect the same construct, and that this construct appears to be different to that measured by the personality dimensions. Moreover, the results might have been brought about by the fact that the sub-scales share more in common than simply construct similarity. For example, similarities in the way the scales were measured might account for some covariation in scores, independent of construct similarity (DeVellis, 1991).

To further strengthen the construct-validity evidence presented by this study, future research could employ a multitrait-multimethod approach (Campbell & Fiske, 1959). This is a powerful approach that not only uses different traits that are similar or different to each other, but also different methods to measure these traits. In the context of the present variables, this could be achieved by comparing the scores on the CCI sub-scales to more objective information on the respective skills, knowledge or behaviours. For instance, career-related skills could be compared with the number of training courses an individual attended, job-related performance effectiveness with the results from a personal development review or career guidance and networking with feedback from work colleagues etc. Apart from this, other measures that aim to assess similar characteristics could be employed to assess convergent validity. For example, self-knowledge could be compared to individuals' responses on other self-awareness measures. However, it was not within the scope of this research project to conduct a separate study collecting this additional information. It is recommended that the issue of construct validity using a multitrait-multimethod approach should be addressed by future research.

As mentioned above, all other forms of validity can be seen as evidence of construct validity. Therefore, demonstrating the face validity of the CCI would also further strengthen the construct validity argument. Face validity could be assessed, for instance, through short interviews with participants. Another form of validity that can be interpreted to support construct validity is criterion-related validity.

7.8.3 Criterion-related validity

7.8.3.1 Hypothesis 7.3 and 7.4

This part of the study examined, in the first instance, the relationship between CCs and career outcomes. The measures of SCS and OCS were moderately positively correlated. However, loading onto separate components, they appeared conceptually distinct. This confirmed previous research findings (e.g. Ng et al., 2005), suggesting that SCS and OCS would measure similar but different concepts.

The present study showed that the CCs presented in the CCI significantly predicted both SCS as well as OCS. Thus, it substantiated the definition of CCs as being instrumental in the achievement of desired career outcomes.

However, the extent to which the CCs explained variance in the outcome variables varied between measures. With regard to SCS, CCs accounted for 20% of the variability in job success and 26% of the variability in interpersonal success. They further explained 15% of the variability in both career satisfaction and life success but only 5% in financial success. This low value with regard to perceived financial success can possibly be attributed to the modest alpha reliability and the 3-item measuring scale of this SCS variable. Further research using alternative and/or broader measures of perceived financial success is warranted to assess the reliability of these findings. An alternative explanation might be that CCs simply played a limited role in the perceived financial success of the population sampled. Considering the relatively low, albeit significant, influence of CCs on OCS, the findings could be interpreted to the effect that CCs are not as strongly linked to career outcomes related to objective measures (e.g. remuneration), as they are to more intrinsic measures (e.g. job success).

This lower impact of CCs on outcome variables related to OCS might be due to the fact that there are numerous external barriers that impact on the achievement of promotion and income. Results from a study by Ayree et al. (1994) support this argument. Ayree et al. (1994) found that structural or work variables explained most of the variance in hierarchical and financial success. King (2004) also states that career opportunities are generally limited by external factors and contextually defined opportunities. For instance, as mentioned in Chapter 4, the majority of individuals working in the police force are police constables. Achieving promotion, especially to the top of the hierarchical ladder, will not be an opportunity that is open to many officers. In addition, the income span in public sector organisations is generally more

restricted than in private sector organisations, thus limiting the remuneration an individual is able to obtain. These organisational boundaries might restrict an individual's scope to influence OCS outcomes by applying career competencies.

An alternative explanation could be that individuals employed CCs, but due to organisational restrictions they could not apply them to an extent that yielded an impact on decisions on promotion or remuneration. It is important to recognise that not everybody works in an environment that allows them to use CCs in the most effective way. Not all individuals will have the same degree of influence and control over their careers and the extent to which they can engage in career-related behaviours. External issues, which were not analysed in this study, need to be taken into consideration. This is in line with King's (2001) suggestion that it might be wrong to assume that any desired career outcomes can be achieved given appropriate human and social capital and behaviour. King (2001) concludes that career outcomes are to some degree outside an individual's direct control. While career self-management would enhance the perception of control, it operates in a context where absolute control is not available (King, 2004). This would explain for the rather large amount of variance left unexplained in the above analyses. Individuals can only use CCs within the constraints posed upon them. For example, in the police service individual training applications are generally only approved if the training course is directly related to individuals' jobs. This makes it difficult to develop a broad range of career-related skills. Stickland (1996) pointed out that organisations needed to overcome this block of only supporting learning if related to work, should they want to foster learning habits required to improve motivation and long-term performance.

In addition, as described above, the police working ethic is very task driven and does not provide much time for self-reflection (see Chapter 4 & 5). Apart from this, the feedback culture in police organisations has been shown to be only poorly established (Beck & Wilson, 1997). This may impact on the development of individual self-knowledge and explain why this career competency was not found to contribute to the prediction of career outcomes - individuals may not be given or may not take the time to engage in it. However, this research did not examine the decision processes with regard to income and number of promotions directly. Therefore, it would be premature to abandon the above CCs without further research.

Furthermore, the contribution of the different CCs to the regression models was found to vary depending on the outcome variable. For instance, all CCs apart from job-related performance effectiveness and self-knowledge contributed significantly to career satisfaction. On the other hand, all CCs except goal setting and career planning and the combined variable of whom (career guidance and networking and feedback seeking and self-presentation) contributed significantly to interpersonal success. This might suggest that certain CCs are more important for some career outcomes than for others.

Knowledge of (office) politics appeared to be a strong contributor to all SCS measures as well as to the outcome variable of number of promotions. Individuals who understood the motives behind others' actions and used their interpersonal skills to influence others at work received more promotions and reported higher levels of internal career satisfaction. These findings support results by Judge and Bretz (1994), who found political behaviour to significantly predict SCS and OCS.

The development of career-related skills also contributed to the prediction of all the SCS measures, apart from perceived financial success. The results indicated that individuals who actively developed a wide skill set and engaged in development activities were more intrinsically successful. This is consistent with previous research linking skill building to perceived career success (Eby et al., 2003).

With regard to the prediction of income, only career planning and goal setting was found to contribute significantly to the regression model. The results indicated that those individuals who set career goals and had a strategy to achieve these goals reported higher remuneration than those who did not plan their careers. This is in line with previous findings showing career planning activities to predict salary (e.g. Gould, 1979).

It is noteworthy that performance effectiveness only impacted on one career outcome, namely perceived interpersonal success. The results suggested that individuals who fulfilled their responsibilities and work expectations were more likely to gain the acceptance of their peers and the confidence of their supervisors. This may be due to the fact that, for instance, in the police organisation team work is essential and sometimes critical for survival, making it more likely for individuals to accept and value reliable and efficient colleagues. However, performance effectiveness does not appear to contribute to the achievement of career or job

satisfaction, higher wages or number of promotions. This result is of special importance since it supports the argument that using competencies, which solely focus on job-performance, may not be adequate when looking at career development. It demonstrates that self-reported performance effectiveness does not guarantee career success, one of the main objectives of career development interventions. Career development needs to go beyond the assessment of strengths and weaknesses and training to improve job-performance. In order to achieve SCS, competency-based development activities have to be wide ranging and take a holistic approach, such as presented in the CCI.

Even though these findings are noteworthy, the analysis of the separate contributions of each CC to the regression models was not the main focus of this study. At this stage of instrument development, the extent to which the CCs jointly explained variance in the outcome variables was of particular interest (Gattiker & Larwood, 1990). Future studies should analyse more closely the way in which each variable individually contributes to the various aspects of career success.

Overall, the findings provide support for the person-centred perspective on career processes advocated by several authors (e.g. Hall, 1996; Seibert et al., 2001). The findings that people who engaged in career competency behaviours reported higher levels of SCS and OCS are consistent with the suggestion that people can actively shape their environments and thus create favourable outcomes for themselves.

The impact of CCs on perceived career success is also important for organisations. Various authors found perceived career success to be positively related to organisational commitment and negatively related to turnover intentions (e.g. Joiner et al., 2004). The retention of skilled and talented human resources is one of the main objectives of human resource management (Arthur, 1994). Therefore, helping individuals develop their CCs may represent a means to not only influence individuals' perceptions but also reduce turnover within the organisation.

7.8.3.2 Hypothesis 7.5

Demographics significantly contributed to the prediction of the SCS variables of job success and perceived life success. Women were found to rate their job success and life success higher than men. Family status also appeared to contribute significantly to the prediction of life success. Life success increased significantly more in individuals who were married or cohabitating than in singles. The results

confirm previous research findings that showed family variables to predict SCS (e.g. Gattiker & Larwood, 1988). It further supports the notion that the family's moral support and the diversion it entails are important factors affecting quality of life.

Demographics were found to significantly predict OCS. Education contributed significantly to the prediction of the OCS variables. The results indicated that the number of promotions increased significantly more in individuals who had A-Level, degree-level or postgraduate-level qualifications, compared to those who had GCSE-level education. Remuneration was found to increase significantly more in individuals who were educated to postgraduate and doctorate level, compared to those who held GCSE levels. This is in line with previous studies that found education to be significant predictors of OCS (e.g. Judge et al., 2004; Ng et al., 2005).

Additionally, tenure was found to have a positive relationship with OCS. The longer individuals had worked for the organisation, the higher the levels of number of promotion and income they reported. These results are in accordance with past research (e.g. Judge et al., 2004; Bozionelos, 2004).

Furthermore, females in the sample received a lower income than males. This is in line with previous research that showed that male respondents earned more than their female colleagues in similar positions (e.g. Gattiker & Larwood, 1998; Ng et al., 2005).

When evaluating these findings, the risk of range restrictions for the sample that provided information on income has to be considered. The large number of missing values on the outcome variable reduced the usable sample size to almost a third, limiting the generalisability of the findings.

That age was not found to significantly contribute to the prediction of any of the career outcomes may have had to do with the characteristics of the sample groups. Had both samples been analysed separately, age may have had an effect, especially seeing that the groups varied significantly with regards to this variable. In the police organisation, as discussed in Chapter 4, individuals generally work for 30 years. Therefore, it is likely that this sample was slightly positively skewed with regards to age, not representing older employees of age 50 and above. Future studies may

want to look into the effects potential age skewing may have on the prediction of career outcomes as well as the reporting of CCs.

Overall, demographics appeared to be more important for the prediction of OCS than of the various SCS measures. Especially with regard to income, demographics showed to be important variables. It is noteworthy that career satisfaction and job satisfaction were not impacted by age and tenure. In other words, they were found not to decline with time. This is contrary to the results of previous research (e.g. Hoath et al., 1998; Wayne et al. 1999). It could be interpreted to the effect that individuals working in the participating organisations have not (career) plateaued, since negative outcomes would have been expected to emerge with plateauing.

7.8.3.3 Hypothesis 7.6

Career salience was found to significantly predict career satisfaction, job success and interpersonal success. Individuals to whom their career was very important, reported higher levels of satisfaction with their career overall, their job and their perceived interpersonal success. High scores on CS represent a willingness to centre all life goals on the career and to make sacrifices to succeed in the career. Consequently, individuals scoring high on CS can be expected to put a lot of effort into their work. This may not only help them to achieve career and job success, but also to obtain the acceptance of their peers and the confidence of their supervisors. The importance of a career did not seem to impact on perceived life success, suggesting that CS does not have a significant influence on individuals' overall contentment with life.

The analyses further showed that CS did not predict perceived financial success. This appeared to be in contrast to the finding that individuals to whom their careers were very important, reported higher levels of income than those with lower CS. As mentioned above, one possible explanation for the non-significance of the finding may be the way this variable was measured on a 3-item scale. However, the results could also suggest that individuals, to whom their careers are of great personal significance, may have different expectations against which they rate their financial success. Being career-centred is argued to involve an intention to prioritise the pursuit of greater satisfaction from one's career (Marshall & Witjing, 1982, in Allen & Ortlepp, 2002). Therefore, the expectations of high scorers on CS with regard to returns of investment may be greater than what they actually receive.

In addition, the fact that CS did not predict the number of promotions suggests that just focussing on the career does not guarantee more promotions.

7.8.3.4 Hypothesis 7.7

The hypothesis was only tested with regard to the career outcomes that had been significantly predicted by career salience, i.e. career satisfaction, job satisfaction, interpersonal success and income. The results indicated that the relation between CS and the outcome variables was completely mediated by CCs. In other words, CCs formed the generative mechanism through which CS was able to influence career outcomes.

This part of the study also provided support for the argument that CS influences the development and application of CCs. It was shown that individuals who were more career-focused engaged more in each of the career competency areas.

However, the estimation of the effects of the IV (CS) and the mediator (CCs) on the DVs will have resulted in multicollinearity. This may have reduced the power of the results in the test of the coefficients in the third equation of the moderation analysis. To counteract the unreliability of the findings, Baron and Kenny (1986) suggest using multiple operations or indicators of the various constructs. Future research could follow this suggestion to validate the present findings.

In addition, the results of this study were derived using various hierarchical regression analyses. Future research may want to employ a different analytical technique to replicate the findings. For instance, structural modelling techniques could be used. Structural modelling techniques have various advantages over the regression approach, including a) having been especially developed for non-experimental data, b) testing all the relevant paths directly and c) incorporating complications of measurement error directly in the model. They were not employed in this research because they involve much more complex statistical analyses which require special training.

Overall, the findings indicated that individuals who had the intention to pursue and derive greater satisfaction from their careers used CCs to achieve desired career outcomes.

7.8.3.5 Hypothesis 7.8

The personality variables were found to jointly predict the career outcomes of interpersonal success, life success and income. This partially replicated findings by Bozionelos (2004), who used similar career success measures: organisational grade, job satisfaction, hierarchical success, financial success, interpersonal success and life satisfaction. Bozionelos found personality to contribute significantly more to OCS than to SCS. In his study, personality only added significant variance to the prediction of the SCS variables of financial success, interpersonal success and life satisfaction.

Of the five personality dimensions, Extraversion appeared to be of particular importance. It was the only variable that contributed to the prediction of income. This indicates that action tendencies and assertiveness, characteristics of Extraversion, may put individuals at an advantage with regard to increasing remuneration. This concurs with previous studies that reported a positive relationship between Extraversion and extrinsic career success (e.g. Melamed, 1996).

Apart from this, Extraversion was also found to be negatively related to life success, suggesting that individuals who score high on Extraversion may be at a disadvantage with regard to the evaluation of life success overall.

Emotional stability also contributed significantly to the explanation of life success. This is in line with Bozionelo's (2004) findings that showed this personality dimension to be related to life satisfaction. Being relaxed and balanced, attributes associated with emotionally stable individuals, appeared to contribute to a positive perception of overall life success.

Even though the personality variables were shown to jointly predict interpersonal success, none was found to significantly contribute individually to the explanation of this SCS measure.

With regard to the contribution of the different personality aspects to career outcomes, the results of this study differed slightly from previous research (e.g. Bozionelos, 2004). This may be due to the way the personality variables were assessed. Using only eight attributes to measure each personality dimension may not fully capture the breadth of the concepts. Future research should seek to confirm

the more detailed accounts empirically, using a broader measure of personality e.g. 16PF5 (Russel & Karol, 1994, in Bozionelos, 2004).

7.8.3.6 Hypothesis 7.9

The testing of this hypothesis was again restricted by the previous findings. The relationship between personality and both life success and income appeared to be partially mediated by CCs. However, the contribution of the personality variables to the prediction of the outcome variables was only slightly reduced by the inclusion of the CCS. This suggests that personality does not exert its influence on career outcomes strongly through CCs.

It is, however, noteworthy that personality was found to significantly predict each of the CCs. Extraversion appeared to be positively related to all of the CCs, except job-related performance effectiveness. In other words, extraverted individuals showed to engage more in all CCs but how1, compared to introverted individuals. Conscientiousness was found to contribute significantly to the regression models for all of the CCs, except whom. It showed to be an especially strong contributor for how1. Individuals, who were effective, organised and systematic, appeared to be at an advantage with regard to this competency that relates to meeting deadlines and completing tasks. Furthermore, Openness was found to contribute significantly to the prediction of all of the CCs. In other words, individuals who described themselves as creative, intellectual and imaginative seemed to engage more in all of the CCs.

Overall, the results suggest that the development and employment of CCs may come more naturally to individuals who are extravert, conscientious and open. This needs to be taken into consideration, when developing interventions aimed at the furthering of these competencies.

7.8.3.7 Hypothesis 7.10

Concurrent with the literature conceptualisation of career competencies and the relevant hypothesis, the results suggested that CCs were relevant predictors of SCS. They were shown to contribute to the outcome variables of career satisfaction, job success, interpersonal success and (lg) life success, in a manner that was additive to the contribution of demographics, career salience and personality. In other words, the results suggested that investments in the accumulation and employment of CCs have complementary effects on these SCS outcomes.

However, none of the IVs was significantly related to financial success. Neither demographics nor career salience nor personality had been found to significantly contribute to financial success in the separate analyses. This, combined with the relatively low predictive value of CCs on this outcome variable (see Table 7.9), may explain for this finding. Also, the 3-item scale used for the assessment of financial success must be mentioned again as possible reason for this non-significant result.

No support was found for the contribution of CCs to OCS over and above the control variables. The restriction of range using only the data that provided information on all dependent and control variables (N=293), may be responsible for these findings. The problem was caused by an error that occurred on the website where the survey was hosted. Combined with the large number of missing values regarding the OCS of income, this reduced the usable sample size to N=158, a level that did not comply with the minimum requirement for case-IV-ratio. Therefore, the results need to be interpreted with caution. Future research considering a larger sample is required to confirm the meaningfulness and generalisability of the findings. In addition, future studies should also aim to avoid such errors by continuously checking the data submitted through the online system.

The criterion-related validity study is also vulnerable to the inflation of correlations by common method variance (CMV) (Lindell & Whitney, 2001). Individuals' reports of their CCs were collected at the same time as their responses to the career outcome variables. Consequently, the possibility arises that CMV might have artificially inflated the observed correlations between these two types of variables. Even though there are studies claiming that the effect of CMV is not severe (Kline, Sulsky & Rever-Moriyama, 2000), future research may want to address the issue by, for instance, assessing the predictor variable prior to the outcome variable in a separate questionnaire.

With regard to the assessment of SCS, the choice of criteria could be criticised. Even though the study looked at different areas of SCS, the measures employed did not assess SCS in form of personal standards against which perceived success was evaluated. Instead, the measures presented individuals with specific questions that were thought to tap into individuals' standards with regard to career success. However, persons' behaviour can be labelled as effective if they are satisfied with the outcomes. Future studies could, therefore, attempt to look at more idiosyncratic

factors when judging the effectiveness of CCs, defining subjective outcomes in more personal terms.

In addition, the choice of measures to assess OCS needs to be commented on. The first problem was the large number of missing values for the variable of income, especially in the police sample. One possible reason for this may be a general reluctance of police officers to provide this type of information. Alternatively, it may be due to the format in which the variable was assessed, by asking individuals to state their pay-bands. Some individuals may not have been familiar with their pay-band number. However, if asked to state the actual amount of money they take home every month, they may have been able to answer this question. Second, with regard to the variable of number of promotions, the subjectivity of the measure could be criticised. This was sought to be avoided by providing a definition of promotion. However, this may not have reduced all subjective components from the measure. Future research may, therefore, want to assess these OCS variables using objective organisational data that is free from potential individual distortion.

The approach of collecting criterion-related validity data through a concurrent approach presents one major limitation of this study, as it does not actually provide evidence of prediction, but merely of correlation (Bartram, 1990). Future research, collecting the data for the IVs first, before assessing the criterion variables at a later time, would need to be conducted to ensure that the interpretations derived from this study are of actual predictive value.

7.8.3.8 General Limitations

The first critical issue that needs mentioning is the format of data collection, using an online survey approach. The more general risks connected with conducting research over the internet have been discussed previously (see Chapter 6).

One specific aspect which is of particular relevance to this study is the possibility of range restrictions due to the self-selection of the sample. Individuals might have chosen to participate in the study for certain reasons, which might be reflected in their responses. For example, it is noteworthy that some of the responses to the career outcome variables showed a positive skew in distribution. For instance, the results indicated a high degree of overall satisfaction with life in the sample. This could indicate that people working in the two participating organisations were, by and large, very happy with their lives. However, it could also mean that especially those

individuals who were happier, chose to participate. With regard to numbers of promotions, the responses were also moderately positively skewed. Most respondents had only received a few numbers of promotions, with only a few high-scorers on this variable. This is not surprising, seeing that the majority of police officers work at the rank of Constable (see Chapter 4). In other words, the hierarchical structure of the police service does not warrant a normal distribution of this variable. However, it remains for future studies to analyse the degree to which the self-selection of the sample had an impact on the results. This could be achieved by, for instance, involving all the employees of one or more organisations in the research.

Also linked to the issue of range restrictions is the fact that participants only came from two organisational backgrounds, both of which form part of the public sector. This also restricts the generalisability of the findings. Organisational expectations, payment structure as well as work ethics are likely to be different in these organisations compared to private sector organisations. For example, as described in Chapter 4, jobs in the police force are generally much more secure than in the private labour market. This may have had an impact on the extent to which individuals felt the need to develop and engage in CCs to self-manage their careers. The employment of CCs may be more important in the private sector, where competition is perceived to be much fiercer than in the public sector.

This is emphasised by the fact that differences were found between the two sample groups, with regard to demographics and responses to the career competency, personality and career outcome variables. Both samples differed significantly with regard to the ratings on the CCs of JPER and POL and the personality dimension of Extraversion and Agreeableness. However, the differences were only small in magnitude and shall, therefore, not be discussed in more detail.

However, the fact that police officers reported lower levels of job success than university employees is noteworthy. This may be a reflection of the high pressure and risk that officers generally have to work under, and which make the job of a police officer particularly demanding (Davies, 1981, in Kakabadse, 1984). The finding is especially critical in light of Hoath et al.'s (1998) argument that job satisfaction is of very great importance to police forces, suggesting that this issue may require organisational attention.

Further points of difference between the two sample groups were age, tenure, gender and education. Police officers had on average been working with their organisation for much longer and were younger than the university employees. This is likely to be a reflection of the unique structure of the police force as an organisation. Individuals start relatively young and work in the organisation for about 30 years, since job security is high and job changes are rare (Blunkett, 2004). The differences with regard to gender-distributions, i.e. the police force was male-dominated and the university sample was female-dominated, is likely to be attributable to the organisational culture (Dick & Hyde, 2006). Additionally, more respondents from the university than from the police sample had obtained postgraduate and doctorate education. On the other hand, the percentage of individuals with GCSE and A-level qualifications was much higher in the police than in the university sample. Altogether, these differences between the two sample groups might have had an impact on the results.

Apart from this, Parker and Arthur (2000) argue for the existence of career communities, i.e. self-organising member-defined social structures that individuals draw upon for career support. These career communities are thought to create a certain culture of achievement, where success is measured by one's peers, rather than by objective or subjective markers of career success (Parker et al., 2004). Depending on the community, SCS would be shaped in a different way for individuals working in different settings and organisational contexts.

All this may suggest that the data from the two organisational cohorts should have been analysed independently. However, the sample sizes were not large enough, so that analysing both samples separately would not have yielded valuable information. Future research needs to be conducted to establish the extent to which the results obtained in this study can be generalised to other organisational or (career) communal contexts.

Another issue that needs to be considered when evaluating the results of this study is the validity and reliability of self-report measures. Most scales assessed in this study were based on self-reports, the consequences of which have already been discussed in Chapter 6. If future research could implement an additional form of objective assessment of the variables measured, it would strengthen the validity argument made by this study.

Apart from this, the issue of response sets also needs to be pointed out (see Chapter 6). Even though different measures were applied in the development of the CCI to avoid response sets, e.g. making items as clear as possible, using only positively phrased items might still have affected responses. It is recommended that a future study assesses the impact response sets might have had, by intermixing an equal number of positively and negatively worded items.

7.8.3.9 Additional questions

The answers showed that the majority of respondents felt that career development within their organisation was not clearly signposted. They also found that most officers were unclear about which unit was responsible for career development. This suggested a need for a clearer structure. A more detailed description of the respective responsibilities as well as the processes available to officers should be implemented.

The outcomes also indicated that providing career guidance through direct line managers would be an accepted way of bringing career development to officers. The majority of officers expressed an interest in the opportunity of receiving career coaching. Only approximately 20% of officers were not at all interested in career guidance or development. This suggested that it may not be necessary to require the whole workforce to engage in career development, since some appear happy without it.

Overall, the answers to the additional questions suggested that it may be possible to use career coaching and guidance as a vehicle to address the issue of signposting career development.

