Competencies for the Contemporary Career: Development and Preliminary Validation of the Career Competencies Questionnaire

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Abstract

A new and promising area of research has recently emerged in the field of career development: career competencies. The present article provides a framework of career competencies that integrates several perspectives from the literature. The framework distinguishes between reflective, communicative, and behavioral career competencies. Six career competencies are discerned: reflection on motivation, reflection on qualities, networking, self-profiling, work exploration, and career control. Based on this framework, we developed the Career Competencies Questionnaire (CCQ) and preliminarily validated it in two samples of young employees between 16 and 30 years of age. The results provided initial support for the content, factorial, discriminant, and incremental validity of the CCQ. We hope to stimulate further discussion, research, and development of interventions in the area of career development. Implications for theory and practice are also discussed.

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The traditional career has been portrayed as a linear path in which employees develop within a single organization and where growth occurs vertically in the hierarchy of a particular organization (Arthur, 1994; Eby, Butts, & Lockwood, 2003). Career development was primarily considered to be achieved by accumulating job competencies and gaining experience in a specific job. In recent decades, however, more dynamic careers have become apparent, in which employees develop through horizontal shifts between multiple organizations (Arnold & Cohen, 2008; Arthur & Rousseau, 1996). This type of career, in which employees must take responsibility for their employability, is becoming more dominant in the labor market (Vuori, Toppinen-Tanner, & Mutanen, 2011), with employees having flexible contracts, changing jobs more often (forced and by free will), and their employment rates decreasing due to the worldwide financial crisis (European Commission, 2012; Raad voor Werk en Inkomen; 2012).

To obtain and retain a job in this changing labor market, individuals increasingly need career competencies that can help them manage their career (Van der Heijde & Van der Heijden, 2006). This may especially be the case for younger workers at the start of their careers as they are at greater risk of finding only temporary employment, experiencing unsatisfactory employment, poor work socialization, and high levels of discontinuity and underemployment (European Commission, 2012; Koivisto, Vuori, & Nykyri, 2007; Koivisto, Vuori, & Vinokur, 2010). Our study aims to increase the understanding of career competencies, which for the purpose of this article we have defined as ''knowledge, skills, and abilities central to career development, which can be influenced and developed by the individual.'' We provide a framework of career competencies by integrating several perspectives from the scientific literature, and we hope to offer new insights into career development, particularly for young workers. The current study also provides a new measurement instrument for career competencies, which may be applicable in human resources (HR) practices and may serve as a basis for career guidance in educational settings.

The Concept of Career Competencies

On reviewing the literature on career competencies with the aim of developing a measurement instrument using an integrative framework, we found four different perspectives: the boundaryless career perspective, the protean career perspective, the career self-management perspective, and the human capital perspective.

Boundaryless career perspective. To understand career development, Defillippi and Arthur (1994) discriminated between job skills and career competencies in their

boundaryless career perspective. According to Defillippi and Arthur, organizations have to continuously adapt to changing markets and demands. This adaptive process requires increasing flexibility of the workforce, matching job skills with new requirements. Career competencies are assumed to play a crucial role in maintaining the employee's value to the organization (Arthur & Rousseau, 1996). Defillippi and Arthur (1994) discriminate between three "dimensions of knowing" that facilitate this adaptive process. The knowing why dimension is related to career motivation, identification with work, and giving personal meaning to work. The knowing whom dimension concerns career-relevant networks and the different ways in which individuals can use their network. Finally, the knowing how dimension represents career-relevant skills (i.e., skills relevant to effectively shaping a career) and job-related knowledge (i.e., knowledge needed to perform a specific job). This framework has been used in multiple studies. For example, Jones and Lichtenstein (2000) performed an interview study among 23 employees, De Janasz and Sullivan (2004) presented their theoretical reflections on career competencies in the boundaryless career, and Eby et al. (2003) undertook an empirical survey study among 458 university alumni.

Protean career perspective. The concept of the protean career was introduced by Mirvis and Hall (1994; Hall, 1996). Although there is some overlap with the boundaryless career perspective, the protean career perspective emphasizes the added value of career competencies for subjective career success (e.g., career satisfaction), rather than their organizational value (Briscoe & Hall, 2006; Briscoe, Hall, & DeMuth, 2006). Anakwe, Hall, and Schor (2000) described three types of career competencies: self-knowledge skills (e.g., self-awareness, effective listening, time and stress management), which refer to reflective skills with regard to individual development and career self-management; interpersonal knowledge skills (e.g., conflict management, assertiveness, and delegation), which refer to knowing how others may contribute to the individual's career; and environmental knowledge skills, which pertain to fully understanding one's environment, with individuals constantly having to monitor their environment in order to understand how to adapt their identity to change. It is important to note that the authors emphasize the element of knowledge, referring to the importance of reflection in career development. Gaining skills alone is not enough: knowing when and how to use them is also essential. The protean career perspective has been used in studies such as Hall and Moss's (1998) theoretical reflection on continuous learning in the protean career and in an empirical survey by Anakwe et al. (2000) of 446 students and graduates.

Career self-management perspective. Concordant with the protean career paradigm, the career self-management perspective emphasizes that the individual has the primary responsibility for managing his or her career (King, 2004). The career self-management perspective emphasizes the proactive nature of career competencies. De Vos, De Clippeleer, and Dewilde (2009) defined proactive career behaviors as deliberate actions undertaken by individuals in order to realize their career goals.

They discerned two components of career self-management: a behavioral component (e.g., career planning, creating opportunities), which refers to individuals' behaviors in managing their careers; and a cognitive component (e.g., career insight), which refers to the perspectives that individuals