Summary

This part of the research project provided additional support for the reliability of the CCI, demonstrating acceptable alpha levels for all CCI sub-scales. In addition, it provided evidence for the convergent validity of the CCI, showing below-chance similarity between the CCI sub-scales. It also showed discriminant validity between the CCI sub-scales and the Big Five personality scales.

The results of the study also suggested criterion-related validity of the CCI. Career competencies were found to jointly predict OCS and SCS. The impact of CCs on all the SCS variables, except financial success, was significant over and above the influence of demographics, personality and career salience. CCs were also shown to mediate the relationship between career salience and career outcomes.

The study also provided input with regard to police officers' perception of career development, indicating that a clearer description of processes and responsibilities may be required. Additionally, most officers stated that they would be happy to receive career coaching, and career guidance from their supervisor.

Having established the psychometric properties of the CCI, in a next step the indicator will be used in an applied setting.

Chapter 8
Development, Piloting and Evaluation of a Career
Development Intervention based on the CCI

“Using a competencies approach is more about what needs training and developing and how to assess improvements in competency than about dictating particular ways of doing the training and developing.”

(Weightman, 1994, p. 125)

8.1 Aims of the intervention

The previous chapters provided evidence for the importance of career competencies in the prediction of SCS and OCS. The idea behind the development of the CCI was to support individuals in the self-management of their careers, with the overall aim of facilitating the achievement of positive career outcomes. This chapter looks at using the CCI in an applied setting. It describes the design, application and evaluation of a career intervention based on the CCI.

The aims of the intervention that was to be piloted within the participating organisation were a) to foster the development and employment of career competencies and b) to facilitate the achievement of career-related outcomes. Apart from this, it was also thought to be important that the intervention was of value to the participants in order to achieve acceptance and engagement.

The intervention sought to achieve its aims by increasing individuals' self-awareness and giving them the opportunity to experience conscious processes. It also aimed to change, where appropriate, attitudes by highlighting the importance of a positive approach and of personal responsibility for career development. Absolute control over the career is rarely attainable. However, as mentioned earlier, using CCs might enhance the perception of control, as it provides an approach that is tailored to individual needs and emphasises the importance of self-responsibility. Once individuals begin to operate in this mode, they may become more proactive in general.

8.2 Process

8.2.1 Format of the intervention

Previous chapters highlighted the fact that individuals are increasingly required to take more responsibility for their own careers (Kidd, 2002). In order to do so, they have to develop the skills and abilities necessary to secure employability. However, as Kidd (2004) states, many employees need help in managing their careers. As mentioned above, many organisations recognise this and adapting their interventions respectively (Kidd, 2002). The findings so far suggest that using CCs in this context should not only help individuals to become more self-reliant, but also to achieve

desired career-related outcomes. Hence, interventions promoting CCs are thought to address both organisational as well as individual goals.

The intelligent career model recognises that the only reliable approach to understanding career behaviour is from the individual's own perspective (Amundson et al., 2002). Stickland (1996) also states that to understand how to enhance individuals' motivation, it would be necessary to get close to people, to find out from them their wants and needs and how they see themselves developing. Therefore, to promote CCs effectively, an individual-centred approach was seen to be required. This would answer the argument that every individual is different, which is widely accepted but rarely carried through into organisational practice (Stickland, 1996). It would also allow for an adjustment of the intervention according to the individual's starting point, a feature that has been asked for by various authors (e.g. Kidd, 1992). For the intervention to be effective, it was further considered necessary to address issues which determine the initiation of behaviour and behaviour change, e.g. self-efficacy. As described above, efficacy expectations are derived from experience. Low expectations can result in internal barriers that may influence career-related behaviours and choices (Hackett et al., 1985).

Of the various ways in which organisations can support the career development of their employees, career coaching meets all the above-described requirements. Coaching is a "collaborative, individualised, solution-focused, result orientated, systematic, stretching" (Grant, 2006, p. 13) activity that fosters self-directed learning and promotes individual growth (Hall & Moss, 1998). In addition, 54.4% of the police respondents in the survey study presented in Chapter 7 stated that they would be happy to receive career coaching. This suggested that career coaching was going to be an acceptable means of career management in the participating organisation.

Career workshops were another format of career interventions that was perceived to lend itself to the promotion of CCs. Career workshops focus on sharing experiences and discussing career-related issues in group settings. Therefore, they appeared of value to the development of CCs in general and the areas of career guidance and networking in particular. Danksy (1996, in McCormack & West, 2006) found that group dynamics include relationships and processes that support career development. Group members can take advantage of the expertise of knowledgeable individuals in the group, who make their expertise available to all participants. This is supported by results of a study by Kidd et al. (2004), who

interviewed 104 employees who had taken part in career discussions. One of the aspects that participants appeared to value most was the sharing of information across functional boundaries. The advice from senior people was appreciated because of the depth and breadth of their experience in the business and their knowledge of the politics of the organisation. As mentioned above, Kakabadse (1984) came to similar conclusions in his research into personal development of police officers. He found that officers benefited from having role models and from learning from other officers. However, participants perceived it to be undesirable to model themselves on just one officer, as they did not wish to mimic someone else but to develop their own skills. In addition, More and Unsinger (1987) found that with regard to counselling services, police officers had a tendency to be hesitant to talk with people outside the profession, where they generally were expected to present a “perfect” image. As a result, the authors stress the value of peer counselling.

The input from other individuals working in the same organisation may also prove invaluable for creating an understanding of the nature of the career system within the organisation. As has been discussed in the previous chapter, the engagement in CCs may be influenced by the organisational context, yielding some approaches to the realisation of CCs more effective than others.

Consequently, it was decided to develop an intervention that combined career workshop structures with coaching elements, and that was to take place in a group setting to encourage the discussion between peers.

Kidd et al. (2004) found that only few effective career discussions took place within personal development reviews (PDR). As reasons they propose that PDRs would often be overloaded and, focussing on short-term performance, would not provide the right mind-set for considering development. Rothwell and Lindholm (1999) also suggest keeping career discussions separate from PDRs, in order not to confuse present performance with future potential. Therefore, the career intervention was not to be included in the PDR process but conducted independently.

8.2.2 Structure of the intervention

The career intervention aimed to help employees assess their own career-related behaviours. Truch et al. (2004) stated that at the individual level, awareness of CCs can already assist in self-development. It was, therefore, seen as an important part of the session to present participants with their individual career competency profile.

The profile was perceived to provide a good indication of the areas of career behaviour that people find most easy and most difficult to engage in. In addition, a detailed discussion of individual results was thought to be essential to further delegates' insight into their own behaviour.

In particular, it was decided to place the emphasis of the discussion around the two career competency areas individuals had scored lowest on. This was to increase the involvement in CCs that individuals presently least focused on, to create a more balanced engagement. As stated above, a deficiency in one or more CCs areas represents an imbalance that is likely to be unsatisfactory (Amundson et al., 2002). It may also highlight specific problems which may impede an individual's successful career development.

King (2001) recommends that in order to evaluate the effectiveness of career strategies, reflection on past experiences is required. This is to assess whether the strategies were successful and constituted an effective route to achieving desired ends. Therefore, the intervention was designed to involve participants in a reflection on, and an evaluation of, past activities. It further included an exploration of potential barriers which may impede successful engagement in the CCs and a brain storming of ideas on how these could be overcome. To this effect, it was perceived most suitable to take a goal-focused and facilitative coaching approach (e.g. Whybrow & Palmer, 2006).

Hall and Moss (1998) suggest ten steps that need to be taken by organisations or managers to facilitate the career development of employees.

1. Recognise that the individual "owns" the career.
2. Create information and support for the individual's own efforts at development.
3. Recognise that career development is a relational process in which the organisation and career practitioner play a "broker" role.
4. Provide expertise on career information and assessment technology, integrated with career coaching and consulting.
5. Provide excellent communication with employees about career services and the new career contract.
6. Promote work planning, now career planning.
7. Promote learning through relationships and work.
8. Provide career-enhancing work and relational interventions.
9. Favour the 'learner identity' over job mastery.

10. Develop the mind-set of using 'natural resources for development'.

Hirsh et al. (2001) also provide a list of tips for successful career discussions. These include four overarching areas: 1) setting up the discussion, 2) establishing trust, 3) sharing information and 4) agreeing action. To be clear about the issues that are to be raised, the giver needs to prepare for the session, bearing in mind that the receiver owns their career. When establishing trust, the giver and the receiver should agree a contract, listen and show empathy, and use a suitable questioning and probing style. Step three involves the sharing of information and the exploration of the pros and cons of different options. Finally, a direction for the future is set. This direction is defined, in more detail, in the conclusion of the session, where concrete actions are agreed upon.

Behaviours associated with effective discussions were: challenge and advice, followed by listening and understanding skills (Hirsh et al., 2001). Consequently, coaching techniques such as active listening and non-directive questioning, using open rather than closed questions were applied in the sessions. In addition, More and Unsinger (1987) point out that the credibility of those providing career assistance and the guarantee of confidentiality are crucial for any programme that is aimed at supporting employees. The facilitative behaviour employed in this intervention was, therefore, geared towards meeting these requirements.

Considering the points mentioned above, the group intervention was designed to have the following structure:

1. Welcome and introduction
 - Introducing the research project and organisational aims of using competencies in the career development context and encouraging officers to take more responsibility for their career development.
 - Introducing the facilitator.
2. Expectations of participants, aims and objectives of the session
 - Exploring participants' expectations of the session.
 - Introducing of schedule for the session.
 - Agreeing on the structure and the purpose of the session.
 - Agreeing on confidentiality.

3. Ice-breaker

- Asking delegates to describe to the group a past career event that went really well. Discussing the event in detail. Exploring skills, knowledge and resources individuals used that helped them to make the situation a success. Discussing how these could be employed to achieve future goals.
- Highlighting the importance of active involvement, ownership and a positive approach to career development.
- Linking experiences to career competency areas.

4. Theoretical input

- Introducing the career competency model and the seven competency areas.

5. Personal profiles

- Presenting individuals with personal profiles and overall scores.
- Describing the meaning of the scores as well as the normative information.
- Discussing general impressions regarding the profile and group comparisons.

6. Discussion of results

- Listing of the two career competencies that each individual scored lowest on.
- Discussing these at an individual level with regards to past behaviours, related barriers and underlying values. Exploring behaviours which individuals would like to engage in more and defining what success would look like. This involved asking questions such as: How would you explain that you scored lower in these areas? What might be the reasons for this? How have you dealt with this kind of situation in the past? What would have to change so you would rate yourself more highly on this? What have you tried so far? What could you do to change your score? What resources do you have? Whom could you approach? What can you learn from other people? What is the next step?
- Inviting other members of the group to contribute once individuals have run out of ideas.
- Contributing ideas by the facilitator, using a list of processes created for this study (see 8.2.4).
- Exploring and outlining the first practical steps individuals want to take to improve in the respective areas.

7. Summary

- Summarising issues discussed.
- Inviting questions regarding the issues discussed.
- Assessing whether expectations have been met.
- Encouraging networking activities.

8. Evaluation (see 8.4.5)

- Securing individuals' agreement to completing the CCI again and to participating in short follow-up interviews three months after the intervention.
- Distributing of evaluation forms.

9. Closure

- Thanking participants and closing the session.

With regard to career discussions, Kidd et al. (2004) found that to get the most out of a session, it was important that participants took time to prepare and engaged in self-disclosure. To facilitate this process, an Email was sent to participants one week prior to the session, asking them to consider their personal career development, their career aspirations and their expectation of the session.

8.2.3 Development of personal reports including norm group information

The individual-centred approach was to be reflected in the way the results of the CCI were presented and discussed. An ipsative approach conducting internal instead of external comparisons was, therefore, chosen to form the basis of the intervention. An individual's scores on the different areas of the CCI were compared with each other to stress the point of self-development. Even though, compared to their peers, individuals may obtain rather high scores on all the competency areas, they can still strive for further development and learning on a personal level, by looking at their individual scores on the competency areas.

The results on the CCI were presented to individuals in the format of a personal report (for an example, see Appendix D1), containing a brief introduction to the concept of CCs as well as a detailed description of the meaning of each CC. Since raw scores allow for ipsative comparisons, they were presented in the report in a table and depicted in a chart, together with a brief description of their meaning.

The report also contained a table with normative information. This was to provide individuals with information on how their scores compared to a larger group from the same background. Since raw scores are not suitable to conduct such comparisons, it was necessary to convert them into standard scores. Sten scores are a form of standard scores that allow comparisons of individuals' scores to a reference or norm group. They can take values from 1 to 10 and have a mean of 5.5 and a standard deviation of 2.

In order to compute sten scores, it was first necessary to transform the raw scores into z-scores. To do this, all the responses from police officers to the CCI from both survey studies (Chapter 6 and Chapter 7) were collated, resulting in an overall norm group size of 477. Using the percentile method, all the obtained raw scores on each of the CCI sub-scales were converted into standard z-scores and then into sten scores. The resultant norm tables were then used to convert individual raw scores into sten scores. This, in turn, allowed comparisons of individuals' scores to the whole group. Sten scores above 5.5 indicated that the individual had scored above average compared to the norm group, while scores below 5.5 indicated that they had scored below average compared to that group.

The sten scores, however, were not explained in the feedback report, as they were not considered of much importance to the individual or the process of self-development and self-insight. However, time was taken during the session to explain the meaning of the norm scores and their implications, for purely informative purposes.

8.2.4 Development of list of processes

It is important for individuals to understand their specific circumstances as well as the possibilities available to them within the context of their organisation. Therefore, a list of relevant procedures was collated, describing the possibilities open to police officers for developing each competency. This was thought to contribute to the effectiveness of the session, enabling the facilitator to provide organisation-specific input and helping to prevent raising unrealistic expectations.

8.2.4.1 Method

Procedure and participants

Nine individuals working in the areas of Training & Development and Personnel within the participating organisation were contacted via Email (see Appendix D2) and invited to participate in the study. The Email introduced the study and asked individuals to read and complete a template document. The template contained a detailed description of each competency, including all the respective items. It also presented a list of skills, abilities and knowledge expected to underlie each competency area. For each competency, this was followed by three sections that individuals were invited to comment on. The sections were introduced as follows:

- 1) The list of skills, knowledge and abilities above is not exhaustive. Please use the space below to note down any other skills etc. that you think are necessary for successful demonstration of this competency.
- 2) What processes, courses, exercises etc. to develop this competency are presently available within the organisation?
- 3) What other processes, courses, exercises etc. can you think of that would further the development of this competency?

Participants were given the choice of completing the document themselves and sending it back to the researcher, or taking part in a telephone interview. Overall, information was received from eight of the nine individuals, three of whom opted for an interview while five completed the template in their own time and posted it back.

8.2.4.2 Analysis and results

The input from participants was compiled in one document, which was used to provide support and advice to police officers during the intervention. Respondents named a list of resources, courses etc. they thought may contribute to the development of each career competency. The list included measures and programmes that were, at that time, available within the organisation. It also mentioned activities which were thought to be of value if initiated by the individual. The list included, for instance, secondments, training courses, home study procedures, mentoring schemes and promotion development plans. For a full list of the responses please see Appendix D3.

8.2.4.3 Discussion

The resultant list is based on input from only a few individuals working in the same organisation. Therefore, it is very specific to this organisation and to the individual experiences, and not generalisable to other settings.

Apart from this, the collated list does not claim to be exhaustive. The input from a larger sample of individuals would, therefore, be of value. If this intervention was to be applied in a different organisational context, a specific list for that setting would have to be produced.

8.3 Evaluation

8.3.1 Hypotheses

The intervention was thought to increase individuals' awareness with regard to the development and employment of career competencies. The coaching elements were expected to facilitate a greater engagement in CCs, since they were geared towards behaviour change, by exploring problems and ways to overcome potential barriers. Therefore, with regard to the success of the intervention, the following hypotheses were proposed:

H8.1 Individuals who participated in the career discussions will report a significant increase in their CCs scores three months after the intervention.

H8.2 The increase in CCs scores will be significantly higher for individuals who participated in the career discussions compared to the control group.

A greater engagement in career competency behaviours, together with an increased level of self-insight and perception of individual responsibility, is expected to have a positive impact on the subjective perception of career outcomes and possibly even on OCS. Therefore, the following hypotheses were to be tested:

H8.3 Individuals who participated in the career discussions will report a significant increase in their responses to a) SCS and b) OCS measures three months after the intervention.

H8.4 The increase in a) SCS and b) OCS will be significantly higher for individuals who participated in the career discussions compared to the control group.

8.3.2 Method

As discussed in Chapter 2, there is no 'ready-made' model for the evaluation of career development interventions. However, it has been suggested that Kirkpatrick's (1967) hierarchy of training evaluation could be modified to conceptualise the evaluation of career management activities (e.g. Kidd, 1997; Williams, 1981). As described above, the model suggests four levels: reaction (participants' satisfaction), learning (immediate change in participants' knowledge, perceptions etc.), behaviour (implementation and application on-the-job) and organisational outcomes (effects on business or environment).

Ideally, all four levels of Kirkpatrick's model should be measured. However, it has been mentioned above that the last level is very difficult to assess. The presented intervention took the character of a pilot study, aimed at only a small number of individuals. It was, therefore, perceived difficult to affect and measure direct organisational outcomes. Consequently, it was decided to focus the evaluation only on the content of the first three levels of Kirkpatrick's model.

A multi-method approach was taken towards evaluation, using client self-reports as a means of data collection (Whiston, 2003). This included a questionnaire survey administered to all participants immediately after the intervention. Additionally, a follow-up questionnaire survey was sent to all participants three months after the intervention, to assess longer term behavioural changes and applications. Apart from this, participants were also asked, three months after the career discussion, to complete the CCI again, including the measures on OCS and SCS. All three aspects of the evaluation are described in more detail below.

8.3.2.1 Feedback Questionnaire Survey

The first evaluation form assessed the effectiveness of the career intervention, using idiographic criteria. It measured participants' satisfaction with the intervention and whether they felt they had learned something, thus covering level one and two of Kirkpatrick's model (Donohue & Patton, 1998). The questionnaire survey was handed out immediately after the career intervention. It asked individuals to rate, for instance, whether they felt the objectives of the session had been met, whether they had learned something from the session and whether they would recommend it to others. Individuals were given a 5-point Likert scale, ranging from 5=fully/very much to 1=not at all/nothing at all, to mark their answers. They were also invited to explain their answers further, if they had rated a question with 3, 2 or 1. This was to explore the reasons behind negative responses in detail, with the aim of improving the intervention according to police officers' needs and requirements.

Apart from this, the feedback form also asked individuals to state what they would hope to do differently in the future and what issues they would like to explore further. Answering these questions required individuals to formulate goals in a more explicit way. In addition, their responses were also used to stimulate discussion in the follow-up interviews.

The form further included questions on participants' satisfaction with the content, administration and delivery of the intervention in general. It also provided space for further comments. Appendix D4 shows a full copy of the feedback form.

8.3.2.2 Follow-up Questionnaire Survey

The second evaluation form focused especially on behaviour, level three of Kirkpatrick's model. It was sent to participants three months after the career discussion, as development outcomes are likely to extend over a longer time period and are generally not immediately visible following engagement in an activity (McDowall & Silvester, 2006). The survey asked individuals, for instance, to rate the extent to which they had applied what they had learned during the session and whether they had made efforts to change their behaviour. Participants were also invited to substantiate their answers with open comments. The majority of the questions were assessed using a binominal yes/no answer format. However, it was decided to collect more detailed information on the change of practices, since it was one of the major objectives of the intervention to facilitate behavioural changes with regards to the employment of career competencies. Delegates were, therefore, asked to rate the extent to which they felt their CC practices had changed, using a Likert scale ranging from 0=none to 10=a lot. Appendix D5 shows a copy of the follow-up questionnaire.

Participants were invited to take part in telephone interviews that used the follow-up questionnaire as a guideline. However, they were also given the option to complete the questionnaire in their own time and send it back to the researcher.

8.3.2.3 Measures of Success

As outlined in Chapter 2, to affect a sound and worthwhile evaluation of a career intervention, it is important to identify its exact aims. Following the call for the inclusion of criteria other than career outcomes (e.g. Kidd, 1998), learning outcomes were placed in the centre of attention of this part of the evaluation.

It was the most prominent goal of the intervention to promote the engagement in CCs to achieve career success. Therefore, it was decided to use the change in individuals' scores on the CCI as well as on the career outcome variables as success criteria. Various authors have asked for a more rigorous methodology to be used in evaluation studies (e.g. Kidd, 1997). In response to this, a pre-post design was employed. Participants' scores on the CCs as well as on the career outcome

measures, before and after the intervention, were assessed and compared. Furthermore, to determine whether the changes in scores on CCs and career outcomes were directly attributable to the intervention or whether they represented random fluctuations in the variables, a control group scenario was applied.

8.3.2.4 Participants

The survey study presented in Chapter 7, asked respondents to provide their Email addresses or other contact details, should they be interested in taking part in the pilot intervention. In total, 91 of the 296 police officers expressed an interest in the intervention and were subsequently contacted via Email and invited to participate in the pilot study (see Appendix D6). The Email was sent by the Head of the Training Department in the participating organisation, endorsing the project.

Twenty-one police officers (14 men and 7 women) followed the invitation and signed up for the career discussions, characterising a response rate of 23%. Participants represented six different rank groups, from Constable to Chief Superintendent. The group sizes differed from two to five delegates. Three one-on-one sessions were conducted. All sessions were facilitated by the researcher.

Not all of the participants completed the follow up questionnaire and the CCI three months after the intervention. After a reminder Email, a follow up call and another endorsing Email by the Head of Training, only a total of 15 responses were received. The demographics of this sample can be found in Table 8.1.

The control group consisted of individuals from the university sample who had not taken part in career discussions. Thirty-one individuals working for the university, who had consented in Chapter 7 to be contacted again, were invited to complete the CCI and the OCS and SCS for a second time, after the same period as applied to the police sample. Fifteen responses were received, representing a response rate of just under 50%.

8.3.3 Analysis and results

8.3.3.1 Participants' Satisfaction – Feedback Questionnaire Survey

All 21 participants took part in the intervention and completed the first evaluation questionnaire. Their responses were collated and frequency analyses using SPSS were conducted. The results are presented below, together with examples of additional comments made by respondents.

Overall, the responses were very positive. Fifteen participants stated that they enjoyed the session very much and six said that they enjoyed it.

The majority of participants (16) also felt that the objectives of the session had been achieved. Four rated them as fully achieved and one participant stated that they had only been partially achieved.

Table 8.1 Demographics of Intervention Group and Control Group

Variable	Intervention Group Police Sample Frequency	Control Group University Sample Frequency
Gender		
Male	11	4
Female	4	11
Age	Mean=39, SD=7.9	Mean=42, SD=13.1
Rank/Job Level		
PC/Clerical	4	2
Sgt/Manual	6	0
Insp/Professional	3	7
Chief Insp/ Junior Mgmt	2	1
Supt/ Middle Mgmt	0	2
Chief Supt/ Senior Mgmt	0	2

Two individuals felt that their personal objectives had been partially, 11 that they had been almost fully and eight that they had been fully achieved. The two lowest scores were received from individuals who stated that they had not had specific personal objectives before the session.

Asked about the amount they felt they had learned during the session, the majority of delegates stated that they had learned much (9) or very much (10), while one participant reported moderate and one low learning outcomes. One participant commented that the session had improved their self-awareness and their understanding of the factors that affect development and progression.

Most police officers found the career discussions useful (10) and very useful (10), with only one officer rating it as moderately useful.

Furthermore, 12 participants found the intervention relevant and seven even described it as very relevant. One delegate felt that the session was of moderate relevance to them and only one described it as having been of little relevance. The

latter attributed this to their “stage of seniority”, but added that it was nevertheless “useful to reflect on issues generally”.

Nine participants said they would recommend and 12 that they would fully recommend the career discussion to others. One respondent stated that they felt the intervention would be “of especial value to those lacking in self-knowledge/awareness”.

Asked to provide an overall rating of the session, eight participants rated it as good and 12 as excellent. One person gave a moderate rating. This was accompanied by comments such as: “very interesting to hear the observations of others” and “very good - this is proactively and self-awareness that is very much key to a successful career and life; boundaries often can be moved and removed by your own actions”.

With regard to the facilitator of the session, participants rated their knowledge of the subject as sufficient (5) and very sufficient (16). All participants were satisfied with the organisation of the session, with 14 rating it as very sufficient and seven as sufficient. 13 participants judged the preparation of the session as very sufficient, while eight rated it as sufficient.

Fifteen delegates found the style and the delivery of the career session to be very effective and six rated it as effective. The facilitator’s responsiveness to individuals and the group, and their producing of a good discussion climate was judged by participants to be effective (3) to very effective (18).

When delegates were asked which experiences they enjoyed and valued most, they stated, for instance, the following:

- “Feedback on the CCI and benchmarking of that feedback.”
- “Insights provided by others”; “sharing of ideas” and “learning from others’ experiences.”
- “Offering assistance to a colleague.”
- Opportunity to concentrate on different issues e.g. motivational, future career ideas, reluctance to career plans, networking issues etc.

Amongst the things that delegates said they would hope to do differently in the future were:

- “Seek feedback more actively and effectively”; “encourage more feedback on a day to day basis”.
- Develop networking and mentoring; be more positive with regard to this competency and engage in it more effectively.
- “Identify individuals who can offer me useful career development advice.”
- “Develop knowledge of office politics.”
- “Plan career”; “recognise my career goals”.
- “Increase self study”; “engage in more career self-analysis”.
- “Consider my successes rather than focussing on my negatives”.
- “Work harder on mentoring my team and finding out their intended goals and helping them to achieve these.”

Issues that participants said they would like to explore further included, for instance, the following:

- “Assertiveness in personal lives.”
- “Mock competency boards practice; competency interviews.”
- “Self-presentation skills.”
- “Self-knowledge, how it can be improved and used to help with career development.”

Asked what they felt had been missing from the session that they would have liked to have seen included, delegates made the following statements:

- “Strategic development.”
- “More “How to...” although uncertain how that could sensibly be achieved.”
- “A bit more of the study and the outcomes.”
- “The organisations view on how well it supports officers’ career development.”

Invited to make further comments with regard to the career discussion, participants noted for instance the following:

- “Nice to see senior managers so they are aware of perceived barriers.”
- “Very informative, should be done once a year by all officers.”
- “It was a valuable learning experience to discuss career development.”
- “Very relaxed. It really made me realise how negatively I view myself and what the effect of comparing myself to others is having on me.”
- “I felt that as a group the sharing of ideas was really positive. I believe that this could work as a self-help group.”

8.3.3.2 Follow-up questionnaire survey

Frequency analyses were conducted to analyse the data of the follow-up questionnaire survey. The results, together with examples of the comments made by respondents, are presented below.

Twelve of the 15 participants stated that the intervention changed their perception with regard to career development and provided them with new insights. Some statements made with regard to this question can be found below:

- “I am now more aware of personal development and the opportunities that exist to further that development.”
- “I feel that I have a greater self-awareness in respect of career competence. I recognise that I do not give due regard to networking and am trying to address the issue of identifying a mentor.”
- “I could have done with this session at the beginning of my career – talking to other people helped.”
- “Made me realise that I don’t put myself and my personal needs first but my staff’s needs, job needs and the force’s needs.”
- “Career development is self generated, and we should not rely upon the employer to assist with our development.”

Twelve of the 15 individuals stated that they had applied what they had learned during the sessions, making comments such as:

- “I have tried to obtain constructive feedback relating to performance and development issues.”
- “I moved to a new job and just chaired my first main meeting a few days ago and ensured that I went round afterwards to get feedback.”
- “I have been able to identify people that I can go to that may be of assistance to me.”

Two individuals said that workload and other work-related pressures and resulting lack of time and opportunities prevented them from applying what they had learned.

Eleven delegates stated that they had made a conscious effort to change their behaviour. Some example statements are provided below:

- “I have tried to involve myself in the mentoring scheme and used networking appropriately.”
- “I have recently volunteered and been accepted to work on a Force Project.”

- “I have tried harder to gain feedback from those for whom I work. I shall be aiming to change my role in the organisation shortly and intend to use networking/mentoring to prepare me for this process more fully.”
- “I have decided to be more positive about what I have done, and tell people what I have achieved, or areas where I have not been so successful, telling them how I intend to improve.”

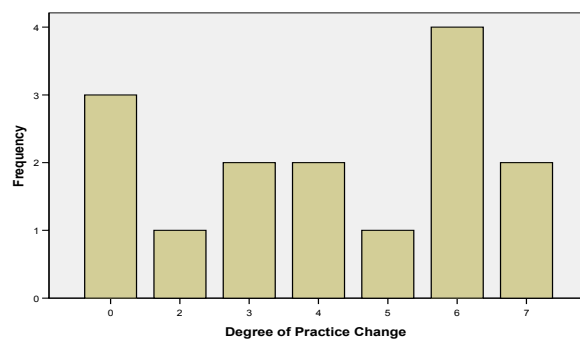
The following statements were received from the individuals who had not made an effort to change their behaviours:

- “Haven’t felt the need to at my stage of service.”
- “Not at this time. Although I am aware of the need to review the activities that I undertake on a regular basis.”

One delegate said he felt that the session was too short to lead to a change in behaviour. He also pointed out that the issues raised were out of his control and would require more of a cultural change than a change of behaviour on an individual level.

A frequency analysis showed that, using a Likert scale ranging from 0=none to 10=a lot, on average, the group of participants rated their change of practice that occurred as result of the intervention as four. The minimum was zero and the maximum was seven. The detailed results are presented in Figure 8.1.

Figure 8.1 Frequency of Practice Change resulted from Career Discussion.



Examples of respondents’ comments with regard to this question can be found below:

- “I have formulated a development plan which I am currently working to.”

- “I put 7 because I expect there is much more I could do, but the session really woke me up to the fact that it's ok to be me and what I have done is actually an achievement. I tell line managers my aims and I volunteer for work, and achieve those things I volunteer to do within the time scales given.”
- “There have been limits as to how much my practices have changed due to opportunity and circumstances, however, I feel more aware and able to identify the opportunities.”
- “10 years ago the session would have changed me 100% but now I already know my way around.”

Apart from this, respondents were also asked whether they had evidence that their practice had changed for the better. Only five felt that their change in practice had improved their effectiveness, e.g.:

- “I have received positive feedback from supervisors regarding my development and my approach to the development of others.”
- “My Divisional Commander has given me encouragement to pursue promotion at an early opportunity.”

A few respondents pointed out that it would be difficult to see concrete evidence at this stage. One said that it was too soon to judge. Another stated, along the same lines, that she wouldn't know yet, since it was a long and ongoing process.

Apart from this, ten participants stated that they had reflected further on the issues that had been discussed during the career intervention.

Invited to make further comments, one delegate stated that there was a "culture of not speaking out, and the general acceptance that keeping your head down and not volunteering is a good thing." Respondents asked for more structure and guidance with regard to career development. One delegate said that the “service becomes completely focused on the provision of beautiful processes and forgetting about the people and how to get most out of them. Instead of promoting self-development they need to actually support this not only in paper but through people.” This was in line with a statement by another participant, who said that “this idea of owning your career should be communicated earlier on so individuals don't rely on the organisation but take responsibility for themselves with the assistance of the force.”

With regard to the development of CCs, delegates also mentioned limitations of resources within the organisation. One said: “I don’t have the opportunity to develop like this because people are not skilled enough, line managers are not skilled enough to advise people adequately and help them develop the skills they need to self-manage.” He continued that, when asked for career advice by a subordinate, many line managers would suggest secondments, training courses etc., instead of considering and addressing the specific skills of the person. Another refers to the issue of workload, stating that “it is still difficult to find time to address development needs while in the working Police environment.”

Some respondents commented in this section again on the usefulness of the shared experience and the input received from their colleagues. “The experience of sitting down with others and discussing the issues and hearing their input was very useful.”

With regard to the intervention, some more general statements were made. One delegate said that “the programme could be good if developed further and be very effective as the ideas and suggestions were good [...] However, I do not believe that two questionnaires and a 1 hour session can create a change in an individual’s behaviour/attitude.”

“I came to the meeting at a time when I had just started in a new department and had been through a very tough time within the division I work, and also personally. On the day it seemed a little like a time for chatting with others away from departmental stress, however, with time to reflect it was much more than that. It would be interesting to learn ways to develop further, and plug the gaps in knowledge and approach.”

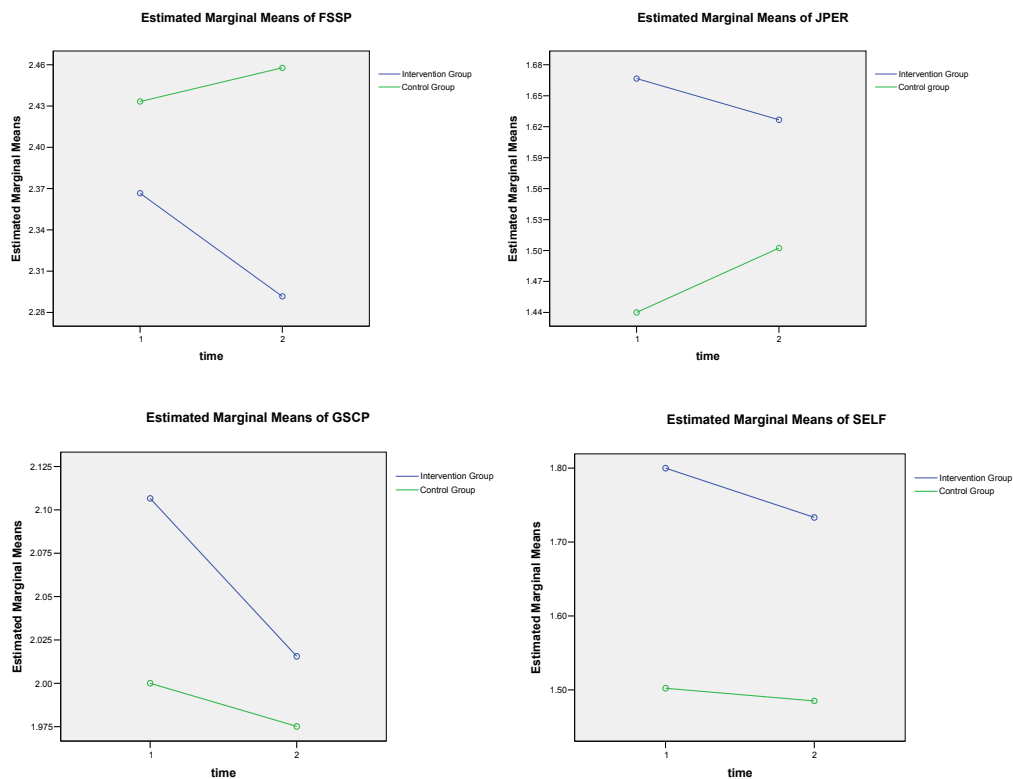
8.3.3.3 Analysis of Success

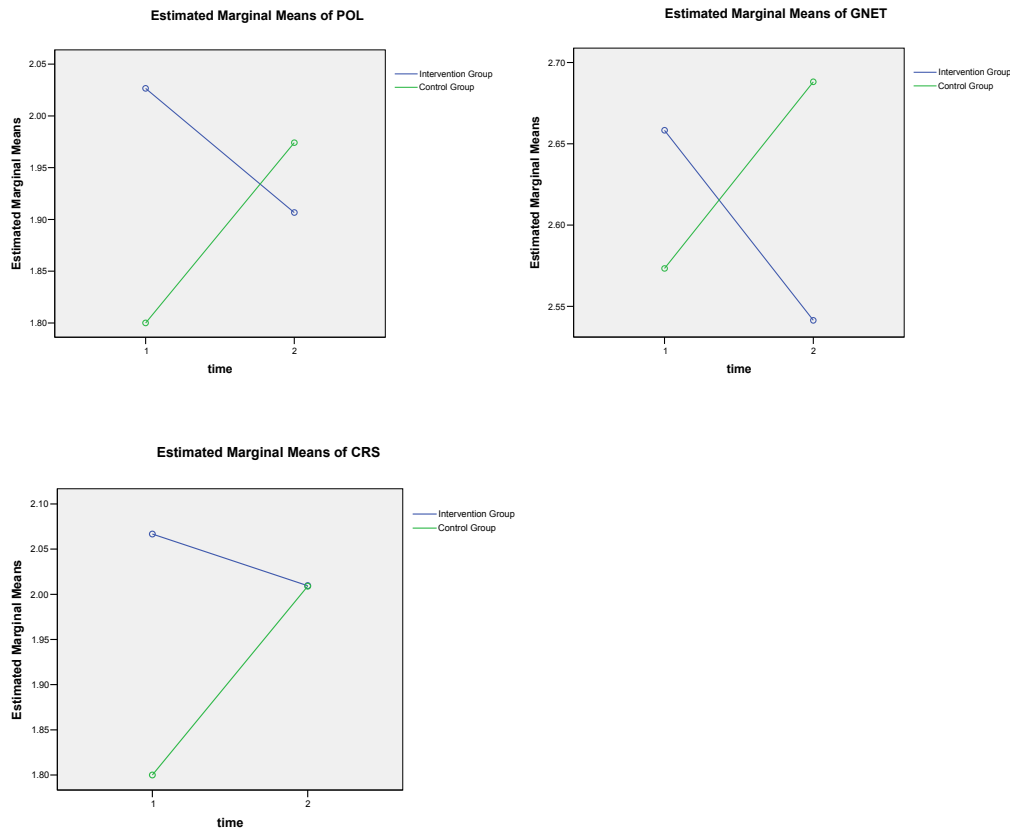
To test the H8.1 to H8.4, a ‘mixed between-within subjects analysis of variance’ using SPSS was conducted. This form of analysis allows for the comparison of the impact of the intervention on participants’ levels of CCs, SCS and OCS (using pre-intervention and post-intervention). At the same time, it enables an assessment of whether the impact was different for the group who participated in the intervention, compared to the control group. In other words, two independent variables were used: one between-subjects variable (intervention/control group) and one within-subjects variable (time1 and time2).

With regard to CCs, none of the multivariate tests showed significant results. Hence neither H8.1 nor H8.2 found support.

However, even though the findings were not significant, an evaluation of the profile plots (see Figures 8.2 a-g) indicated general developments in the hypothesised directions. The plots present the interaction effects between the two independent variables of time (time1 and time2) and group (blue=intervention and green=control) for each career competency. With regard to the competencies, one was the highest possible score and five the lowest. Comparing the CCs scores of individuals who participated in the intervention from time1 to time2, a general increase in the scores can be observed. In contrast to this, the results of the control group, where participants reported very similar or lower CCs scores at time2 compared to time1.

Figure 8.2 a–g Profile Plots Showing Interaction Effects Between the two Independent Variables Time and Group for CCs.



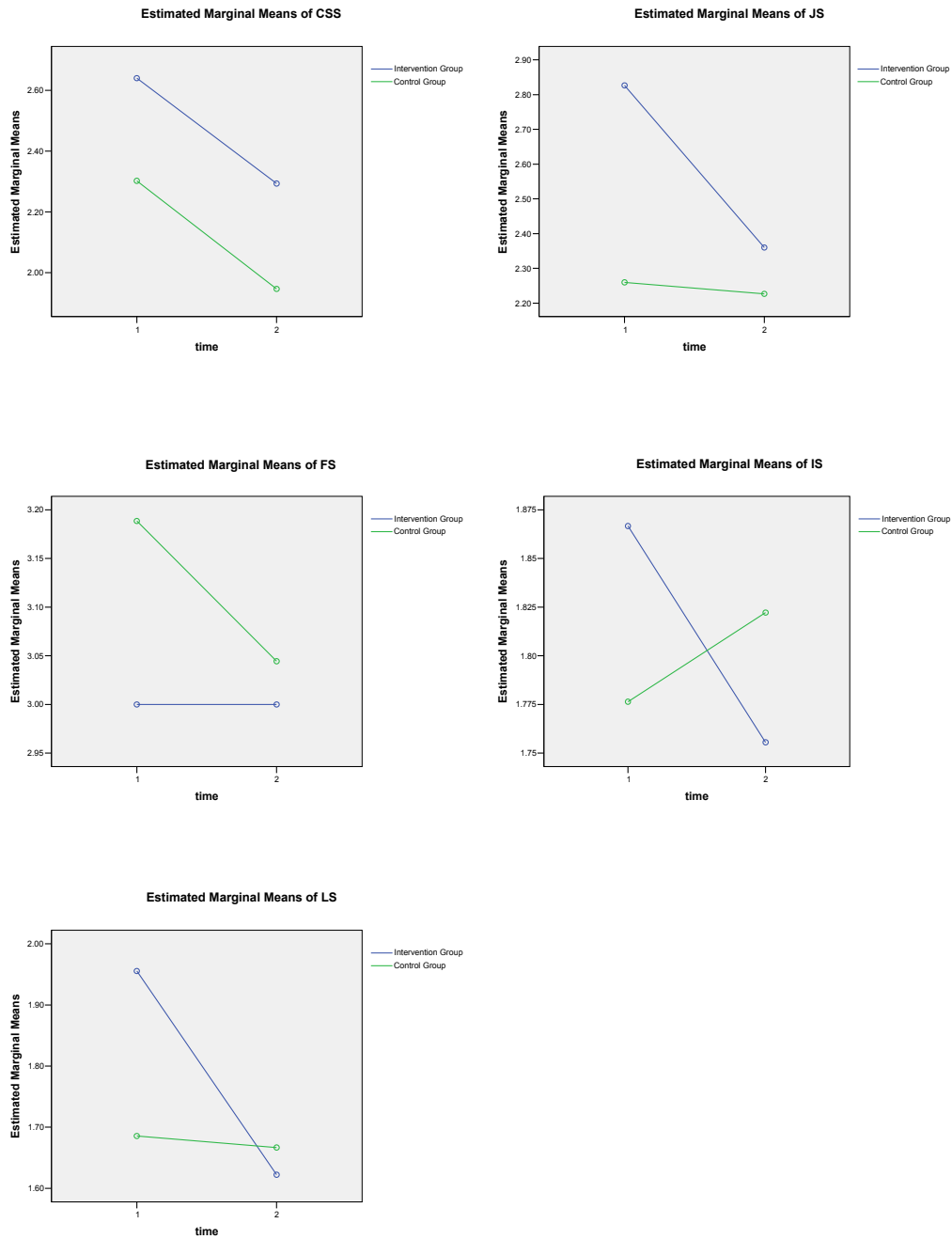


Looking at the SCS measures, significant main effects were found for time on career satisfaction, $F(1,28)=5.27$, $p<.05$ and life success, $F(1,28)=5.64$, $p<.05$, both large in size (partial eta squared=.16 and .17 respectively). This indicated that participants reported significantly higher levels of career satisfaction and life success at time2 compared to time1. However, looking at the intervention group separately, conducting paired-sample t-tests, only the increase in scores on life success between time1 ($M=1.96$, $SD=0.68$) and time2 ($M=1.62$, $SD=0.69$) was of significance. Hence, Hypothesis 8.3a was only partially supported.

However, when analysing the profile plots (see Figures 8.3 a-d), general effects in the predicted direction can be noted for all SCS variables, apart from perceived financial success. In other words, individuals who participated in the intervention rated their SCS in general higher at time2 compared to time1. Financial success is the exception. The scores on this variable appeared to remain the same over time for the intervention group.

Looking at the interactions, a significant effect between time and groups was only found with regard to life success, $F(1,28)=4.50$, $p<.05$. This effect, however, was large in size (partial eta squared=.14). It indicated that the increase in life success was significantly greater for the intervention group than for the control group. However, the results overall provided only very limited support for Hypothesis 8.4a.

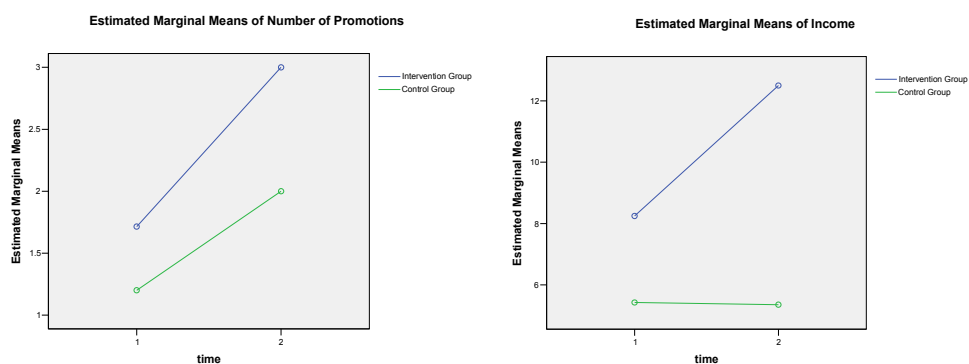
Figure 8.3 a-d Profile Plots Showing Interaction Effects Between the two Independent Variables Time and Group for SCS Measures



With regard to the OCS measures, significant main effects between time1 and time2 were found for number of promotions ($F(1,27)=24.12$, $p<.001$) as well as for income ($F(1, 20)=5.92$, $p<.05$) (see Figure 8.4 a-b). Both effects were large in size (partial eta squared=.47 and .23 respectively). Paired sample t-test analyses, looking at the intervention group separately, found a statistically significant increase in number of promotions and income from time1 ($M=1.71$, $SD=1.20$; $M=8.25$, $SD=6.63$ respectively) to time2 ($M=3.00$, $SD=1.11$; $M=12.50$, $SD=7.09$ respectively), providing support for Hypothesis 8.3b.

However, an interaction effect was only found for the income variable ($F(1.20)=7.12$, $p<.05$), indicating that the increase in income was significantly larger for the intervention group compared to the control group. Hence, Hypothesis 8.4b was only partially supported.

Figure 8.4 a-b Profile Plots Showing Interaction Effects Between the two Independent Variables Time and Group for OCS Measures



8.3.4 Discussion

The results showed that participants appreciated the individual-centred approach to career management. The majority of police officers rated the career discussions as a useful experience which was relevant to their career development. They especially valued the group approach which allowed for the input from other police officers and the sharing of experiences and ideas. This replicated earlier findings (e.g. Kakabadse, 1984; More & Unsinger, 1987) in which police officers, involved in skill development activities, particularly appreciated exchanges with others.

It also demonstrated the value that input from peers can bring to career management. Engaging officers more in each others' career development,

facilitating discussions and the sharing of knowledge may be an effective approach to support career self-management. Instead of personnel from specialist HR departments, officers could act as career champions for their peers.

Participants appreciated the time and the opportunity to reflect on their personal career development in a confidential context which invited open discussions, as this is generally not available to them due to organisational pressures. The fact that originally 91 officers expressed an interest in participating in the pilot study indicates that there is a need for more engagement. However, that only 21 officers were actually able to attend the sessions, and of that only 15 completed the follow up assessments, may be a direct consequence of the above-described pressures.

Two individuals stated they had not had personal objectives with regard to the session. This might have had an impact on their levels of reported satisfaction. As mentioned above, individuals are more likely to engage in certain behaviours and actively involve themselves in interventions, when they see them as a means to achieving their objectives. Not being clear about your own objectives can, therefore, make it difficult to achieve satisfying outcomes, as there is no standard against which to measure the success of the intervention. Future studies may want to address this issue. Instead of asking individuals to reflect on their objectives in an unstructured way, they could invite them to complete a document and send it to the facilitator before the session. At the beginning of the session, the submitted objectives could then be discussed briefly, to assess whether they are still prevailing. The established personal objectives would provide an objective measure to evaluate the effectiveness of the intervention.

Comments by the delegates further suggested that the study had achieved its objective of increasing self-awareness. They also indicated that the message, that career development should be owned by the individual and that self-reliance was essential, had been brought across successfully. For instance, some delegates stated that they were now clearer about their own responsibilities.

With regard to the success criteria, no significant increase in CCs for the intervention group was found. However, the interaction graphs showed changes in the desired direction. In other words, there was an increase noticeable from time1 to time2 in the scores on all the CCs for individuals who participated in the intervention.

Apart from this, there was a significant increase in scores on life success, income and number of promotions from time1 to time2 for the intervention group. For life success and income, this increase was significantly larger for the intervention group than for the control group. This suggested that the intervention had a positive impact on the levels of perceived life success and income. With regard to life success, this might be due to the fact that the career coaching session took a positive approach. It tried to help individuals to focus on their strengths and the successful career experiences they have obtained. This might have triggered a more positive perception of life overall. With regard to income, the results might be due to the behavioural changes in CCs, seeing that CCs were found to predict this OCS variable (see Chapter 7). However, it needs to be mentioned that two participants were acting up at the time of the intervention, i.e. they were performing a role that was one rank above their actual rank. They might have subsequently received promotion and, hence, an increase in payment, which might have influenced the change in scores.

The non-significant findings with regard to the majority of the success criteria may be attributable to the small sample size which is much more sensitive to the influence of single scores and outliers. Especially the results regarding income, which again showed some missing values, need to be evaluated with care. Future studies involving larger groups of participants are required to replicate the findings and to provide support for their generalisability.

Another explanation for the non-significance of the results may be that the time-span between the pre-and post-testing was too short. As participants pointed out, it takes some reflection and planning to develop career competencies. Furthermore, even if competencies and related practices have been changed, the time might have been too short for the change to take effect and yield positive career outcomes. To allow for development outcomes to become visible and show effects, it is, therefore, recommended that future studies conduct a long-term follow-up, e.g. six months to a year after the session.

Apart from this, the character of the intervention may be another reason that the changes on the success criteria did not reach significance. As reflected in a statement by one delegate, just conducting a single coaching session may help individuals to increase self-awareness but it may not be sufficient to bring about long-term behavioural changes. In general, single coaching sessions are rather rare.

More often, the coach and the client have an ongoing relationship and meet up over a period of time (Rauen, 2002). Future research, taking a long-term approach conducting coaching sessions over a period of time, is required to assess the validity of this criticism.

In addition, it may also be that the learning materials used in the session were not very efficient. For instance, while individuals were invited to formulate goals and intended behavioural changes, they were not asked to write them down in a formal way. This could have been achieved by asking them to formulate SMART goals, i.e. goals that are specific (S), measurable (M), attractive (A), realistic and time framed (T) goals (Greene & Grant, 2003). Furthermore, the plans made with regards to the achievement of individual goals were not very detailed, due to time constraints. This is in contrast to many coaching approaches, where the coach and the client together decide on specific actions and tasks to be conducted from one session to the next, with the aim of facilitating goal achievement (Starr, 2003). Therefore, future studies may want to consider adopting different approaches. For instance, setting SMART goals could be included to support a more active long-term development of career competencies.

The findings could also be caused by a discrepancy between coaching and work conditions. It might not have been possible for an individual to apply the activities and behaviours discussed in the sessions. It was, for instance, mentioned by a few participants that they did not have the time to put into reality what they had learned in the sessions. Additionally, they felt there were external barriers, the removal of which was out of their control, but instead required an organisational change.

The career discussions highlighted that personal reasons and preferences played a role in individuals not engaging in some of the career competencies. However, delegates' comments also suggested that they felt that the organisational culture and its structures were not very supportive of these behaviours. For instance, networking was said to be impeded by the structural disconnection of areas of the organisation. The scope for feedback-seeking was also perceived to be very limited, due to a strong organisational drive towards meeting targets. The overall feedback culture in the organisation was described as not supporting feedback-seeking behaviours. Feedback was mainly given and received through the PDR system. While other channels for seeking feedback, such as mentoring processes, are existent, participants were often not aware of them. In addition, networking and knowledge of

politics often carried a negative connotation for participants, which dissuaded them from engaging in these activities. This is in line with findings by Beck and Wilson (1997), who stated that feedback in the police organisation was notoriously bad. It also supports the comments made in Chapter 7 with regard to the restrictions that the organisational context can pose on the employment of career competencies and the impediments that this may lead to.

This may suggest that the organisational context does not provide the necessary environment for individuals to develop and apply behaviours which are important for successful individual career management, i.e. career competencies. Additionally, it supports the argument that simply incorporating self-development features in career interventions, without establishing a supportive organisational context, does not necessarily lead to effective individual career management (e.g. Burke & Deszca, 1987; Macaulay & Harding, 1996). Instead, individuals undergoing transformations in their self-concepts and values need to be supported with a responsive environment, if these changes are to be of less organisational and individual distress.

Apart from this, participants also mentioned the limited qualified support available in the organisation from line managers. They felt this would restrict their opportunities with regard to the development of career competencies. This appears to be a common problem. A study of 700 organisations conducted by the CIPD (2003) found that only 5% of the organisations interviewed trained the majority of their line managers to support career development. Indeed, 43% stated that only a minority and 17% that none of their line managers were trained. Seibert et al.'s (2001) research showed that, even of the companies that carried out individual career counselling by line managers, only less than half provided training for the supervisors to conduct career discussions. If organisations want to create a culture of supported self-development in which line managers play a role, they need to consider taking active measures to train the individuals involved in this process.

However, the small sample size needs to be considered when interpreting the findings. In addition, it also needs to be born in mind that the control group was not matched to the intervention group. No random allocation to the groups had taken place. Participants even came from different organisations. This might have had an impact on the findings. For instance, the slight, if not significant, increase in the CC levels for police officers might have been caused by an event that occurred within the police force, rather than by the intervention. This could only be ruled out by

employing more rigorous methodologies, using random sample allocation. In summary, more research is necessary to ensure the generalisability of the findings.

With regard to Kirkpatrick's (1967) training evaluation model, it needs to be acknowledged that the present study only focused on Level1 to Level3, without evaluating the wider organisational impact of the career discussions. This is especially critical, since it is Level4 that is likely to be of main interest to organisations. Level4 generally presents an estimate of the value a career intervention adds in monetary terms. Future studies may, therefore, want to provide a specific calculation of the Return on Investment that such an intervention would accrue. This could involve, for instance, the analysis of productivity figures or long-term organisational commitment.

With respect to the evaluation and in line with the discussions presented in previous chapters, the extensive use of self-reports could be criticised. The opinions of participants are a relevant indicator, especially with regard to the assessment of Level1, i.e. individual satisfaction. However, at the same time they are also subjective and potentially unreliable. This study attempted to address this by measuring self-reports in a consistent way and by using the CCI as an evaluation tool. However, future studies may want to reduce the subjectivity of the evaluation even further. In particular, the assessment of Level2, 3 and 4 would benefit from a more objective approach. For instance, information on learning outcomes could be collated from participants' supervisors, peers etc.

As in previous chapters, the potential impact of the self-selection of the sample also needs to be considered. Registering voluntarily for this study indicates proactivity. It could also suggest that individuals had already accepted responsibility for their career development. Therefore, they might have been more inclined to engage in the process and learn from it, yielding the positive responses to the intervention and the positive trends in the results. More research involving larger groups of individuals is necessary, though, to ensure generalisability of the findings beyond the present sample.

Summary

This chapter presented the development, application and evaluation of career coaching sessions. The sessions were based on the CCI and conducted with a small group of police officers. The results of the study indicated that participants perceived the intervention as a positive learning experience. They especially valued the exchange of ideas and experiences. Additionally, the intervention appeared to lead to a slight increase in career competencies scores. It was also shown to have a positive impact on overall life success, numbers of promotions and income in the intervention group.

The career discussions highlighted that there may be organisational barriers that impede the development and employment of career competencies. It is suggested that, if applied on a broader level, this type of intervention may be helpful in the initiation of cultural change towards a working environment which supports self-development.

Chapter 9

Discussion

“If people are viewed as human resources, those resources need to be
invested in and developed.”

(Arnold, 1997, p. 38)

9.1 Summary of research findings

This research project began by carrying out an extensive literature review on the subjects of career, career management and competencies (Chapter 2 and 3). This was followed by an in-depth examination of the literature regarding the application of these concepts in the police force, the organisational context for this study (Chapter 3). Bringing the expositions of the previous chapters together, Chapter 4 introduced the concept of career competencies and its conceptualisation as three areas of knowing: knowing-why, knowing-how and knowing-whom (DeFillipi & Arthur, 1994). In light of problems with previous definitions of career competencies, and the recent abandonment of the term in the literature, a re-conceptualisation of the concept was undertaken. Defining career competencies in a traditional behavioural way, they were presented as a potential framework for structuring career management interventions aimed at supporting individual career self-management. Thereafter, the study set out to operationalise the proposed three-fold career competency model and to apply it in a practical setting.

First, two qualitative studies were conducted (Chapter 5). The first study involved a consultation with 29 experts working in the field of career development and competencies, seeking confirmation on a range of issues highlighted in the literature review. In particular, this part of the project showed that a) there was no clear definition with regards to the concepts of competencies or career development, b) competencies were mainly used as standards for assessment of performance effectiveness, neglecting a whole range of issues important for career development, c) the use of competencies entailed a range of advantages and disadvantages and d) there was an absence of evaluation studies assessing the effectiveness of career interventions. The first study also demonstrated that the alignment of competencies and career development in practice was often restricted to a small number of interventions, such as assessment and development centres, and performance development reviews. While in the police service the prevalent opinion was that individuals were responsible for their own career development, the majority of experts saw it as a shared responsibility between the organisation and the individual. These perceptions were reportedly not shared by police officers, who, according to experts, would often rely on the organisation to take care of career development. Career development interventions were found to serve a wide range of purposes, the two most important ones being workforce planning and empowering of the individual. Another important contribution of this part of the study was a list of factors that were thought to be related to successful individual career development. This list could be

partially subsumed under the three career competency areas introduced by Arthur and colleagues (e.g. DeFillipi & Arthur, 1994). However, it also included three additional categories: personality, external and demographic factors. All three of these new categories had already been identified in Chapter 1 as antecedents and/or correlates of career success.

The second study involved the application of the Intelligent Career Card Sort (ICCS), an operationalisation of the three career competencies, developed on the basis of qualitative evidence, to four groups of police officers. The results of this study provided support for the interrelatedness of the three career competency areas and indicated acceptance of the three-fold model by police officers. The study also highlighted issues that were important to police officers with regard to their career development, providing valuable contextual information. This information contributed not only to the understanding of the organisational setting, but also to the subsequent item generation. The findings highlighted the problem that career development in the police force focused mainly on knowing-how development. In light of the organisation's drive towards an increase in career self-management, this restricted application of career development was critically noted. It was concluded that a cultural change may be required to yield any efforts in this direction fruitful.

The literature review and preliminary studies showed that organisations often see career management purely as an instrument for performance control. They rarely consider its potential use as a primary tool in the personal development of employees. Currently, career development is often understood as improvement of job-effectiveness, neglecting the person as a whole, without seeking to understand their ambitions and motivations.

In a next step, a measure called the Career Competency Indicator (CCI) was developed (Chapter 6), following a classical test theory approach, using factor and item analytic methods. A set of concepts and representative items was selected to conceptualise the three areas of knowing. The selection employed a mainly theory-based approach, drawing on input from the literature research and the findings of the preliminary studies. An initial item pool of 89 items was reduced and refined to 87 items, through consultation with subject matter experts and a small pilot trial. In the last step of the development, responses from a large sample (n=632) were submitted to factor analyses, using a split-sample approach to allow for cross-validation of the findings. The results showed that instead of the expected three-fold structure, career

competency (CC) comprised seven factors: goal setting and career planning, self-knowledge, job-related performance effectiveness, career-related skills, knowledge of (office) politics, career guidance and networking, and feedback seeking and self-presentation. The closer to 1 an individual's score on each of the sub-scales, the more they engage in the respective competency, i.e. the more career competent they are. The seven factors accounted for 48% of the variance in the original data set. Using an iterative scale-development approach, looking at homogeneity and scale length in tandem, the scales were subsequently refined and the number of items reduced to 43.

The factors were well replicated in the second data set. Apart from this, the inter-correlations between the derived sub-scales, as well as the mean loadings of the items on the sub-scales, were very similar in both development samples, indicating the validity of the construct.

The Cronbach alphas for the different sub-scales were found to be of an acceptable level, above .7. They were similar for both groups, suggesting relative stability of the derived scales. However, it must be noted that, while internal reliability determines the overall consistency of a sub-scale, it does not demonstrate uni-dimensionality. In other words, while indicating homogeneity, it does not mean that all the items in each sub-scale measure the same underlying construct (Field, 2005). In addition, Cronbach alpha does not indicate consistency over time. This must be established through test-retest reliability testing. While the data collected in the intervention study may have lent itself to the analysis of the test-retest reliability of the CCI, the sample size was too small. Considering that Kline (1994) suggests a minimum sample of 100 to reduce statistical error, using the present sample would not have yielded very meaningful results. Moreover, test-retest reliability should only be analysed if there is no intervention conducted between testing. Therefore, only the data of the control group would have been useful, and this only contained 15 entries.

Comparing the inter-scale correlations of the CCI sub-scales with their average Cronbach alpha, the values were found to be substantially different, providing support for the discriminant validity of the construct. Furthermore, conducting a second-order factor analysis, all the sub-scales loaded above .3 on the one extracted factor that explained 42.7% of the variance, suggesting convergent validity.

The most significant contribution of this stage of the study is the development of a measure of career competency. The literature review introduced a range of approaches to conceptualise the behaviours, skills and knowledge important for successful career self-management. While some researchers looked at single concepts such as goal setting (Noe, 1988) or political skills (Perrewe & Nelson, 2004), others combined them under headings such as career strategies (e.g. Gould & Penley, 1984) or career competencies (DeFillipi & Arthur, 1994; Hackett, Betz & Doty 1985). Even though Hackett et al. (1985) developed a taxonomy for career competencies, they did not translate it into an actual measure. The only operationalisation of the concept found in the literature was presented by Arthur and colleagues in the form of the ICCS (e.g. Arthur et al., 2002), which lacked empirical support. This study has served to integrate much of the earlier work, by including many concepts that have been shown to be related to career success and measuring them together in one psychometrically sound instrument. This study identified reliable and valid constructs, providing a means of discriminating between the ones that are indeed different and combining those that are indeed similar.

In the next stage of the project, the reliability and the validity of the CCI were explored in more detail (Chapter 7). More evidence for the reliability of the CCI was provided, through an acceptable replication of the factor structure and a demonstration of acceptable Cronbach alpha levels. The study further established construct validity through correlation and component analyses. The correlation analysis took two forms. First, it looked for evidence of convergent validity, and second, for evidence of discriminant validity. Convergent validity was demonstrated through above chance similarity between the seven career competency sub-scales. However, using other measures not applied in this study, such as the Career Attitudes and Strategies Inventory (Holland & Gottfredson, 1994), may not show an overlap.

It was difficult to discriminate between the two CCI sub-scales of networking and mentoring, and feedback seeking and self-presentation. Both appeared to measure something very similar, as indicated by a high correlation and multicollinearity between the scales. Therefore, for the analysis, the two sub-scales were combined into one sub-scale.

A personality measure was chosen to assess the suggested differentiation between personality aspects and competency, seeking further support for the argument of

keeping both concepts separate. Since the Big Five is the most widely accepted structure of phenotypic personality traits (Tokar et al., 1998), a respective measure was applied in this study. Discriminant validity was shown between the CCI sub-scales and the Big Five personality variables as measured by Saucier (1994). All CCI sub-scales demonstrated below chance similarity with the personality dimensions. The only exception was job-related performance effectiveness, which was difficult to discriminate from Conscientiousness, suggesting both variables measure overlapping concepts.

The results from the component analysis of the personality and CC sub-scales, showed a three-component structure, providing further support for the distinction of the concepts. On extraction, the first component was found to be formed of five CC sub-scales and the second of three personality variables. The third component, however, contained a mix of two CC sub-scales (JPER and SELF) and two personality scales (Conscientiousness and Intellect), suggesting that these variables measure similar constructs. However, it must be recognised that other measures of personality, not used in this validation, may well show more or less of an overlap.

In the process of assessing the criterion-related validity of the CCI, a range of simple and multiple regression analyses was carried out. The findings provided further supportive evidence for the validity of the CCI. The CCs were found to jointly predict subjective as well as objective career success (SCS and OCS). Their impact on SCS, explaining an average of 16% of variance, was slightly larger than on OCS, where they explained, on average, only 7.5% of variance. This may be due to the fact that, while self-management behaviours enhance a sense of control (King, 2004) leading to increased levels of perceived career success, they may not have much impact on promotion and remuneration which are, to a great extent, outside the individual's control.

CCs were also found to predict all the SCS variables, except for financial success, over and above the influence of demographics, career salience and personality. However, no such additive contribution was found for OCS.

The most important contribution of this part of the study was the statistical support for the proposed definition of career competencies as instrumental in the achievement of desired career results.

Each competency contributed in varying degrees to the explanation of the different career success measures. The career competencies significantly involved in the prediction of most of the subjective career outcomes were knowledge of (office) politics and career-related skills. The only CC that significantly contributed to the prediction of income was goal setting and career planning, while for number of promotions it was knowledge of (office) politics. It is important to note that job-related performance effectiveness only contributed to the prediction of one of the career outcomes, namely interpersonal success. This finding strengthens the argument presented earlier that using competencies (which only focus on job-performance) is not sufficient to guarantee the achievement of desired career outcomes.

Whilst CCs appeared to have a mediation effect on the relationship between career salience and some of the career outcome measures, the relationship between personality and career outcomes was only partially mediated by CCs.

In both the development and the validation studies, some statistically significant differences were found in scores on particular sub-scales across organisational backgrounds. For instance, in the development study, police officers reported lower levels of goal setting and career planning and career-related skills than participants from the university and other public sector organisations. Police officers also scored lower on networking and mentoring than individuals from private sector, other public sector, or university organisations. In the validation study, police officers rated themselves lower than university employees on job-related performance effectiveness and knowledge of (office) politics. This variance may indicate that the organisational context influences the extent to which individuals enact career competencies. Organisational cultures and structures may provide different environments for the employment of career competencies, depending on the behaviours they directly or indirectly encourage and support. An alternative argument is that these variations are due to internal rather than external differences. According to Holland's (1985) vocational choice theory, people typically chose their jobs to suit their personalities. Therefore, people with similar personalities may have chosen similar jobs, and hence enact career competencies to a similar degree. This idea is further supported by a) the differences found in personality variables between the two organisational groups who participated in the validation study and b) the result from the regression analyses that personality significantly predicted each of the career competency areas.

The final stage of the project was concerned with the application of the CCI in an applied setting (Chapter 8). The CCI was used as the basis of a career development intervention in which 21 police officers participated. The intervention took the form of a career coaching session with career workshop and career discussion elements. It was evaluated in three ways: a) delegates' immediate satisfaction with the session and learning outcomes (Level 1 and 2 of Kirkpatrick's model) were assessed using a questionnaire survey; b) the behavioural impact of the session (Level 3 of Kirkpatrick's model) was assessed through a follow-up questionnaire three months after the session and c) the increases in CCs, SCS and OCS levels were measured using a pre-post control group approach. The intervention was very well received by participants. They especially valued the opportunity to discuss their career development with other officers. Participants also stated that the session had increased their self-knowledge and their awareness of the importance of taking responsibility for their own careers. Participating officers scored lowest on networking and mentoring, feedback seeking and self-presentation, and knowledge of (office) politics. The follow up, in which 15 officers participated, showed that the majority of participants had made efforts to change their behaviours and apply what they had learned from the session in their jobs. Looking at the outcome factors, no significant increase in CCs, SCS or OCS levels was found in the intervention group compared to the control group. The only exceptions were life success and income, for which the intervention group reported a significantly higher increase than the control group. However, an analysis of the interaction plots indicated an increase in CCs levels from time1 to time2 for the intervention group. This increase was also apparent for most of the SCS and OCS measures, reaching significance for career satisfaction, life success, number of promotions and income. These findings must be interpreted with care however, given the small sample size of the intervention, as well as the small size of the control group.

9.2 Limitations of research design and methodology and their implications for future work

There is a range of limitations regarding the research design and methodology that should be considered, especially with respect to implications for future work.

First, it must be considered that the creation of a new measure typically requires numerous administrations and intensive research into the measure's validity and

reliability in different settings. Therefore, the current administration of the CCI should be seen as the first in an iterative development process.

Reliability

It has already been critically mentioned that the reliability evidence presented in this study focused exclusively on internal consistency. This does not affirm consistency of the CCI over time. Future research should seek to substantiate the reliability evidence further, looking at forms other than Cronbach alpha, such as test-retest or alternate form reliability.

Content-validity

The development of the CCI followed a theory-based approach, using previously tested or hypothesised items to represent the three areas of knowing suggested by Arthur and colleagues (e.g. Arthur et al., 1995). This may have restricted the breadth of items included in the operationalisation of the career competencies. A related concern is the relatively low number of items in some of the sub-scales. It may have been better to have included an even larger initial number of concepts and items to represent the three CC areas, in order to obtain the desirable scale length of ten items as suggested by Kline (1994). As it is, some scales only contain five items. This may give reason to question how comprehensively the respective career competencies are measured. Using a research-based approach (see Chapter 2 or Hackett & Betz, 1985) might have yielded broader categories, with different items. Although the sub-scales identified in this study were shown to accommodate most of the career competencies identified by Hackett et al. (1985), it must be acknowledged that some concepts important for effective career self-management might have been missed.

The study sought to minimise this risk of omitting concepts through consultation with subject-matter experts and the inclusion of findings from the preliminary studies. In addition, only operationalisations relevant for the achievement of positive career outcomes were considered. The concepts and items used were mostly already validated, rather than being subjective criteria whose impact had not already been empirically evaluated. However, to substantiate the validity and the comprehensiveness of the seven factor structure, future replication studies using a different approach (e.g. research-based interviews with employees) are required. Future studies should bear in mind, however, that in order to develop a generally applicable representation of career competency, a large group of individuals working

in different jobs in different organisations must be involved in the development process.

Construct-related validity

It has already been discussed in detail that the evidence for construct validity presented in this study is somewhat limited. The career competency sub-scales showed above-chance similarity with each other, indicating convergent validity. They also demonstrated below-chance similarity with the Big Five personality dimensions, indicating divergent validity. Replication of these findings using a multi-trait multi-method approach would add strength to this evidence.

Criterion-related validity

This study presented theoretical arguments which postulated causal sequences with regard to the influence of career competencies on career outcomes. These arguments were supported by the results of hierarchical regression analyses. However, as acknowledged previously, this is not sufficient to imply causation. First, there are issues related to hierarchical regression analysis which suggest that structural equation modelling may be a more suitable method for assessing causation. Second, a longitudinal study assessing real predictive validity is required, to examine true cause and effect.

Although this study was able to demonstrate the importance of career competencies as predictors of police officers' and university employees' subjective and objective career outcomes, generalising these findings to other jobs/sectors is not possible. The use of only public sector organisations may well have restricted the variance of the career competency and the career success measures, possibly attenuating the relationship between the predictor and outcome variables. The finding that personality significantly contributes to the prediction of career competencies suggests that individuals with similar predispositions tend to develop similar career competencies. Based on the theory that individuals with similar personalities select similar jobs (Holland, 1985), the distribution of career competencies across a public sector sample may vary less than across a sample of different sector organisations. The organisational context may also restrict the variance to which career competencies are employed by individuals. The same applies to the measure of career success. Individuals are thought to be members of career communities, and these career communities are said to influence the way career success is judged (Parker, 2000). Following on from this, the responses to the SCS and OCS variables

may vary less in a public sector sample than in a broader sample spanning different sectors (i.e. different career communities). Therefore, it is likely that the variance of all the included variables will be greater in a mixed-sector sample. The present study has shown significant findings, despite these potential limitations, and this suggests that the effects may be even greater when a range of different organisational sectors is considered. Therefore, future research should seek to replicate the findings of this study, focusing not only on a range of different jobs, but also a range of different organisational sectors.

In addition, the approach sought by this study of separating the concepts of competencies and personality aspects may have limited the predictive power of the CCI. It has been acknowledged in Chapter 3 and shown in Chapter 7 that the two concepts are not completely independent of each other. Instead, certain personality aspects have been found to play a significant role in the prediction of CCs. Therefore, it is recommended that personality should be taken into consideration when dealing with CCs, since the findings of this study suggest that they play a role with regards to the extent to which individuals develop and display CCs. Future research into the relationship between personality and CCS is required (see 9.3).

Measures used

There are a number of issues related to the career outcome measures applied in this study. First, asking individuals to rate how successful they feel their careers are involves a) making presumptions that our understanding of career and success is a valid way of making sense of other people's experiences of work and b) making assumptions participants share the same understanding of the terms (Gunz & Heslin, 2005). In addition, looking at the SCS, it must be pointed out that some of the measures focused on issues that related to objective career concerns, e.g. financial and hierarchical success. Therefore, it may be questioned to what extent these variables really capture individuals' perceptions of career success. As mentioned before, future research may wish to consider assessing SCS by employing more idiosyncratic criteria, i.e. standards directly defined by the individuals. This may best be realised by using more qualitative methods.

Second, the large number of missing values with regard to the OCS measure of income may have influenced the findings of the study, since it considerably restricted the usable sample size. It is, therefore, recommended that future studies carefully consider the way they assess this variable. They may want to employ a more

objective approach, by collecting the information from an external source such as the organisation's database. Alternatively, other measures of OCS may be used, e.g. grades, etc.

Third, some of the measures only contained a few items, which carried the risk of not comprehensively assessing the respective concept. While Kline's (1994) comment that a reliable scale must encompass at least ten items is a rather conservative recommendation, especially since most scales used in the literature do not meet this criteria, it must be acknowledged that three items is a small scale. Therefore, future studies may want to explore alternative measures of the same constructs, e.g. hierarchical success.

The method of assessing the Big Five personality factors using Saucier's (1994) mini-markers had rarely been used in the literature, limiting the comparison of results from this study with previous research. Future studies may wish to consider employing more frequently applied (albeit longer) scales such as the 16PF5.

Additional limitations of quantitative studies

Another issue, of a more general nature, is the possible impact of common method variance (CMV), a problem often encountered in behavioural research (Podsakoff, MacKenzie, Jeon-Yeon & Podsakoff, 2003). The correlation of the predictor and outcome variables measured using the same method (i.e. self-reports) may have been inflated due to the action of CMV. Although some studies cast doubt on the gravity of the problem of inflated correlations (e.g. Kline et al., 2000), saying that in many cases it does not invalidate research findings, it is nevertheless accepted that the interplay of the constructs and methods by which they are assessed are a cause for concern. Common method biases can come from various sources, such as social desirability, common scale formats, item ambiguity, item characteristics, etc. Some have been addressed in this study, e.g. item ambiguity. However, it is suggested that future studies aim to operationally reduce CMV sources further, in order to substantiate the findings of this research. This could be done in two ways, procedurally or statistically. Procedural remedies may include the process of item reversal. It may also involve the separate measurement of the predictor and the outcome variables at different times, or the counterbalancing of the question order of predictor and outcome variables. Statistical remedies may involve the use of a multitrait-multimethod approach (Campbell & Fiske, 1959), or an assessment of social desirability (including respective scales).

Overall, a longitudinal study that employs measures to avoid CMV, and that uses structural equation modelling to explore the impact of career competencies on career outcomes across time and employment sectors, should be the next step in this research.

Issues of self-report may have obscured findings in the data. While self-ratings are the most commonly used form of assessment for many psychological constructs (Conway, 2002), they may present a problem for the validity of the results. The exclusive reliance on self-report measures contains the possibility of percept-percept inflation (Bozionelos, 2004), even though empirical systematic investigations suggest that this danger to validity is overstated (Crompton & Wagner, 1994; Spector, 1987).

Self-report measures cannot provide certainty that participants' perceptions of the extent to which they engaged in career competencies were accurate. The CCI assumes that individuals' responses indicate the extent to which they engage in the specific career competency. However, individuals' answers will be influenced not only by their motivation (e.g. social desirability), but also by their perceptions and understanding of the statements. Consequently, their answers may represent behaviours at different levels. For instance, when asked whether they seek career guidance from their supervisor, some respondents might interpret this as conducting the annual PDR session with their supervisor, while others may see it as a continuous dialogue on a more informal level. In addition, different levels of knowledge may have an impact on responses to the competencies. For example, when presented with the statement "I develop skills which may be needed in future positions", some individuals may have a more realistic idea of what these skills are than others. Therefore, they would be able to give a more objectively accurate answer than individuals who do not have such a concrete knowledge of the required skill set.

This reasoning supports the application of the CCI as an ipsative, rather than normative, scale. It also underlines the importance of an exploration of the results with the individual. This work originally sought to develop a measure of career competencies that could be used without requiring much in-depth exploration with the individual. However, the results of this study suggest that it is indispensable for an individual-centred approach to career development to take personal interpretations into consideration. Depending on different contexts, the items may be interpreted differently.

To replicate the present findings, future studies may want to develop and utilise a multi-source approach for measuring the CCs and the success criteria, using methods of data collection other than self-report. Whilst in the case of SCS the choice is limited (e.g. the criteria is more idiosyncratic), objective measures of some CCs (such as performance effectiveness and career-related skills) and of OCS measures are much easier to obtain. Reports from peers or supervisors, or additional organisational data, can function as alternative sources of information.

Application of the CCI in the career intervention

With regard to the application of the CCI, a range of issues need to be critically commented on. First, the coaching session discussed career competencies (i.e. issues that were predetermined by the researcher) instead of problems that the coachees had chosen themselves. As discussed above, individuals need to be motivated to engage in learning. Therefore, the discussion of something that participants did not bring to the session may not have been as effective as the discussion of an issue they felt was important to them. Nevertheless, this study showed that individuals appreciated and valued the experience. Even though they did not initiate the discussion of career competencies, they found the intervention useful. This suggests that the concept of career competencies and its importance for successful career development was immediately accepted by participants, indicating face validity.

Second, as acknowledged above, the intervention may have been too short to make a real difference with regard to behavioural changes, etc. Future studies may want to employ a longer-term approach, in which the coaching relationship is continued over a certain period of time, depending on individual needs. This would also allow a detailed monitoring of individuals' progress against the competencies and the behavioural impact of the sessions.

Third, even though, overall, a goal-focused approach was chosen, it was not carried through as SMART goals. Asking participants to explicitly define their goals, and to agree on concrete actions, may have made the session more effective. This would ideally require a continuous coaching relationship.

Finally, discussing only the two CC areas that individuals scored lowest on might have restricted the impact of the intervention. It may have been more in line with the

positivistic approach of the career discussion to focus on all of the competencies, by building on strengths as well as developing weaker areas.

Evaluation of the CCI in the career intervention

With regard to the evaluation of the intervention, two things need to be mentioned. First, Kirkpatrick's (1967) evaluation model was used to structure the evaluation, placing the main focus on the first three levels, while neglecting the organisational impact. This was because it was felt that it would be difficult for the intervention to affect result level criteria, especially as a pilot study involving only a few individuals. However, since the fourth level is a very important aspect, often of special interest to organisations, future studies should seek to assess it by measuring organisational outcomes such as employee morale, turnover, etc.

Second, the general suitability of Kirkpatrick's model for evaluation purposes has been criticised. The apparent strength of the model (i.e. its simplicity) is at the same time seen as a liability (Alliger & Tannenbaum, 1997). Therefore, new approaches have been called for (e.g. Alliger & Janak, 1989; Holton, 1996). Since Kirkpatrick's evaluation model was adopted from the field of training, future research may want to establish an evaluation model specifically tailored to career interventions, where the parameters may differ from those of a training context.

Apart from these methodological issues, the characteristics of the samples must also be borne in mind when evaluating the findings of this study. Not only were the control and intervention samples small in numbers, they also came from different organisations. This might have had an impact on the results. The study did not control for events that could have taken place in each organisation between the two points of data collection, and which might have influenced the way delegates responded to the questions. Future research may want to consider larger samples, either from one or a range of organisations, allocating individuals randomly to the control and intervention groups.

With regard to the evaluation, the self-selection of the intervention sample might have affected the results. More and Unsinger (1987) found that counselling services provided for police officers were generally more effective when people had sought them out on their own. For officers to voluntarily participate in this study indicates that they are interested in moving their careers forward. Therefore, it can be assumed that they are motivated to get the most out of the session. However, it is

important to bear in mind that not everybody is interested in career and career development, as demonstrated by the findings of the study presented in Chapter 7. Since interventions such as the one applied in this study depend on motivation, commitment and the engagement of the individual, they are not as open to quality control as some other practices may be (Arnold, 1997a). For instance, involving the whole workforce of an organisation in career development interventions may not yield positive results, since they might not engage in the process. Therefore, future approaches to exploring the generalisability of the present findings must be carefully considered.

9.3 Issues requiring further clarification

The work highlighted a few important issues that require further clarification, notably: 1) the relationship between career competencies and personality, 2) the applicability of the CCI to different career contexts and 3) the reasons why only some of the six career competency sub-scales contribute to the explanation of career outcomes.

9.3.1 The relationship between career competencies and personality

This study has proposed a theoretical argument for differentiating between the two concepts of career competency and personality. It has also provided some empirical support for this argument by demonstrating below-chance similarity between the CCs and the Big Five dimensions. However, the CC sub-scales of job-related performance effectiveness and self-knowledge and the Big Five dimensions of Conscientiousness and Intellect appeared to share some communality. Further work is required to establish more precisely the degree of communality between the CCI and existing measures of personality. Given the call by various authors (e.g. Moloney, 2000) for a clear distinction of the concepts, this work would seem to be of prime importance.

Personality was found to predict all the considered CCs, suggesting that for some individuals it may be easier to develop certain competencies than for others. Knowledge of such differences would be useful for interventions that offer individuals support for the development of CCs, since it would allow them to tailor their activities more effectively to individual needs.

9.3.2 The applicability of the CCI to different contexts

Qualitative differences in career competencies

This study found no significant differences across age groups on any sub-scales, indicating that the quantitative enactment of CCs is relatively stable over time and does not depend much on experience. However, as mentioned before, even though the quantity of career competencies does not appear to change, the quality of related behaviours is expected to increase during the course of individuals' working lives. People become socialised to their organisational (career) context (e.g. Chao et al. 1994) and learn how to engage most effectively with their environment. This is thought to include a socialisation with regard to the application of career competencies, involving the adaptation of behaviours. In this study, these qualitative differences surfaced in the career discussions. Further research is now required to explore the subtleties of these differences. In addition, future studies may want to examine whether there are certain patterns that the development of career competencies follows (e.g. development may depend on the career stages the individual goes through). For individuals who have just moved into a new position, networking and feedback seeking may be more relevant, while after a few years in a job, goal-setting and self-analysis may be more important. Knowing about potential patterns would allow more focused support of individuals, specifically addressing the career competencies most critical at that stage. In addition, individuals could be teamed up according to the prevalent requirements, to help each other in the development and employment of the particular career competencies.

In this respect, a longitudinal study assessing the development of career competencies of complete novices, from entry into the world of work, through socialisation and further advancement, may yield valuable information.

Organisational context

Another issue that requires further exploration relates to the application of the CCI to individuals not working for public sector organisations. It has already been discussed above that the generalisability of the findings of this study to other sector organisations is somewhat limited. Future studies are necessary to replicate the results for organisations from the private sector. Private sector organisations may be affected more by the new career realities than public sector organisations, due to fiercer competition, more frequent job moves and less job security. Consequently, it may be even more important for individuals working in private sector organisations to

take responsibility for their careers and engage in career self-management through career competencies.

The applicability of the CCI to individuals not working in an organisational context (such as the self-employed) also needs to be assessed. There has been an increase in the growth of self-employment over the last few years (Kidd, 2007). The work environments and career communities that self-employed individuals engage in are likely to differ from the experiences of individuals working in corporations. This may not only affect the standards against which career success is measured, but it may also require a different approach to the development and application of CCs. While the CCI was developed with the idea of a general application, an adaptation to the needs of the self-employed may be necessary. Some of the items (e.g. "I seek career guidance from my supervisor" or "I have a good understanding of the politics in my workplace") may not be entirely applicable to the self-employed context, where individuals may be their own boss and/or work on their own. Nevertheless, the CCI should be of importance, even though career guidance may be sought from someone other than the supervisor, and the understanding of politics may not be applied to their own workplace, but to interactions with clients. More research is needed, to find the extent to which the items of the CCI would require rephrasing in order to be applicable to the self-employment context. Moreover, it remains to be analysed whether CCs predict career outcomes to the same extent for a sample of self-employed individuals as they do for the present sample of public sector employees.

9.3.3 The reasons why only a few career competencies contributed significantly to the explanation of the career outcomes

The study found that, of the six career competency sub-scales, knowledge of (office) politics and career-related skills were the best predictors of SCS, while self-knowledge was the best predictor of income, and knowledge of (office) politics the best predictor of the number of promotions. Further research is needed to assess whether this is a reflection of the importance of their contribution to career competency overall, or whether it reflects an artefact related to this study. In other words, it must be assessed whether these competencies are generally more important for the achievement of career outcomes than the others. Dominance analysis (e.g. Eby et al., 2003) determining the relative importance of each sub-scale for career success could perhaps be employed to answer this question. Alternatively, this result may have been caused by other factors (for instance, the

organisational context under examination here) and may not occur in other scenarios. Again, this remains to be analysed by future studies.

9.4 Other Future Work

The potential role of career competencies in dealing with the requirements of the new career realities

The discussion below considers the potential role of career competencies a) as a factor in making career decisions and b) as a factor in stress and in coping with changing career circumstances.

Differences in the development and employment of career competencies may provide an explanation for why some individuals are able to make career decisions without long contemplation, while others suffer from what Callanan and Greenhaus (1990) call career indecision. The authors suggested various reasons for career indecision, including lack of self-information, lack of internal and external work information, decision-making fear or anxiety, etc. According to the idea of career indecision, it is likely that a person who scores high on self-knowledge, goal setting, and career planning and career-related skills, would be able to make career-related decisions quite comfortably. However, the other career competencies may also contribute to an individual being more confident when it comes to making career decisions. For instance, networking and feedback seeking are likely to inform self-knowledge, and provide information on job requirements and the likelihood of individual fit. Therefore, they may also be of importance with regard to reducing career indecision.

As described above, the continuous changes affecting the world of work have a large effect on careers. Individuals are required to deal with changes that make promotion less likely and job changes more frequent. Change and career events are key sources of stress at work (Latack, 1989). A lot of costs are associated with stress and career issues have become increasingly salient and common in work organisations (Latack, 1989). Though as yet not empirically supported, career self-management activities (and so career competencies) are thought to provide the individual with an increased sense of control. Therefore, it can be speculated that individuals who score low on the career competencies are more likely to experience stress, or display strain reactions, under conditions of career change. As described

earlier, having a career goal, self-knowledge, a broad range of career-related skills, and a network to obtain information and guidance from, may help individuals to deal with career changes and events more effectively. Not only may career competencies give individuals a greater sense of control, which may prevent them from interpreting the situation as stressful, career competencies may also function as coping strategies, and help to overcome barriers. If career competencies help individuals to feel on top of change activities and adverse career events, they are likely to encourage more positive work attitudes and lower stress levels.

In this respect, future studies may want to explore the relationship between CCs and career resilience. If, as theorised, career competencies further the sense of control, they may also enhance the resilience of an individual. People who are career competent are likely to adapt to changing circumstances more easily, even if these circumstances are discouraging or disruptive, because they will have a supportive network, a goal to work towards and a detailed knowledge of what they need to do to achieve this goal. Individuals will be more likely to resist adverse career disruptions if they have a clear career plan, the abilities and skills to re-assess their situation and people they can approach for career advice and input on potential opportunities, etc. As such, career resilience may be a consequence of career competency.

Different ways of promoting career competencies

As mentioned above, the intervention applied in this study may not have provided the ideal setting to promote career competencies. Even though individuals largely appreciated the input from peers, in some cases one-on-one sessions may have been more effective. This may especially be the case where more private issues are discussed, such as work-life-balance. In addition, a one-off session might have been too short to explore related issues and potential barriers in enough depth to resolve problems or initiate change. Future research may focus on different ways that the development of career competencies can be promoted.

9.5 The study's contribution to the literature

Previous writers have stressed the importance of competencies in career management (e.g. Craig, 1992). However, some have argued that the current focus of competencies on job performance would be too narrow to address the issues of importance for successful individual career development (e.g. Arthur et al., 1999).

This project has provided support for this position. It showed that experts in the field of career development and competencies, as well as users of competency-based career interventions, feel that issues other than performance on the job (such as self-knowledge, knowledge of politics, etc.) are important for achieving career success. This study also found that job-related performance effectiveness did not affect the prediction of any career outcome measures, apart from contributing significantly to perceived interpersonal success. Instead, the CC sub-scales developed in this study were found to jointly significantly contribute to the prediction of the OCS measures of income and number of promotions. The CC sub-scales were also shown to contribute significantly to the prediction of SCS over and above the impact of demographics, personality and career salience.

One of the main contributions of this study is the re-conceptualisation of the term career competencies, as behavioural repertoires and knowledge that are instrumental in the delivery of desired career-related results and outcomes. Earlier research either did not provide a clear definition, or renamed the concept, as in the case of Arthur and colleagues, who now use the term career investments. The study also generated evidence that suggests that the three-fold structure of career competencies (as introduced by Arthur and colleagues) may be too simplistic, and proposes a seven-factor structure instead.

In addition, no empirically based conceptualisation of the concept of career competencies existed previously. This work contributed to the field by providing an empirically sound measure of career competencies, which draws on previous research into career self-management and the antecedents of positive career outcomes. The CCI can act as a structure for career management interventions that seek to support and increase individuals' self-reliance regarding career development. In addition, it can be used to evaluate the effectiveness of such interventions. The study substantiated the proposed definition of career competencies by demonstrating the importance of career competencies for the achievement of career success. Moreover, it provided support for the writings of authors such as King (2001), Uzumaka et al. (2000) and Allred et al. (1996), who have argued for the importance of career self-management for career success.

The existing literature has so far only provided limited evidence for the effectiveness of career management interventions. This work is a contribution in terms of demonstrating potential evaluation strategies. It provides some evidence for the

positive impact the intervention had on the development of career competencies and the achievement of career outcomes such as income and number of promotions.

In summary, this work is a contribution to the literature in terms of: a) introducing a concrete definition of the concept of career competencies based on traditional competency approaches (e.g. Bartram, 1990), b) operationalising the concept and thus providing a taxonomy to be used in career management, c) providing empirical evidence for the importance of career competencies for career success and d) providing preliminary empirical evidence for the effectiveness of career management interventions based on career competencies.

9.6 Implications for practice

The following section discusses the implications of the findings of this study for practice. It focuses primarily on the participating organisation. However, some of the recommendations are rather general and as such may apply to other organisations. Once the generalisability of the reliability and validity of the CCI to other contexts has been established, the instrument can be used in these organisations to support individual career self-management.

The research strongly suggests that competencies (as presently used) are not comprehensive enough to facilitate development of the career self-management skills necessary to increase individual self-reliance. For organisations such as the police force, this indicates the need for a shift of focus in their career interventions, away from job performance, to other areas that are important for successful career development. The CCI offers itself as a framework for this new direction. This study emphasised the importance of clarifying the objectives of interventions from the beginning and conducting evaluations of their effectiveness. Again, the CCI could be a useful tool for structuring such processes within organisations.

The results of this study suggested that the organisational context (i.e. the police force) may not be very supportive of the development of career competencies. Considering the importance of CCs for the achievement of career outcomes, the organisation may want to consider a cultural change towards supporting and promoting the activities measured by the CCI. For example, the discussions showed that for most participants the competency of knowledge of (office) politics carried negative connotations. Considering the relationship of this competency with SCS, an approach which seeks to encourage more positive connotations may be useful. The discussions suggested that the task-focus of the organisation supported feedback-seeking behaviours only with regard to job performance, and even then only partially. The creation of a feedback culture throughout the organisation may help to embed this competency. Feedback is important for learning and, as mentioned in Chapter 2, career development is an ongoing learning process. Therefore, the more the organisation emphasises, supports and acknowledges learning in general, the more these processes are bound to flourish. This includes allowing the individual the time to think about and discuss these issues. In the career intervention, it became apparent that officers often do not have the time to focus on themselves, due to work requirements. Frequently, the only occasion when this time was granted was for promotion processes. The task-focus of the organisation also impacts on other career competency areas, such as the development of career-related skills. Currently, the organisation mainly supports activities and training that are directly job-related. Since this study found career-related skills to have a strong impact on career success, this approach may need revising. The organisation may want to pay more attention to the development of skills and knowledge important for future roles.

It was found that career planning significantly contributed to the prediction of career satisfaction. The literature review, as well as the preliminary studies, however, indicated that police officers' careers are often a loosely joined string of opportunities (More & Unsinger, 1987). Therefore, the organisation may want to address the issue of career planning, to ensure a more focused and goal-driven development of their employees. If officers were encouraged and helped from the outset to increase their self-knowledge, to explore where they want to go and to re-assess their goals continuously, it is likely that much more potential will be realised and, as suggested in this study, greater career satisfaction will be achieved. Furthermore, police officers generally reach retirement after 30 years of service. This means that they can be comparatively young when they retire, and may want to find a new career after their time with the force. Self-assessment using the CCI may be useful in helping

individuals in general (and police officers in particular) to deal with this career change, especially if it is applied on a continuous basis.

Closely linked to career planning is the issue of communicating information with regard to career development and career opportunities to employees. This study found that a large percentage of officers did not know which individuals or which department was responsible for career development and felt that career development was not clearly signposted in the organisation. This may influence the level of career planning individuals engage in. This information should be made more clearly and more widely available to officers e.g. through the intranet, staff communications, etc. Career champions in each division could be trained to support individuals and be the point of contact for career-related queries. Since this study showed that officers appreciated the input from their peers, it may be valuable to organise career discussions to realise learning and tap into the available knowledge pool.

If organisations want to provide the context and environment for individuals to self-manage their careers, they need to encourage the necessary behaviours and skills. However, a couple of issues must be taken into consideration. First, the relationship between career salience and career outcomes was mediated by CCs. This indicates that solely placing emphasis on one's career does not necessarily lead to positive career outcomes. Career salience expressed through the use of career competencies appears to yield more career success. This suggests that when offering career interventions to individuals who are interested in moving their careers forward, it may be useful to focus the interventions around career competencies, as CCs appear to function as a catalyser for career salience.

On the other hand, the findings suggest that people who place more importance on their private lives than their careers use CCs to a lesser extent (and report lower career success levels) than individuals who score high on career salience. Therefore, interventions focussing on CCs may not be of much interest to these individuals. In this respect, it is important that about 20% of officers who participated in the validation study were not interested in career development. Since the engagement of individuals in career interventions and thus the success of these interventions, largely depends on the motivation of the individual, making interventions compulsory may not yield positive effects. A more appropriate way to approach this issue may be by valuing each individual's contribution to the

organisation, and making it clear that they will be supported if they choose to engage in career development, without putting pressure on them to be career-focused.

9.7 Reflections on research process

This final section is intended to provide some reflection on the experience of the research process as a whole.

When I started the process, the participating organisation only gave limited guidelines with regard to their expectations. The issues they wanted me to address were rather broad, and no specifics with regard to the desired outcomes were provided. The difficulties of developing an intervention without being clear about its objectives have been discussed earlier in the thesis. It was a challenge to produce a piece of work that would address the organisational issues adequately, whilst also being an original contribution to research in this area.

Throughout the process, I have felt the need to question both the theoretical approaches and the methodologies adopted. For instance, being unable to replicate the three-fold structure of career competencies provoked me to consider that I was dealing with a much more complex and multi-faceted concept, that perhaps should have been explored using a research-based approach. Another example is the differential interpretation of career competencies, which led me to question the general use of normative approaches for individual career development purposes.

Overall, the process was a career development intervention for me. I had to continuously re-assess my goals, and develop new time-scales to work towards. Achieving my objectives, meeting deadlines and meeting the demands placed upon me, required time-management, coordination and efficiency. I learned a lot about myself and discovered strengths and weaknesses. The project encouraged me to engage with new theories and methods of analysis, evaluate literature critically, formulate clear arguments and present them in a succinct manner, i.e. the project encouraged me to develop career-related skills. Working with various organisations developed my networking skills and getting others to participate in the study enhanced my influencing skills. I engaged in self-presentation by submitting abstracts to conferences, presenting posters and giving talks. I developed my feedback seeking skills in the interactions with my supervisory team. Thus, the process helped me to develop my career competencies, so that I am now more confident about my own ability to effectively manage my career.

Appendix A1

Results Intelligent Career Card Sort – Group Summaries

Intelligent Career Card Sort[®] Group Summary WMC Probationers 12 Oct 04 (n = 6)

Knowing-Why

<u>Rank</u>	<u>Description</u>	<u>Weight</u>	<u>Freq.</u>
1.	I want to be trusted at work	6.25	83.3%
2.	I enjoy helping other people	4.42	83.3%
3.	I like to gain a sense of achievement from my work	4.33	66.7%
4.	I want to ensure financial security	3.00	33.3%
5.	I like the feeling of sheer excitement in my work	3.00	33.3%
6.	I want to be challenged in my work	2.75	33.3%
7.	I want to provide for my family	2.75	33.3%

Knowing-How

<u>Rank</u>	<u>Description</u>	<u>Weight</u>	<u>Freq.</u>
1.	I seek training and development for my current job	5.50	66.7%
2.	I seek to learn from the people I work with	5.17	66.7%
3.	I seek to learn from the job situations I experience	5.17	66.7%
4.	I seek to become more adaptable to different situations	4.92	83.3%
5.	I am developing knowledge about my own abilities	3.25	50.0%
6.	I seek to be better able to resolve differences with other people	2.75	50.0%
7.	I seek to apply the skills that I have	2.67	33.3%

Knowing-Whom

<u>Rank</u>	<u>Description</u>	<u>Weight</u>	<u>Freq.</u>
1.	I give support to people that I can help	5.25	83.3%
2.	I work with teams to help me be more effective in my work	3.50	50.0%
3.	I work with teams from whom I can learn	3.00	50.0%

4.	I look for support from people who can help me	3.00	50.0%
5.	I work to sustain my relationships with school or college friends	2.75	33.3%
6.	I maintain or develop relationships with family	2.67	33.3%
7.	I work with people from whom I can learn	2.50	33.3%

***Intelligent Career Card Sort*[®] Group Summary**

WMC Sergeants 24 Jan 05 (n = 3)

Knowing-Why

<u>Rank</u>	<u>Description</u>	<u>Weight</u>	<u>Freq.</u>
1.	I like to be recognized and admired for my work	5.50	66.7%
2.	I like to gain a sense of achievement from my work	5.00	66.7%
3.	I want to ensure employment security	4.83	66.7%
4.	I want to provide for my family	4.83	66.7%
5.	I enjoy being a member of a high performing team	3.83	66.7%
6.	I enjoy helping other people	3.33	66.7%
7.	I enjoy sharing work and life responsibilities with my partner	3.33	33.3%

Knowing-How

<u>Rank</u>	<u>Description</u>	<u>Weight</u>	<u>Freq.</u>
1.	I seek to learn from the job situations I experience	8.17	100.0%
2.	I pursue qualifications and skills that make me distinctive	4.83	66.7%
3.	I learn through being open to fresh ideas	3.83	66.7%
4.	I pursue skills and knowledge specific to my occupation	3.83	66.7%
5.	I seek training and development for my current job	3.83	66.7%
6.	I am developing knowledge about my own abilities	3.33	66.7%
7.	I seek to learn from the people I work with	3.33	66.7%

Knowing-Whom

<u>Rank</u>	<u>Description</u>	<u>Weight</u>	<u>Freq.</u>
1.	I look for support from people who are interested in my career	5.00	66.7%
2.	I build relationships with people who have a broad knowledge of my field	4.83	66.7%
3.	I work to enhance my reputation with people I know	3.83	66.7%
4.	I build relationships with people less experienced than me	3.83	66.7%
5.	I maintain or develop relationships with people outside my workplace	3.33	33.3%
6.	I work with people who can learn from me	3.33	33.3%
7.	I work with people from whom I can learn	2.67	33.3%
8.	I build relationships with people who can help me to solve my problems	2.67	33.3%

Intelligent Career Card Sort*[®] Group Summary*WMC Inspectors 05 Oct 04 (n = 5)****Knowing-Why**

<u>Rank</u>	<u>Description</u>	<u>Weight</u>	<u>Freq.</u>
1.	I like to gain a sense of achievement from my work	5.50	80.0%
2.	I want to ensure financial security	5.20	60.0%
3.	I enjoy being a member of a high performing team	4.60	80.0%
4.	I like to make a contribution to society	3.30	40.0%
5.	I want to be challenged in my work	2.60	40.0%
6.	I enjoy helping other people	2.30	40.0%
7.	I like to be recognized and admired for my work	2.30	40.0%
8.	I like the feeling of sheer excitement in my work	2.30	40.0%

Knowing-How

<u>Rank</u>	<u>Description</u>	<u>Weight</u>	<u>Freq.</u>
1.	I seek to become a better leader	6.60	80.0%
2.	I learn through being open to fresh ideas	5.00	60.0%
3.	I seek to learn from the job situations I experience	3.60	60.0%
4.	I pursue qualifications and skills that make me distinctive	3.60	60.0%
5.	I pursue skills and knowledge specific to my occupation	3.00	60.0%
6.	I seek training and development for my current job	3.00	40.0%
7.	I seek to become a more strategic thinker	2.90	40.0%
8.	I seek to become better at reflecting on past experiences	2.90	40.0%

Knowing-Whom

<u>Rank</u>	<u>Description</u>	<u>Weight</u>	<u>Freq.</u>
1.	I work to enhance my reputation with people I know	4.60	80.0%
2.	I work with people from whom I can learn	3.30	60.0%
3.	I maintain or develop relationships with family	3.30	40.0%
4.	I give support to people that I can help	3.00	40.0%
5.	I develop relationships with influential people	3.00	40.0%
6.	I build relationships with people who can help me to solve my problems	2.90	40.0%
7.	I work to keep my old friends	2.60	40.0%
8.	I build relationships with people inside my occupation	2.60	40.0%
9.	I look for support from people who are interested in my career	2.60	40.0%
10.	I work with teams to help me be more effective in my work	2.60	40.0%

Intelligent Career Card Sort[®] Group Summary
WMC Chief Inspectors & Supter Intendent Sept-Dec 04 (n = 4)

Knowing-Why

<u>Rank</u>	<u>Description</u>	<u>Weight</u>	<u>Freq.</u>
1.	I want to create the vision and the plan that others follow	5.75	75.0%
2.	I enjoy helping other people	4.12	75.0%
3.	I want to be trusted at work	3.75	50.0%
4.	I like to make a contribution to society	3.75	50.0%
5.	I like to gain a sense of achievement from my work	3.62	50.0%
6.	I want to be challenged in my work	3.25	50.0%
7.	I enjoy being a member of a high performing team	2.88	50.0%

Knowing-How

<u>Rank</u>	<u>Description</u>	<u>Weight</u>	<u>Freq.</u>
1.	I seek to learn from the people I work with	7.75	100.0%
2.	I seek to learn from the job situations I experience	5.75	75.0%
3.	I seek to become a better leader	5.00	50.0%
4.	I learn through being open to fresh ideas	4.88	75.0%
5.	I pursue qualifications and skills that make me distinctive	2.88	50.0%
6.	I seek to integrate information from different sources	2.88	50.0%
7.	I am learning about my company's politics and personalities	2.88	50.0%

Knowing-Whom

<u>Rank</u>	<u>Description</u>	<u>Weight</u>	<u>Freq.</u>
1.	I work with people from whom I can learn	7.75	100.0%
2.	I work with teams to help me be more effective in my work	3.75	50.0%
3.	I build relationships with people more experienced than me	3.62	50.0%
4.	I build relationships with people less experienced	2.50	50.0%

	than me		
5.	I maintain or develop relationships to receive support	2.50	50.0%
6.	I work to keep my old friends	2.50	25.0%
7.	I maintain or develop relationships with family	2.50	25.0%

Appendix A2

Interview Guidelines – Questionnaire on Career Development and Competencies

COMPETENCIES AND CAREER DEVELOPMENT

The aim of this questionnaire is to explore the role that competencies play or could play in the career development of police officers. It furthermore looks at factors that influence career self-management and attitudes towards the use of competencies in general.

The content of this form is **absolutely confidential**. Information will be grouped in reports so that individuals cannot be identified.

Competencies in career development

- 1.1 When talking about competencies, what do you mean by it? How would you define the term?
- 1.2 What are the advantages of using competencies in career development?
- 1.3 What are the disadvantages of using competencies in career development?

Career development

- 2.1 We already mentioned the term career development. What does career development mean to you?
- 2.2 Who do you think is responsible for career development e.g. supervisors, individual? (Suggest more than one if appropriate.)
- 2.3 What role plays the individual in their own career development?
- 2.4 What role plays the organisation in the career development of its officers?
- 2.5 From your experience, do most officers working in the Police share this point of view?
Yes
No
Don't know

If 'NO', what point of view do you think most officers share?

There is a general tendency of large organisations to give more control over career development to their employees.

- 2.6 What factors influence individual career development? What personal attributes or competencies promote successful career development?

A wide range of career development interventions is used by organisations.

2.7 What interventions are available in your organisation? Are they linked to a competency approach or the Integrated Competency Framework (ICF)? Please tick the appropriate boxes.

Career intervention	Used within your force	Linked to competency approach	Linked to ICF
Open internal job markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Open external job markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Formal appraisal or development review	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Informal career support from immediate superior/other manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Informal career support from HR or training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Secondment/attachments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Career moves managed by the organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Succession planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Formal mentoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Informal mentoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Career advice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
External career coaching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Development or assessment centres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Career workshops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Career information/tools on the intranet or on paper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If 'OTHER', please specify.

2.8 What are the general aims of career interventions? What issues should they address?

2.9 How is the effectiveness of these practices being assessed?

Additional comments

If you have any additional comments on the issue that you feel are important, please add these below.

Please indicate if you are willing for me to contact you again in the future for the purposes of this research.

Yes

No

Furthermore, if you can think of any other person who might be able to contribute valuable information on these issues, please supply their contact details below.

Thank you very much for sparing the time to answer these questions.

Appendix A3

Detailed analysis of group responses to ICCS application (Chapter 5.3)

Knowing-why

Similarities between the groups were especially prevalent in this area of knowing.

The desire to *gain a sense of achievement from their work* was among the top three items of each group. It was strongly associated with the feeling of doing a job that was worthwhile. Achievement was interpreted on different levels. On the one hand, achievement was directly related to conducting police work, which was described as very task-oriented, solving problems, such as burglaries and murders and experience immediate outcomes from their actions, e.g. arresting criminals. This sometimes required individuals to stretch personal boundaries and undertake tasks that were not necessarily well within their personal capabilities. On the other hand, achievement was defined on a more daily basis as the successful fulfilment of day-to-day tasks and routines.

Helping other people and making a contribution to society were topics that were also short-listed by all groups. To most officers it was important to do something that mattered, something they perceived to be worthwhile. By solving crimes and helping victims, officers felt they would serve a good purpose and have a positive impact on other peoples' lives. At higher ranks, helping other people by supporting subordinates and other departments gained in importance.

"I want to be trusted at work" was an issue frequently selected by various groups. It was especially important to Probationers, who were still undergoing training and still had to "prove" themselves. However, the issue was also relevant at higher levels, since it was associated with being entrusted to run difficult enquiries, or to solve special problems. This sense of being trusted was, in turn, connected to a sense of achievement, and was said to help officers to progress.

Receiving recognition and admiration for their work was of importance to participants at various ranks. Receiving credit and respect for completed duties was associated with job satisfaction. It was a motivator that did not necessarily have to be presented in a public or official way. A simple "well done" from one's superior or colleagues was often considered satisfactory.

It was important to officers that the job would *ensure financial security*. This was the underlying concern of officers who expressed the desire to provide for their families. The amount of money earned, however, was not the most important consideration. Officers in higher positions were aware that they could earn more money working in the private sector. Instead, long-term security was the main issue behind the selection of these items. This is reflected in another frequently selected item, namely “*I want to ensure employment security*”.

Police work, in its various guises, was found to directly satisfy the desire to be *challenged in the job*. It was frequently stated that, in policing, everyday was different, that no two incidents were the same. Officers would go out and deal with a vast range of different situations in a single day, leaving little room for boredom, an important reason for staying with the force.

Officers said they would *enjoy being a member of a high performing team*. This was reported as directly related to police work. It was stated several times that police work was teamwork. Problems would often require officers to work together and form trusting relationships. Working in an effective, highly motivated team was considered a critical factor in the quality of work.

There were some topics that were only mentioned by officers at higher ranks i.e. Chief Inspectors and Superintendent. These included *creating the vision and the plan that others follow* and *liking to be directly responsible for results of own work*. These topics were considered inherent to the position of higher-level managers.

Knowing-how

Seeking to learn from job situations experienced was selected by officers at all ranks as one of their four most important concerns. This was seen as an essential part of police work. Daily confrontation with unprecedented situations would make continuous reflection on personal behaviour and analysis of its effectiveness a necessity. Dealing successfully with serious incidents and offences requires experience. Officers felt that every situation would provide an opportunity for continuous learning and the application of knowledge and skills. This included voluntarily exposing oneself to unknown situations and pushing the limits of personal knowledge. After dealing with an incident, an overall debrief with colleagues should be sought, to assess achievement, receive feedback and explore, where possible,

more efficient ways of dealing with the job. This issue was especially important to Probationers still undergoing training. This topic is related to another item chosen by the Probationer group as most important, namely *seeking to become more adaptable to different situations*.

All officers, apart from Inspectors, stated they would *seek to learn from the people they work with*. Officers acknowledged that everybody would have different abilities, skills and ways of dealing with issues. They pointed out that nobody could be an expert in everything. They stressed the importance of learning from the behaviours, successes and failures of others, in order to improve their own performance.

Another topic frequently mentioned by officers at various ranks was *learning through being open to fresh ideas*. To deal effectively with common problems and, more importantly, with unprecedented situations, it was considered important to be creative and to try out new things. Police work was described as being dynamic, constantly adapting to changes in society and technology. To meet these demands, it was considered essential to take on board new ideas and continuously adapt working styles.

The need to develop skills and qualifications was also considered important. *Seeking training and development specific to their occupation* was selected by officers at the lower three ranks as an important issue. This was especially relevant for Probationer officers, who experience a steep learning curve during their first two years of training. This was directly linked to another item Probationers and Sergeants chose, namely the *development of knowledge about own abilities*. Self-awareness (i.e. knowledge of own capabilities, strengths and weaknesses) was considered very important, especially in respect to unanticipated incidents, where overestimating one's abilities could prove fatal. Following the probationer period, officers increasingly seemed to focus on *pursuing qualifications and skills that make them distinctive*. They said they would seek out specialisation as part of their ongoing professional development, in order to secure their position and build a reputation. Building a profile and fulfilling job expectations were perceived as investments in career progression.

An issue that was important to officers at Inspector and Chief Inspector level was *seeking to become a better leader*. Inherent in the role description for these positions, leadership was considered the most relevant quality. Leading by example, creating a vision, making decisions and making people follow you were seen as the

important abilities of a leader. This, together with other items such as *seeking to become a more strategic thinker* and *seeking to integrate information from different sources*, was said to reflect the specific demands placed on higher-level positions.

Knowing-whom

Some participants felt that selecting the knowing-whom cards was the most difficult task. This was partly attributed to the cards having wording very similar to each other. Furthermore, knowing-whom was identified as an area that people would generally not think about. Thus, when confronted with it, they needed more time to reflect on it. Of all three competencies, selections varied most widely with this one, with group lists extending to up to ten items. Therefore, only aggregated findings of the most prominent results are presented here.

“I work with people from whom I can learn” was an item chosen by all groups. This item was linked to police work as teamwork and continuous learning leading to improved performance. Similar to the comments made on the knowing-how item *“I seek to learn from people I work with”*, officers said that they liked working with people who could open up new perspectives on things. They were not referring only to higher-level officers, but also to specialists and colleagues who were doing a good job. The item was closely related in interpretation to other frequently chosen cards such as *“I work with teams to help me being more effective in my work”*, *“I build relationships with people who are more experienced than me”*, *“I work with teams from whom I can learn”* and *“I build relationships with people who have a broad knowledge of my field”*. All these items have, in one way or another, been linked to seeking feedback, exchange with other people and learning from others how to do the job more effectively.

Another issue of importance to all groups of officers was *giving support to people that they can help*. Other items such as *“I work with people who learn from me”* or *“I build relationships with people less experienced than me”* were sometimes chosen to express the same concern – the sharing of information. Especially when officers had responsibility for subordinates, giving them time and advice, supporting them and helping them develop, were all seen as essential behaviours to make the organisation work. This issue was also seen as a means of building good relationships across the board and creating a motivating and inspiring environment.

Sergeants and Inspectors ranked the *enhancement of their own reputation with people they know* very highly. Participants explained that, to progress within the police force, it was important to get noticed and be recognised. The force was described as a tight-knit organisation, where a bad reputation is difficult to lose. With regard to promotion, the amount of support officers received would often depend upon recommendations. High value is placed on respect, which officers said was developed through reputation, not the PDR. A good reputation would lead to being entrusted with certain tasks, which, if carried out successfully, would lead to respect and further support. This was closely linked to *looking for support from people who are interested in my career*, an item also chosen by these two groups.

Maintaining or developing relationships with family and working to keep old friends was also found to be of importance to police officers. A few participants stated that they would find it difficult to talk about work-related issues with people outside the force, because they felt that “externals” would not understand them. However, they also said that it was essential to have a balance and be able get away from police work every now and then. Family and friends were seen as providing stability and support, helping officers to cope with issues such as work-related stress.

Appendix B1

Items after item refinement

Knowing-why	
Item	Goal setting and career planning
1	I have specific career goals.
2	I have clear career goals.
3	I change or revise my career goals based on new information I receive regarding my situation or myself.
4	I know what I need to do to reach my career goals.
5	I have a strategy for achieving my career goals.
6	I have a plan for my career.
7	I change or revise my career plan based on new information I receive regarding myself or the external circumstances.
8	I have a plan for the next few years of my work future.
Item	Self-knowledge
1	I know my strengths.
2	I am aware of my weaknesses.
3	I know what work tasks or projects I find boring.
4	I know what job characteristics are personally important to me.
5	I know what work projects interest me.
6	I understand what I want from this job.
7	I recognise what I can and what I can't do well.
8	I know my limitations.
9	I know how my past integrates with my future career.
10	I understand the relevance of past behaviour for my future career.
11	I know what to seek and what to avoid in developing a career path.
Item	Career resilience
1	I adapt to changing circumstances.
2	I am willing to take risks (actions with uncertain outcomes)
3	I welcome job changes e.g. new assignments, responsibilities etc.
4	I welcome organisational changes e.g. new structures, processes etc.
4	I can handle any work problems that come my way.
5	I reward myself when I complete a project.
6	I take the time to do the best possible job on a task.
7	I accept job assignments for which I have little or no experience.
8	I make suggestions to others even though they may disagree.
Total: 27	
Knowing how	
Item	Job related performance effectiveness
1	I deliver the activities listed in the role profile.
2	I fulfil the competencies (as specified in the competency framework) that are required by my role.
3	I perform the tasks that are expected as part of the job.
4	I meet the formal performance requirements of the job.
5	I engage in activities that are directly linked to my performance appraisal.
6	I meet performance expectations.
7	I fulfil the responsibilities specified in the job description.
8	I perform all assigned duties.
Item	Career related skills
1	I develop skills, which may be needed in future positions.
2	I have a diversified set of job-related skills.

3	I develop knowledge and skill to distinguish me from others.
4	I remain current on the trends and developments in my profession.
5	I seek out training and development opportunities.
6	I constantly update my job-related skills.
7	I spend free time on activities that will help my job.
8	I join professional organisations related to my career goals.
9	I gain experience in a variety of work assignments to increase my knowledge and skills.
10	I develop expertise in areas that are critical to my work unit's operation.
11	I take job-related courses.
Item	Knowledge of politics and opportunity structures
1	I keep myself up to date on the career opportunities provided by my organisation.
2	I keep myself up to date on the labour market and general job opportunities.
3	I know who the most influential people are in my organisation.
4	I have a good understanding of the politics in my organisation.
5	I keep informed on rules and regulations in the organisation.
6	I keep up with developments in the organisation.
7	I attend and participate in meetings regarding the organisation.
8	I know how things "really work" in my field of work.
9	I keep informed on affairs, political structures and processes in my field of work.
10	I know what to do to get the most desirable assignments in my area.
11	I have a good understanding of the motives behind the actions of other people at work.
12	I keep informed on personnel policies.
13	I can identify the people who are most important to getting the work done.
14	I have a good understanding of the politics of career development processes in this organisation.
Total: 33	
Knowing-whom	
Item	Mentoring relationships
1	A mentor is generally a higher-ranking, influential individual who has advanced experience and knowledge and is committed to providing upward mobility and support in your career. Your mentor may or may not be in your organisation, and he/she may or may not be your immediate supervisor. I have a formally appointed mentor.
2	I have an informal self-sought mentor.
3	I seek to become acquainted with higher-level managers.
4	I seek counselling and advice from higher-level managers.
5	I take the initiative to find mentors.
6	I ask my supervisor for career guidance.
7	I seek career guidance from other experienced people within the organisation.
8	I seek career guidance from experienced people outside the organisation.
Item	Networking
1	I network with other employees to obtain information about how to do my work or to determine what is expected of me.
2	I network with co-workers or other people to provide me with help or advice that will further my career progression.
3	I keep in touch with people who are at higher levels than I am.
4	I keep in contact with several people in the organisation who hold important

	positions.
5	I network with people in other departments.
6	I talk to senior management at social gatherings.
7	I build contacts with people in areas where I would like to work.
8	I introduce myself to people who can influence my career.
9	I network with people who occupy important posts in other organisations or the community.
10	I keep in contact with people outside the organisation on whom I can rely for information on job opportunities.
11	I establish professional contacts outside the organisation.
Item	Feedback seeking
1	I ask for feedback on my job performance from my immediate supervisor.
2	I ask for feedback on my job performance from individuals other than my supervisor.
3	I ask for feedback on the service I deliver to our customers (which are people I serve either internally or externally by performing my job).
4	I seek feedback on my career progress to date.
5	I seek feedback on my training and development needs.
6	I seek feedback on opportunities for future career development.
Item	Self-presentation
1	I make others aware of the assignments I want.
2	I make others aware of my accomplishments.
3	I make others aware of my aspirations and career objectives.
4	I make my work become visible to other people.
Total: 29	
Total overall: 89	

Appendix B2

Items after consultation with experts

Knowing why	
Item	Goal setting and career planning
1	I have specific career goals.
2	I have clear career goals.
3	I have a strategy for achieving my career goals.
4	I have clear career goals.
5	I have a plan for my career.
6	I know what I need to do to reach my career goals.
7	I have a plan for the next few years of my work future.
8	I change or revise my career goals based on new information I receive regarding myself or external circumstances.
Item	Self-knowledge
1	I am aware of my strengths.
2	I am aware of my weaknesses.
3	I understand the relevance of past behaviour for my future career.
4	I know what work tasks or projects I find boring.
5	I know what job characteristics are personally important to me.
6	I understand what I want most from this job.
7	I know my limitations.
8	I know what work projects interest me.
9	I recognise what I can and what I can't do well.
10	I know what to seek and what to avoid in developing a career path.
Item	Career resilience
1	I adapt to changing circumstances.
2	I am willing to take risks (actions with uncertain outcomes).
3	I handle any work problems that come my way.
4	I welcome job changes e.g. new assignments, responsibilities etc.
5	I reward myself when I complete a project.
6	I take the time to do the best possible job on a task.
7	I accept job assignments for which I have little or no experience.
8	I welcome organisational changes e.g. new structures, processes etc.
9	I adapt to changing circumstances.
10	I make suggestions to others even though they may disagree.
Total: 28	
Knowing how	
Item	Job related performance effectiveness
1	I deliver the activities listed in the role profile.
2	I fulfil the competencies (e.g. as specified in the competency framework) that are required by my role.
3	I perform the tasks that are expected as part of the job.
4	I perform all assigned duties.
5	I meet performance expectations.
6	I fulfil the responsibilities specified in the job description.
7	I meet the formal performance requirements of the job.
8	I engage in activities that are directly linked to my performance appraisal.
Item	Career related skills
1	I develop skills, which may be needed in future positions.
2	I develop knowledge and skills that make me distinctive.
3	I develop expertise in areas that are critical to my work unit's operation.

4	I gain experience in a variety of work assignments to increase my knowledge and skills.
5	I take job-related courses.
6	I spend free time on activities that will help my job.
7	I seek out training and development opportunities.
8	I gain experience in a variety of work assignments to increase my knowledge and skills.
9	I have a diversified set of job-related skills.
10	I constantly update my job-related skills.
11	I remain current on the trends and developments in my profession.
12	I join professional organisations related to my career goals.
Item	Keeping informed
1	I keep informed on affairs, political structures and processes in my profession.
2	I keep informed on personnel policies.
3	I keep myself up to date on the labour market and general job opportunities.
4	I keep myself up to date on the career opportunities provided by my organisation.
5	I keep informed on rules and regulations in my organisation.
6	I keep up with developments in my organisation.
7	I attend and participate in meetings regarding my organisation.
Item	Knowledge of politics and opportunity structures
1	I know how things "really work" in my profession.
2	I know what to do to get the most desirable assignments in my area.
3	I can identify the people who are most important to getting the work done.
4	I know who the most influential people are in my organisation.
5	I have a good understanding of the politics in my organisation.
6	I have a good understanding of the motives behind the actions of other people at work.
7	I have a good understanding of the politics of career development processes in my organisation.
Total: 34	
Knowing whom	
Item	Mentoring relationships
1	A mentor is generally a higher-ranking, influential individual in your work environment who has advanced experience and knowledge and is committed to providing upward mobility and support in your career. Your mentor may or may not be in your organization, and he/she may or may not be your immediate supervisor. I have a formally appointed mentor.
2	I have an informal self-sought mentor.
3	I seek to become acquainted with higher-level managers.
4	I take the initiative to find mentors.
5	I seek counselling and advice from higher-level managers.
6	I seek career guidance from my supervisor.
7	I seek career guidance from other experienced people within the organisation.
8	I seek career guidance from other experienced people outside the organisation.
Item	Networking
1	I network with co-workers or other people to obtain information about

	how to do my work or to determine what is expected of me.
2	I network with co-workers or other people to provide me with help or advice that will further my career progression.
3	I keep in touch with people who are at higher levels than I am.
4	I network with people in other departments.
5	I keep in contact with several people in the organisation who hold important positions.
6	I network with people who occupy important posts in other organisations or the community.
7	I keep in contact with people outside the organisation on whom I can rely for information on job opportunities.
8	I talk to senior management at social gatherings.
9	I introduce myself to people who can influence my career.
10	I build contacts with people in areas where I would like to work.
11	I establish professional contacts outside the organisation.
Item	Feedback seeking
1	I ask for feedback on my job performance from my immediate supervisor.
2	I ask for feedback on my job performance from individuals other than my supervisor.
3	I ask for feedback on the service I deliver to our customers (which are people I serve either internally or externally by performing my job).
4	I seek feedback on my career progress to date.
5	I seek feedback on my training and development needs.
6	I seek feedback on opportunities for future career development.
Item	Self-presentation
1	I make others aware of the assignments I want.
2	I make others aware of my accomplishments.
3	I make others aware of my aspirations and career objectives.
4	I make my work become visible to other people.
Total: 29	
Total overall: 91	

Appendix B3

Items after pilot study

Knowing why	
Item	Goal setting and career planning
1	I have detailed written career goals.
2	I have a strategy for achieving my career goals.
3	I have a clear idea of what my career goals are.
4	I change or revise my career goals based on new information I receive regarding myself or my situation.
5	I know what I need to do to reach my career goals.
6	I have a plan for my career.
7	I change or revise my career plan based on new information I receive regarding myself or external circumstances.
8	I have a plan for the next few years of my work future.
Item	Self-knowledge
1	I am aware of my own strengths.
2	I am aware of my weaknesses.
3	I understand the relevance of my past behaviour for my future career.
4	I know what work tasks or projects I find boring.
5	I know how my past integrates with my future.
6	I understand what I want most from this job.
7	I know what job features are personally important to me.
8	I know what work tasks or projects interest me.
9	I recognise what I can and what I can't do well.
10	I know what to seek and what to avoid in developing my career path.
Item	Career resilience
1	I am willing to take risks (actions with uncertain outcomes).
2	I can handle any work problems that come my way.
3	I welcome changes to my job e.g. new assignments, responsibilities etc.
4	I reward myself when I complete a piece of work.
5	I take the time to do the best possible job on a task.
6	I accept job assignments for which I have little or no experience.
7	I welcome organisational changes e.g. new structures, processes etc.
8	I adapt to changing circumstances in my work.
9	I make suggestions to others even though they may disagree.
Total: 27	
Knowing how	
Item	Job related performance effectiveness
1	I perform the activities that are expected as part of my job.
2	I fulfil the competencies that are required by my role e.g. as specified in a competency framework.
3	I engage in activities that are directly linked to my performance appraisal.
4	I meet set deadlines.
5	I fulfil the responsibilities specified in my job description.
6	I perform all assigned duties.
7	I meet the quality standards required of my job.
Item	Career related skills
1	I develop skills which may be needed in future positions.
2	I develop knowledge and skills that make me distinctive.
3	I develop expertise in areas that are critical to my work unit's operation.
4	I gain experience in a variety of work assignments to increase my

	knowledge and skills.
5	I take job-related courses.
6	I spend free time on activities that will help my job.
7	I seek out training and development opportunities.
8	I have a diverse set of job-related skills.
9	I constantly update my job-related skills.
10	I remain current on the trends and developments in my profession.
11	I join professional organisations related to my career goals.
Item	Keeping informed
1	I keep informed on affairs, structures and processes in my profession.
2	I keep informed on personnel policies.
3	I keep myself up to date on the labour market and general job opportunities.
4	I keep myself up to date on the career opportunities provided by my organisation.
5	I keep up with developments and changes in my organisation.
6	I take part in meetings about my workplace.
Item	Knowledge of politics and opportunity structures
1	I know what to do to get the most desirable assignments in my area.
2	I can identify the people who are most important to getting the work done.
3	I have a good understanding of the motives behind the actions of other people at work.
4	I have a good understanding of the politics in my work.
5	I know who the most influential people are in my work.
6	I have a good understanding of how to use training and development processes.
7	I use my interpersonal skills to influence people at work.
Total: 31	
Knowing whom	
Item	Mentoring relationships
1	A mentor is generally a higher-ranking, influential individual in your work environment who has advanced experience and knowledge and is committed to providing upward mobility and support in your career. Your mentor may or may not be in your organization, and he/she may or may not be your immediate supervisor. I have a formally appointed mentor.
2	I have an informal self-sought mentor.
3	I take the initiative to find mentors.
4	I seek to become acquainted with higher-level managers.
5	I seek counselling and advice from higher-level managers.
6	I seek career guidance from my supervisor.
7	I seek career guidance from other experienced people within the organisation.
8	I seek career guidance from experienced people outside the organisation.
Item	Networking
1	I network with co-workers or other people to get information about how to do my work or about what is expected of me.
2	I network with co-workers or other people to provide myself with help or advice that will assist my career progression.
3	I keep in touch with people who are at higher levels than I am.
4	I network with people in other departments.

5	I keep in contact with people in my work who hold important positions.
6	I network with people who are in important positions in other organisations or the community.
7	I keep in contact with people outside the organisation on whom I can rely for information on job opportunities.
8	I talk to senior management when I get the opportunity to.
9	I introduce myself to people who can influence my career.
10	I build contacts with people in areas where I would like to work.
11	I establish professional contacts outside the organisation.
Item	Feedback seeking
1	I seek feedback on my training and development needs.
2	I seek feedback on opportunities I have identified for future career development.
3	I ask for feedback on the service I deliver to customers (which are people I serve either internally or externally by performing my job).
4	I seek feedback on my career progress to date.
5	I ask for feedback on my job performance from my immediate supervisor.
6	I ask for feedback on my job performance from individuals other than my supervisor.
Item	Self-presentation
1	I make others aware of the assignments I want.
2	I make others aware of my accomplishments.
3	I make others aware of my aspirations and career objectives.
4	I make my work become visible to other people.
Total: 29	
Total overall: 87	

Appendix B4

Career competency indicator – After factor analysis and scale refinement

Item	1. Feedback seeking and self-presentation
3.4.1	I make others aware of the assignments I want.
3.4.3	I make others aware of my aspirations and career objectives.
3.4.4	I make my work become visible to other people.
3.3.1	I seek feedback on my training and development needs.
3.3.2	I seek feedback on opportunities I have identified for future career development.
3.3.4	I seek feedback on my career progress to date.
3.3.5	I ask for feedback on my job performance from my immediate supervisor.
3.3.6	I ask for feedback on my job performance from individuals other than my supervisor.
Item	2. Job-related performance effectiveness
2.1.1	I perform the activities that are expected as part of the job.
2.1.4	I meet set deadlines.
2.1.5	I fulfil the responsibilities specified in my job description.
2.1.6	I perform all assigned duties.
2.1.7	I meet the quality standards required of my job.
Item	3. Goal setting and career planning
1.1.2	I have a clear idea of what my career goals are.
1.1.3	I change or revise my career goals based on new information I receive regarding myself and my situation.
1.1.4	I know what I need to do to reach my career goals.
1.1.5	I have a strategy for achieving my career goals.
1.1.6	I have a plan for my career.
Item	4. Self-knowledge
1.2.1	I know my own strengths.
1.2.2	I am aware of my weaknesses.
1.2.7	I know what job features are personally important to me.
1.2.8	I know what work tasks or projects interest me.
1.2.9	I recognise what I can and what I can't do well.
Item	5. Career guidance and networking
3.1.4	I seek to become acquainted with higher-level managers.
3.1.5	I seek counselling and advice from higher-level managers.
3.1.6	I seek career guidance from my supervisor.
3.1.8	I seek career guidance from experienced people outside the organisation.
3.2.2	I network with co-workers or other people to provide myself with help or advice that will assist my career progression.
3.2.5	I keep in contact with people in my work who hold important positions.
3.2.6	I network with people who are in important positions in other organisations or the community.
3.2.9	I introduce myself to people who can influence my career.
Item	6. Knowledge of (office) politics
2.4.3	I can identify the people who are most important to getting the work done.
2.4.4	I have a good understanding of the motives behind the actions of other people at work.
2.4.5	I have a good understanding of the politics in my work.
2.4.6	I know who the most influential people are in my work.
2.4.8	I use my interpersonal skills to influence people at work.

Item	7. Career related skills
2.2.1	I develop skills which may be needed in future positions.
2.2.2	I develop knowledge and skills that make me distinctive.
2.2.3	I develop expertise in areas that are critical to my work unit's operation.
2.2.4	I gain experience in a variety of work assignments to increase my knowledge and skills.
2.2.5	I take job-related courses.
2.2.7	I seek out training and development opportunities.
2.3.1	I keep informed on affairs, structures and processes in my profession.
	Item total: 43

Appendix B5

Results Descriptive Statistics and Turkey HSD
Normative study - Organisational differences regarding scores on career competencies

Means, Standard Deviation - Scores Organisational Groups on Career Competencies

	org	Mean	Std. Deviation	N
why1	private sector organisation	2.7577	.98087	52
	university	2.2419	.77259	62
	police	2.7174	.85922	385
	other public sector	2.1152	.86173	33
	other	2.3333	.24221	6
	Total	2.6253	.87954	538
why2	private sector organisation	1.8500	.40945	52
	university	1.7097	.46473	62
	police	1.8894	.42637	385
	other public sector	1.7091	.43038	33
	other	1.7333	.20656	6
	Total	1.8520	.43201	538
how2	private sector organisation	2.4753	.68990	52
	university	2.1544	.63272	62
	police	2.4783	.69019	385
	other public sector	1.9740	.56858	33
	other	1.9762	.27726	6
	Total	2.4041	.69018	538
how4	private sector organisation	2.0423	.59717	52
	university	1.9516	.63317	62
	police	2.1553	.54475	385
	other public sector	1.8606	.52556	33
	other	2.0333	.23381	6
	Total	2.1015	.56321	538
whom12	private sector organisation	3.1346	.82130	52
	university	2.8931	.88789	62
	police	3.5354	.85053	385
	other public sector	2.6477	.68212	33
	other	2.7500	.84779	6
	Total	3.3594	.89039	538
whom34	private sector organisation	2.8654	.86632	52
	university	2.8145	.82939	62
	police	3.1377	.88634	385
	other public sector	2.4545	.81838	33
	other	2.6042	.85300	6
	Total	3.0263	.89249	538

Post-hoc Tukey HDS – Organisational Differences on Career Competencies

Dependent Variable	(I) org	(J) org	Mean Difference (I-J)	Std. Error	Sig.
why1	private sector organisation	university	.5158(*)	.16147	.013
		police	.0403	.12687	.998
		other public sector	.6425(*)	.19112	.007
		other	.4244	.37024	.782
	university	private sector organisation	-.5158(*)	.16147	.013
		police	-.4755(*)	.11751	.001
		other public sector	.1268	.18504	.960
		other	-.0914	.36714	.999
	police	private sector organisation	-.0403	.12687	.998
		university	.4755(*)	.11751	.001
		other public sector	.6023(*)	.15576	.001
		other	.3841	.35329	.813
	other public sector	private sector organisation	-.6425(*)	.19112	.007
		university	-.1268	.18504	.960
		police	-.6023(*)	.15576	.001
		other	-.2182	.38111	.979
	other	private sector organisation	-.4244	.37024	.782
		university	.0914	.36714	.999
		police	-.3841	.35329	.813
		other public sector	.2182	.38111	.979
why2	private sector organisation	university	.1403	.08050	.408
		police	-.0394	.06325	.972
		other public sector	.1409	.09527	.577
		other	.1167	.18457	.970
	university	private sector organisation	-.1403	.08050	.408
		police	-.1797(*)	.05858	.019
		other public sector	.0006	.09224	1.000
		other	-.0237	.18302	1.000
	police	private sector organisation	.0394	.06325	.972
		university	.1797(*)	.05858	.019
		other public sector	.1803	.07765	.140
		other	.1560	.17612	.902
	other public sector	private sector organisation	-.1409	.09527	.577
		university	-.0006	.09224	1.000
		police	-.1803	.07765	.140
		other	-.0242	.18998	1.000

Dependent Variable	(I) org	(J) org	Mean Difference (I-J)	Std. Error	Sig.
	other	private sector organisation	-.1167	.18457	.970
		university	.0237	.18302	1.000
		police	-.1560	.17612	.902
		other public sector	.0242	.18998	1.000
how2	private sector organisation	university	.3209	.12680	.085
		police	-.0030	.09962	1.000
		other public sector	.5012(*)	.15008	.008
		other	.4991	.29073	.425
	university	private sector organisation	-.3209	.12680	.085
		police	-.3239(*)	.09228	.004
		other public sector	.1804	.14530	.727
		other	.1782	.28830	.972
	police	private sector organisation	.0030	.09962	1.000
		university	.3239(*)	.09228	.004
		other public sector	.5043(*)	.12231	.000
		other	.5021	.27742	.369
	other public sector	private sector organisation	-.5012(*)	.15008	.008
		university	-.1804	.14530	.727
		police	-.5043(*)	.12231	.000
		other	-.0022	.29927	1.000
	other	private sector organisation	-.4991	.29073	.425
		university	-.1782	.28830	.972
		police	-.5021	.27742	.369
		other public sector	.0022	.29927	1.000
how4	private sector organisation	university	.0907	.10485	.910
		police	-.1130	.08238	.646
		other public sector	.1817	.12410	.586
		other	.0090	.24040	1.000
	university	private sector organisation	-.0907	.10485	.910
		police	-.2037	.07630	.060
		other public sector	.0910	.12015	.943
		other	-.0817	.23839	.997
	police	private sector organisation	.1130	.08238	.646
		university	.2037	.07630	.060
		other public sector	.2947(*)	.10114	.030
		other	.1220	.22940	.984
	other public sector	private sector organisation	-.1817	.12410	.586
		university	-.0910	.12015	.943
		police	-.2947(*)	.10114	.030
		other	-.1727	.24746	.957
	other	private sector organisation	-.0090	.24040	1.000
		university	.0817	.23839	.997
		police	-.1220	.22940	.984
		other public sector	.1727	.24746	.957

Dependent Variable	(I) org	(J) org	Mean Difference (I-J)	Std. Error	Sig.
whom12	private sector organisation	university	.2415	.15852	.548
		police	-.4008(*)	.12454	.012
		other public sector	.4869	.18761	.073
		other	.3846	.36346	.828
	university	private sector organisation	-.2415	.15852	.548
		police	-.6422(*)	.11536	.000
		other public sector	.2454	.18165	.659
		other	.1431	.36041	.995
	police	private sector organisation	.4008(*)	.12454	.012
		university	.6422(*)	.11536	.000
		other public sector	.8877(*)	.15290	.000
		other	.7854	.34682	.158
	other public sector	private sector organisation	-.4869	.18761	.073
		university	-.2454	.18165	.659
		police	-.8877(*)	.15290	.000
		other	-.1023	.37412	.999
	other	private sector organisation	-.3846	.36346	.828
		university	-.1431	.36041	.995
		police	-.7854	.34682	.158
		other public sector	.1023	.37412	.999
whom34	private sector organisation	university	.0509	.16432	.998
		police	-.2723	.12910	.218
		other public sector	.4108	.19448	.216
		other	.2612	.37676	.958
	university	private sector organisation	-.0509	.16432	.998
		police	-.3231	.11958	.055
		other public sector	.3600	.18829	.312
		other	.2103	.37360	.980
	police	private sector organisation	.2723	.12910	.218
		university	.3231	.11958	.055
		other public sector	.6831(*)	.15850	.000
		other	.5335	.35951	.573
	other public sector	private sector organisation	-.4108	.19448	.216
		university	-.3600	.18829	.312
		police	-.6831(*)	.15850	.000
		other	-.1496	.38781	.995
	other	private sector organisation	-.2612	.37676	.958
		university	-.2103	.37360	.980
		police	-.5335	.35951	.573
		other public sector	.1496	.38781	.995

Based on observed means.

* The mean difference is significant at the .05 level.

Appendix C1

Correlation Analysis n=406

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 Age	1	.525**	.898**	-.133**	-0.097	-.145**	-.141**	-.104*	0.022	-.145**	-.126*	-0.05	-.132**	-.102*	-.085	.147**	.199**
2 Tenure	.525**	1	.592**	-.047	-.071	-.065	-.131**	-0.02	.083	-.096	-.095	.004	-.103*	0.014	-.041	.190**	.337**
3 Work experience	.898**	.592**	1	-.145**	-.116*	-.141**	-.179**	-.130**	.013	-.184**	-.170**	-.075	-.156**	-.127*	-.113*	.140**	.255**
4 JPER	-.133**	-.047	-.145**	1	.364**	.556**	.401**	.422**	.213**	.114**	.037	.153**	.366**	.216**	.266**	.099*	.031
5 GSCP	-.097	-.071	-.116*	.364**	1	.540**	.526**	.624**	.623**	.334**	.092	.397**	.301**	.319**	.179**	.113*	.292**
6 SELF	-.145**	-.065	-.141**	.556**	.540**	1	.495**	.528**	.328**	.173**	.022	.202**	.386**	.238**	.261**	.058	.151*
7 POL	-.141**	-.131**	-.179**	.401**	.526**	.495**	1	.538**	.514**	.253**	.177**	.315**	.396**	.364**	.249**	.122*	.241**
8 CRS	-.104*	-.02	-.130**	.422**	.624**	.528**	.538**	1	.671**	.247**	.076	.296**	.361**	.391**	.263**	.065	.164**
9 GNET & FSSP comb	.022	.083	.013	.213**	.623**	.328**	.514**	.671**	1	.171**	.044	.275**	.260**	.323**	.097	.093	.210**
10 CSS	-.145**	-.096	-.184**	.114*	.334**	.173**	.253**	.247**	.171**	1	.451**	.778**	.249**	.622**	.415**	.158**	.234**
11 FS	-.126*	-.095	-.170**	.037	.092	.022	.177**	.076	.044	.451**	1	.395**	.229**	.456**	.217**	.096	.175**
12 HS	-0.05	.004	-.075	.153**	.397**	.202**	.315**	.296**	.275**	.778**	.395**	1	.342**	.639**	.291**	.209**	.130*
13 IS	-.132**	-.103*	-.156**	.366**	.301**	.386**	.396**	.361**	.260**	.249**	.229**	.342**	1	.444**	.233**	.105*	.101
14 JS	-.102*	.014	-.127*	.216**	.319**	.238**	.364**	.391**	.323**	.622**	.456**	.639**	.444**	1	.295**	.115*	.107
15 LS	-.085	-.041	-.113*	.266**	.179**	.261**	.249**	.263**	.097	.415**	.217**	.291**	.233**	.295**	1	.115*	.127*
16 No of promotions	.147**	.190**	.140**	.099*	.113*	.058	.122*	.065	.093	.158**	.096	.209**	.105*	.115*	.115*	1	.269**
17 Income	.199**	.337**	.255**	.031	.292**	.151*	.241**	.164**	.210**	.234**	.175**	.130*	.101	.107	.127*	.269**	1

*p<.05, ** p<.01

Appendix C2

Correlation Analysis Restricted Sample n=293

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 Gender	1	-.015	.259**	.035	-.027	.103	.065	.051	-.017	-.021	.082	-.11	-.024	.122*	.046	.016	-.051
2 Age	.015	1	.459**	.902**	.140*	.111	.183**	.132*	.117*	-.061	0	.140*	.03	.197**	.02	-.03	.179**
3 Tenure	.259**	.459**	1	.524**	-.009	.046	.014	.069	-.006	-.11	-.035	-.132*	-.04	.013	-.084	-.124*	.089
4 Work experience	.035	.902**	.524**	1	.149*	.114	.165**	.157**	.129*	-.051	-.003	.085	.05	.212**	-.035	-.067	.196**
5 JPER	-.027	.140*	-.009	.149*	1	.336**	.514**	.363**	.442**	.222**	.174**	.223**	.515**	.210**	.299**	.176**	.084
6 GSCP	.103	.111	.046	.114	.336**	1	.527**	.513**	.591**	.630**	.287**	.099	.246**	.168**	.207**	.414**	.316**
7 SELF	.065	.183**	.014	.165**	.514**	.527**	1	.518**	.554**	.351**	.289**	.173**	.321**	.203**	.273**	.238**	.126*
8 POL	.051	.132*	.069	.157**	.363**	.513**	.518**	1	.543**	.538**	.372**	.112	.277**	.199**	.221**	.327**	.241**
9 CRS	-.017	.117*	-.006	.129*	.442**	.591**	.554**	.543**	1	.666**	.314**	.117*	.285**	.154**	.264**	.418**	.240**
10 GNET & FSSP comb	-.021	-.061	-.11	-.051	.222**	.630**	.351**	.538**	.666**	1	.353**	.11	.159**	.014	.185**	.511**	.234**
11 Extraversion	.082	0	-.035	-.003	.174**	.287**	.289**	.372**	.314**	.353**	1	.193**	.301**	.240**	.176**	.133*	.107
12 Agreeableness	-.11	.140*	-.132*	.085	.223**	.099	.173**	.112	.117*	.11	.193**	1	.299**	.383**	.266**	.113	.054
13 Conscientiousness	-.024	.03	-.04	.05	.515**	.246**	.321**	.277**	.285**	.159**	.301**	.299**	1	.335**	.276**	.083	-.023
14 Emotional stability	.122*	.197**	.013	.212**	.210**	.168**	.203**	.199**	.154**	.014	.240**	.383**	.335**	1	.144*	.016	.137*
15 Openness	0.046	0.02	-.084	-.035	.299**	.207**	.273**	.221**	.264**	.185**	.176**	.266**	.276**	.144*	1	.164**	-.037
16 CS	.016	-.03	-.124*	-.067	.176**	.414**	.238**	.327**	.418**	.511**	.133*	.113	.083	.016	.164**	1	.123*
17 CSS	-.051	.179**	.089	.196**	.084	.316**	.126*	.241**	.240**	.234**	.107	.054	-.023	.137*	-.037	.123*	1

*p<.05, ** p<.01

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
18 JS	-.255**	.134*	-.045	.127*	.176**	.268**	.205**	.354**	.350**	.346**	.079	.085	.019	.035	-.006	.279**	.601**
19 FS	-.082	.116*	.078	.158**	.003	.094	.004	.163**	.07	.096	-.109	-.035	-.134*	.003	-.077	.109	.491**
20 HS	-.165**	.073	-.056	.065	.113	.342**	.127*	.254**	.255**	.299**	.055	.056	0.026	.054	.008	.211**	.752**
21 IS	-.026	.127*	.059	.131*	.319**	.267**	.352**	.370**	.313**	.229**	.181**	.190**	.223**	.179**	.172**	.222**	.262**
22 LS	-.042	.098	-.02	.122*	.219**	.193**	.232**	.202**	.269**	.148*	.238**	.173**	.157**	.280**	.076	-.013	.436**
23 No of promotions	.074	.159**	.195**	.126*	.044	.088	-.003	.045	.022	.048	.001	-.044	-.002	-.068	.037	.029	.133*
24 Income	.248**	.192**	.353**	.235**	-.001	.305**	.180*	.265**	.168*	.225**	.268**	-.026	.045	.132	.037	.185**	.263**

*p<.05, ** p<.01

	18	19	20	21	22	23	24
1 Gender	-.255**	-.082	-.165**	-.026	-.042	.074	.248**
2 Age	.134*	.116*	.073	.127*	.098	.159**	.192**
3 Tenure	-.045	.078	-.056	.059	-.02	.195**	.353**
4 Work experience	.127*	.158**	.065	.131*	.122*	.126*	.235**
5 How1	.176**	.003	.113	.319**	.219**	.044	-.001
6 Why1	.268**	.094	.342**	.267**	.193**	.088	.305**
7 Why 3	.205**	.004	.127*	.352**	.232**	-.003	.180*
8 How4	.354**	.163**	.254**	.370**	.202**	.045	.265**
9 How2	.350**	.07	.255**	.313**	.269**	.022	.168*
10 Whom combined	.346**	.096	.299**	.229**	.148*	.048	.225**
11 Extraversion	.079	-.109	.055	.181**	.238**	.001	.268**
12 Agreeableness	.085	-.035	.056	.190**	.173**	-.044	-.026
13 Conscientiousness	.019	-.134*	.026	.223**	.157**	-.002	.045
14 Emotional stability	.035	.003	.054	.179**	.280**	-.068	.132
15 Openness	-.006	-.077	.008	.172**	.076	.037	.037
16 CS	.279**	.109	.211**	.222**	-.013	.029	.185**
17 CSS	.601**	.491**	.752**	.262**	.436**	.133*	.263**
18 JS	1	.524**	.644**	.440**	.264**	.053	.11
19 FS	.524**	1	.446**	.248**	.199**	.107	.192**
20 HS	.644**	.446**	1	.341**	.287**	.197**	.143*
21 IS	.440**	.248**	.341**	1	.183**	.018	.097
22 LS	.264**	.199**	.287**	.183**	1	.105	.122
23 No of promotions	-.053	-.107	-.197**	-.018	-.105	1	.232**
24 Income	-.11	-.192**	-.143*	-.097	-.122	.232**	1

*p<.05, ** p<.01

Appendix D1

Career Competencies Profile

Name: Mr Example

The information below contains details about the competencies you use to manage your career based on the Career Competencies Model. Career competencies are behaviours, skills and knowledge that are important for successful career development.

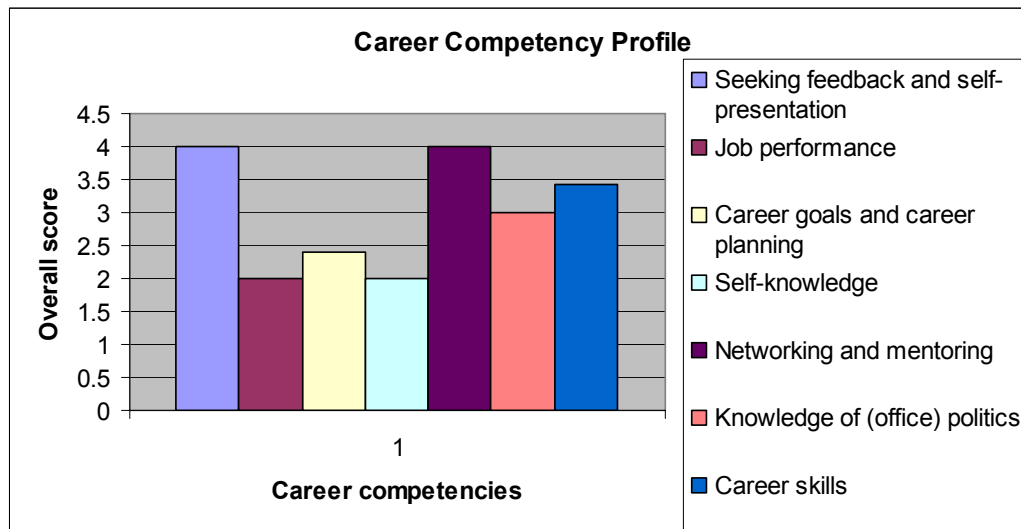
The information will help you to:

Understand the dimensions of career competence

Increase your self-awareness

Focus on how you apply career competencies

The scales below show your average scores on the career competencies. Scores range from 1 (high) to 5 (low). The lower the score, i.e. the higher the bar, the more scope there is for development in the respective area.



	Seeking feedback & self-presentation	Job performance	Career goals & career planning	Self-knowledge	Career guidance & networking	Knowledge of (office) politics	Career skills
Raw Scores	4	2	2.4	2	4	3	3.43
Sten Scores	3	5	6	5	4	3	3

Seeking feedback and self-presentation

This competency describes your active engagement in a two-way process with other people with the aim to support your personal career development. On the one hand, it looks at the extent to which you present yourself and your work to others. This involves making others aware of the work you have done, drawing their attention to the work you would like to do and making them aware of your aspirations. On the other hand, this competency describes the extent to which you invite feedback from others. It specifically looks at the feedback you seek on issues such as your career progress, job performance, training and development needs. However, it also considers the input you invite from others on opportunities you have identified for future career development. The person approached for feedback can either be your immediate supervisor or other individuals such as colleagues or friends.

Job performance

This competency looks at your performance in your job. It describes the extent to which you fulfil the responsibilities specified in your job description. This also involves your fulfilment of the duties required by your role and your performance in the activities as listed in the competency framework. Furthermore, job performance also refers to your ability to meet deadlines and to deliver high quality work.

Career goals and career planning

This competency looks at how clear you are about your career goals and the strategy to achieve them. It reflects the extent to which you revise your career goals based on new information you receive about yourself or your situation. It also looks at the extent to which you are aware of what you need to do to achieve your career goals and the plan you develop to do so.

Self-knowledge

This competency describes your level of self-awareness. It refers to the extent to which you know your strengths and weaknesses as well as the things you can and cannot do well. Self-knowledge also looks at your awareness of personal interests and values. It describes how well you know what features of a job are important to you and what tasks and projects are of particular interest to you.

Career guidance and networking

This competency relates to the relationship side of career development. It describes the extent to which you are inclusive and establish relationships with others who are

able to support you with your career development. It looks at behaviours such as introducing yourself to individuals who can influence your career and keeping in contact with people who hold important positions. This networking aspect is hereby not restricted to individuals and groups inside your organisation but also includes external sources and contacts. Furthermore, this competency describes how far you are seeking guidance from your supervisor or others on career-related issues.

Knowledge of (office) politics

This competency looks at your awareness and knowledge of the influencing structure in your workplace. It gives an account of the extent to which you can identify the people who are most influential in your workplace as well as those who are important for getting the work done. It also refers to your understanding of the motivation behind other peoples' actions and your skill to influence people at work.

Career skills

This competency looks at your investments into the development of skills and expertise. It describes how far you are engaged in the expansion of a work-related knowledge base that may be needed in future positions and that makes you distinctive. It also refers to the extent to which you engage in development activities, seek training opportunities and take job-related courses. Furthermore, this competency also refers to how informed you keep on developments in your profession.

Appendix D2

Letter inviting individuals working in Training & Development and Personnel in the participating force to contribute to the development of list

Dear

Training and development at WMC are supporting research conducted by the University of Worcester looking at career development for police officers. For the next stage of the project we would very much appreciate input from individuals who are very familiar with the organisation, its structures, training and development processes etc. S.B. suggested that you would be able to provide valuable information and was so kind to provide me with your contact details.

In the course of the PhD project I developed a Career Competencies Indicator based on recent research in career theory and a qualitative study including input from over 600 individuals. The indicator measures the extent to which individuals display behaviours, skills and knowledge necessary for successful individual career development.

The Career Competencies Indicator is going to form the basis of a career development intervention that is going to be piloted within WMC. In order to develop the intervention, I am currently seeking to create a list of all procedures, courses etc. available to police officers within or outside WMC that could help individuals develop their career competencies.

I would very much appreciate it if you could look through the attached document that describes the different areas of career competencies as presented in the Career Competency Indicator and answer a few questions. For every competency I would like you:

- To read through each competency description and the underlying skills, abilities etc. and
- To note down any other skills, abilities etc. that you think are essential for successful demonstration of the respective competency
- To note down what processes, courses, exercises etc. are currently available within WMC/through WMC that would further the development of the respective competency, i.e. the underlying skills, abilities etc.
- To note down any other processes, courses, exercises etc. you can think of that would further the development of the respective competency, i.e. underlying skills, abilities etc.

As mentioned before, your contribution is important and will be greatly appreciated. If you have any questions regarding this research, please contact me.

In anticipation of your support,
Yours sincerely,
Sandra Haase

Appendix D3

Career Competency Indicator - List of Procedures

Item	1. Feedback seeking and self-presentation	8 items
3.4.1	I make others aware of the assignments I want.	<p>This competency describes your active engagement in a two-way process with other people with the aim to support your personal career development. On the one hand, it looks at the extent to which you present yourself and your work to others. This involves making others aware of the work you have done, drawing their attention to the work you would like to do and making them aware of your aspirations. On the other hand, this competency describes the extent to which you invite feedback from others. It specifically looks at the feedback you seek on issues such as your career progress, job performance, training and development needs. However, it also considers the input you invite from others on opportunities you have identified for future career development. The person approached for feedback can either be your immediate supervisor or other individuals such as colleagues or friends.</p> <p>Skills, abilities and knowledge expected to underlie this competency:</p> <ul style="list-style-type: none"> - Communication skills - Ability to build and sustain relationships - Knowledge of suitable individuals to ask for feedback - Feedback seeking skills, e.g. knowledge of feedback rules - Assertiveness - Confidence - Knowledge of how to promote own work and make it visible to others, i.e. communication structure of organisation
3.4.3	I make others aware of my aspirations and career objectives.	
3.4.4	I make my work become visible to other people.	
3.3.1	I seek feedback on my training and development needs.	
3.3.2	I seek feedback on opportunities I have identified for future career development.	
3.3.4	I seek feedback on my career progress to date.	
3.3.5	I ask for feedback on my job performance from my immediate supervisor.	
3.3.6	I ask for feedback on my job performance from individuals other than my supervisor.	
Available within WMC:		
<ul style="list-style-type: none"> • PDR process • Departmental/force presentations e.g. of projects worked on • Presentation skill training see course prospectus, management development • Personal Development Courses (Sergeant, Inspector, police staff equivalent) – session about feedback giving • PDR - Feedback from line manager and others • 360 degree feedback used in certain situations • Mentoring exists within the HPDS Scheme, and we have run Mentoring courses in the past - We have a list of Force Mentors that are accessible to people seeking promotion (Management Development Trainer - ext 2997 will be able to give you the latest), however, more structured mentoring programme would be helpful • Tutoring roles and the respective training involves issues on assessment and feedback giving HPDS • Initial Police Learning Development Programme (IPLDP) asks officers to give presentations, provides feedback • Trainers courses (specialist pathway) 		

<p>From literature etc.:</p> <ul style="list-style-type: none"> • Active behaviour that refers to initiatives and interventions that search for information and advice from others on own behaviour through the building of relationships with one's boss or colleagues (Claes & Ruiz-Quintanilla, 1998). Feedback seeking aims to gain a better understanding of the environment and knowledge about performance, strengths and weaknesses i.e. information that individuals can use to their career advantage (e.g. Kossek et al., 1998). • Feedback rules e.g. "I" messages, concrete behaviour and not assumptions, positive feedback first, then negative • Know your supervisor and his/her preferences (VandeWalle, 2003) • Assertiveness training
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Item	2. Job-related performance effectiveness	5 items
2.1.1	I perform the activities that are expected as part of the job.	<p>This competency looks at your performance in your job. It describes the extent to which you fulfil the responsibilities specified in your job description. This also involves your fulfilment of the duties required by your role and your performance in the activities as listed in the competency framework. Furthermore, job performance also refers to your ability to meet deadlines and to deliver high quality work.</p> <p>Skills, abilities and knowledge expected to underlie this competency:</p> <ul style="list-style-type: none"> - Knowledge of job profile and competencies required by the role - Awareness of responsibilities/personal responsibility - Ability to delegate - Knowledge of job, processes and procedures - Skills and ability to perform role - Time management skills - Knowledge of quality standards required - Knowledge of National Occupational Standards for role
2.1.4	I meet set deadlines.	
2.1.5	I fulfil the responsibilities specified in my job description.	
2.1.6	I perform all assigned duties.	
2.1.7	I meet the quality standards required of my job.	

<p>Available within WMC:</p> <ul style="list-style-type: none"> • Training on-the-job for some specialised roles • Secondments are encouraged (see secondment policy) • PDR 3 process (performance monitoring and evaluation) • <i>Course prospectus; E-learning packages: appraisal for performance</i> • Management development courses (development workbook: Performance and development review - SMART goal setting plus importance of goal setting) • IDF role profiles available on the Intranet • Information on performance targets e.g. each division, briefings etc. • Competency Based Structured Interviews (course prospectus, management development) • Tutoring (Student Development Assessors, Tutor Detective constables) • Mentoring/Coaching by experienced people • Assessment against National Occupational Standards • IPLDP (specifying requirements of role and objectives) • Sergeant and Inspectors Development programme workbook – section on time management (e.g. urgency vs. importance)
<p>From literature etc.:</p> <ul style="list-style-type: none"> • Time management courses

Item	3. Goal setting and career planning	5 items
1.1.2	I have a clear idea of what my career goals are.	<p>This competency looks at how clear you are about your career goals and the strategy to achieve them. It reflects the extent to which you revise your career goals based on new information you receive about yourself or your situation. It also looks at the extent to which you are aware of what you need to do to achieve your career goals and the plan you develop to do so.</p> <p>Skills, abilities and knowledge expected to underlie this competency:</p> <ul style="list-style-type: none"> - Knowledge about SMART goal setting - Awareness of personal motivators, value and interests - Ability to develop strategy to achieve career goals - Knowledge of career development structure within the organisation - Knowledge of processes and support mechanisms available in organisation - Knowledge of role profiles and NOS of the ranks or roles being aspired to (so as to identify gaps in current skill, knowledge and ability levels)
1.1.3	I change or revise my career goals based on new information I receive regarding myself and my situation.	
1.1.4	I know what I need to do to reach my career goals.	
1.1.5	I have a strategy for achieving my career goals.	
1.1.6	I have a plan for my career.	
Available within WMC:		
<ul style="list-style-type: none"> • PDR • Promotion Development Plans • Management development courses (development workbook: Performance and development review - SMART goal setting plus importance of goal setting) • Opportunity for senior managers to take Senior Leadership Development Programme modules • Mentoring scheme • Support if HPDS • IPLDP and other courses feature SMART goal setting 		
From literature etc.:		
<ul style="list-style-type: none"> • SMART goal setting rules (coaching) 		

Item	4. Self-knowledge	5 items
1.2.1	I know my own strengths.	<p>This competency describes your level of self-awareness. It refers to the extent to which you know your strengths and weaknesses as well as the things you can and cannot do well. Self-knowledge also looks at your awareness of personal interests and values. It describes how well you know what features of a job are important to you and what tasks and projects are of particular interest to you.</p> <p>Skills, abilities and knowledge expected to underlie this competency:</p> <ul style="list-style-type: none"> - Knowledge of own strengths and weaknesses - Knowledge and ability to assess own strengths and weaknesses - Openness for feedback - Knowledge of job features - Self-reflection, i.e. ability to assess own work performance - Knowledge of personal motivators, values and interests
1.2.2	I am aware of my weaknesses.	
1.2.7	I know what job features are personally important to me.	
1.2.8	I know what work tasks or projects interest me.	
1.2.9	I recognise what I can and what I can't do well.	
Available within WMC:		
<ul style="list-style-type: none"> • Newly promoted Sergeants and Equivalent Police Staff Development Programme – Module 1: Personal Development (development programme workbook: learning style, behavioural style etc.) • Chief Inspectors and Inspector Level – feedback from DAC • OSPRE Part II awareness (police assessment centre for promotion to Sergeant and Inspector) • Feedback from interviews and assessment centres undergone • 360 degree feedback on ECI for senior managers • PDR • Require individuals to complete a comprehensive self-assessment prior to embarking on career development • Submission of promotion development plan • Self-reflection courses to do with assessment training • Tutors courses and specialist courses - learn more about yourself • Student development assessor training • IPLDP (student officer learning and development document; continuous assessment to feed back self-knowledge) • Development Course Workbook; decision making model 		
From literature etc.:		
<ul style="list-style-type: none"> • Individuals who used rational career decision-making made an effective choice because the use of this strategy enhanced their self- and environment awareness. So training people in making rational career decisions can actually help them to increase self-awareness. • Career self-help resources e.g. books (e.g. "What colour is your parachute") • Coaching • Personality questionnaires • Performance surveys 		

Item	5. Networking and mentoring	8 items
3.1.4	I seek to become acquainted with higher-level managers.	<p>This competency relates to the relationship side of career development. It describes the extent to which you are inclusive and establish relationships with others who are able to support you with your career development. It looks at behaviours such as introducing yourself to individuals who can influence your career and keeping in contact with people who hold important positions. This networking aspect is hereby not restricted to individuals and groups inside your organisation but also includes external sources and contacts. Furthermore, this competency describes how far you are seeking guidance from your supervisor or others on career-related issues.</p> <p>Skills, abilities and knowledge expected to underlie this competency:</p> <ul style="list-style-type: none"> - Communication skills - Interpersonal skills and ability to successfully interact with others, including “other-awareness” - Knowledge of how to build rapport - Knowledge of individuals who might be able to influence career and who could provide career guidance - Awareness of organisational structures and processes - Self-confidence - Knowledge of how best keep in touch with individuals - Knowledge of organisational etiquette - Strategic thinking and planning
3.1.5	I seek counselling and advice from higher-level managers.	
3.1.6	I seek career guidance from my supervisor.	
3.1.8	I seek career guidance from experienced people outside the organisation.	
3.2.2	I network with co-workers or other people to provide myself with help or advice that will assist my career progression.	
3.2.5	I keep in contact with people in my work who hold important positions.	
3.2.6	I network with people who are in important positions in other organisations or the community.	
3.2.9	I introduce myself to people who can influence my career.	
Available within WMC:		
<ul style="list-style-type: none"> • Behavioural style inventory (controlling, supporting, promoting, analysing) • Transactional analysis (p. 18 workbook) • Partnership working opportunities (with other organisations) • Mentoring for higher level staff • Supervisor support • Conference opportunities e.g. CID (if relevant for the role, individual training panel decides on this, more likely for higher level roles) • Association with H&W Women’s Network • Centrex courses - e.g. Leadership Development for Senior Women Officers, Positive Action Programme (for under-represented groups) • Meetings and team working • Career planning meetings with line managers, resulting in effective action planning via PDR • Course prospectus; E learning packages; soft-skills: business calls, business communication, coaching skills 		
From literature etc.:		
<ul style="list-style-type: none"> • Communication training • Widespread mentoring programme • Networking courses • Build self-confidence/self-esteem 		

Item	6. Knowledge of (office) politics	5 items
2.4.3	I can identify the people who are most important to getting the work done.	<p>This competency looks at your awareness and knowledge of the influencing structure in your workplace. It gives an account of the extent to which you can identify the people who are most influential in your workplace as well as those who are important for getting the work done. It also refers to your understanding of the motivation behind other peoples' actions and your skill to influence people at work.</p> <p>Skills, abilities and knowledge expected to underlie this competency:</p> <ul style="list-style-type: none"> - Knowledge of organisational structure and hierarchies - Knowledge of organisational culture - Knowledge of role individuals play in an organisation - Interpersonal skills, i.e. awareness of other people and their values, interests etc. - Knowledge of and skill to perform in accordance with organisational etiquette - Knowledge of communication channels and ability to use them
2.4.4	I have a good understanding of the motives behind the actions of other people at work.	
2.4.5	I have a good understanding of the politics in my work.	
2.4.6	I know who the most influential people are in my work.	
2.4.8	I use my interpersonal skills to influence people at work.	
Available within WMC:		
<ul style="list-style-type: none"> • Intranet information on policies and procedures (who is going to give you answers to what you are looking for) • Internal networking (“who do I see about this...?”) • ICF behaviours – guide expected behaviour • 4000+ force vision and four key principles • Induction pack with organisational mission, vision and objectives • Mandatory courses such as diversity • Organisational context module (Sergeant and Inspectors development programmes) • Development Course Workbook; Ethics: personal values, organisational values, service delivery values 		
From literature etc.:		
<ul style="list-style-type: none"> • Utility of implementing training programs that serve to enhance employees political skills whereas political skill is most often conceptualized as a dispositional trait, theorists have argued that on the margin, it can be improved or developed (Perrewé & Nelson, 2004) e.g increased investment in mentoring, coaching and socialization programs that formally address the political nature of the workplace • Civic virtue is constructive involvement in the political process of the organisation and a willingness to participate actively in its governance by attending meetings, engaging in policy debates etc. • Influencing courses 		

Item	7. Career related skills	7 items
2.2.1	I develop skills which may be needed in future positions.	This competency looks at your investments into the development of skills and expertise. It describes how far you are engaged in the expansion of a work-related knowledge base that may be needed in future positions and that makes you distinctive. It also refers to the extent to which you engage in development activities, seek training opportunities and take job-related courses. Furthermore, this competency also refers to how informed you keep on developments in your profession.
2.2.2	I develop knowledge and skills that make me distinctive.	
2.2.3	I develop expertise in areas that are critical to my work unit's operation.	
2.2.4	I gain experience in a variety of work assignments to increase my knowledge and skills.	
2.2.5	I take job-related courses.	
2.2.7	I seek out training and development opportunities.	Skills, abilities and knowledge expected to underlie this competency:
2.3.1	I keep informed on affairs, structures and processes in my profession.	
Available within WMC:		
<ul style="list-style-type: none"> • Secondments are encouraged (see secondment policy) (must be submitted via Divisional Commander/Heads of Department to comment on suitability) • Home Study procedure • PDR process • Intranet – training prospectus, research into external courses • Centrex courses • Continued professional development (some can achieve chartered status e.g. CID) • OSPRE development courses and mock exams • Self-development beliefs check 		
From literature etc.:		
<ul style="list-style-type: none"> • Career identity can be improved if opportunities for enhancement and development alongside with expert role models are provided (Eby et al., 2003). • Self-directed learning through vehicles such as project teams, task forces, electronic communication; coaching 		

Appendix D4

Career Discussion Evaluation

Please consider the career discussion that you have just attended and complete the following questionnaire. Please be completely honest in your assessments and answer the questions as fully as possible. This will help us in planning future sessions.

Name (optional):

Date of career discussion:

Session content

Please circle the appropriate response.

1. Have the objectives of the session been achieved?

Fully **Not at all**

If you have circled 3, 2 or 1, please tell us why you have given this rating.

2. Have your personal objectives for attending the session been achieved?

Fully **Not at all**

If you have circled 3, 2 or 1, please tell us why you have given this rating.

3. Have you learned something from the career discussion?

Very much **Nothing at all**

If you have circled 3, 2 or 1, please tell us why you have given this rating.

4. Was the content of the session useful?

Very useful **Not useful at all**

If you have circled 3, 2 or 1, please tell us why you have given this rating.

5. Was the career discussion of relevance to you?

Very relevant **Not relevant at all**

If you have circled 3, 2 or 1, please tell us why you have given this rating.

6. Did you enjoy the session?

Very much **Not at all**

If you have circled 3, 2 or 1, please tell us why you have given this rating.

7. To what extent would you recommend the career discussion to others?

Fully **Not at all**

If you have circled 3, 2 or 1, please tell us why you have given this rating.

8. What is your overall rating of the session?

Excellent **Poor**

Please make any comments on your rating that you feel will be of help to the designers to improve this session.

Administration

9. Please rate the facilitator of the session on each of the following by circling the appropriate response.

	Very sufficient			Insufficient	
Knowledge of subject	5	4	3	2	1
Organisation of session	5	4	3	2	1
Preparation	5	4	3	2	1
	Very effective			Very ineffective	
Style and delivery	5	4	3	2	1
Responsiveness to individual/ group	5	4	3	2	1
Producing a good discussion climate	5	4	3	2	1

Reflection

10. What experiences did you enjoy and value?



11. What do you hope to **do** differently? (notes for actions)



12. What would you like to **explore** further? (notes for learning)



13. What experiences did you not enjoy nor value?



14. What do you think was missing from the session that you would like to be included?



15. Please use the space below for any other comments on the career discussion that you would like to make.

Appendix D5

Career Discussion Follow up Evaluation

Name:

Date:

1. Has the intervention changed your perception with regard to career development? Did you gain any new insights or perceptions?

Yes

No

If yes, please describe the change.

2. Have you applied what you have learned during the session?

Yes

No

If yes, please describe how you have applied what you have learned during the session.

If no, please give reasons.

3. Have you undertaken any efforts to change behaviour?

Yes

No

If yes, please describe what efforts you have undertaken.

If no, please give reasons.

**4. How much has your practice changed as a result of the career discussion?
(0 = none to 10 = a lot)**

Please describe below how your practice has changed since the workshop.

5. Do you have evidence that your practice has changed for the better, i.e. improved your effectiveness/results of managing your career?

Yes

No

What evidence do you have that your practice has changed for the better?

6. Have you reflected further on any of the issues discussed during the session?

Yes

No

Please describe the issues that you have reflected on further.

7. Please use the space below for any other comments you might have.

Appendix D6

Invitation to individuals who had expressed an interest in the pilot study to come along to the career discussion.

Dear Colleague,

I am writing to you with regard to your participation in the survey on Career Competencies and Career Success in December 2005 and January 2006. West Mercia Constabulary is sponsoring this research conducted by the University of Worcester to examine the area of police officer career development and career satisfaction.

In the survey, you expressed interest in participating in the pilot study based on the outcomes of the survey. The pilot study will take the form of a career discussion.

The career discussion will focus on your individual results in the survey. Using a structured approach, based on coaching principles, the discussion aims to increase self-awareness and to provide practical input through the exploration and discussion of results.

One of the identified career competencies is networking. Therefore, we are looking to bring together small groups of 4 to 6 individuals to take part in the career discussions. However, if you prefer one-on-one sessions, these will also be available. All the information you provide during the discussions will be treated as strictly confidential. Only aggregated data will be published, therefore personal information will remain confidential.

The group sessions will take place at WMC Head Quarters. As potential dates we have scheduled the 27th, 28th and 29th of June, as well as the 11th, 12th, 13th and 18th of July. Group session will take approximately 2 hours. There will be 2 sessions every day, one in the morning and one in the afternoon.

An overview of the research has been brought to the attention of your Divisional Commander, seeking their active support in facilitating attendance in duty time where possible. Please confirm with your manager that they can accommodate your attendance at one of these sessions during duty time.

This is a great opportunity to explore your career competencies and different perspectives on career development. If you are interested in participating in the career discussion or have any questions regarding this study, please contact the researcher, Sandra Haase, on 01905 855240 or via Email (s.haase@worc.ac.uk) stating your preferences for dates and format of the session.

Many thanks,

Head of Training and Development

Appendix E

List of publications

Haase, S. (2004). New realities for career development in the police force. *Proceedings of the Division of Occupational Psychology's 2004 Postgraduate Occupational Psychology Conference*. London.

Haase, S. (2005). Using Competencies in Career Development: Sense or Nonsense? *Proceedings of the Division of Occupational Psychology's 2005 Postgraduate Occupational Psychology Conference*. Nottingham.

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Haase, S. & Francis-Smythe, J. (2007). The Importance of Organisational Support for Successful Individual Career Management. *Proceedings of the XIIIth Congress of Work and Organizational Psychology 2007*, Stockholm, Sweden.

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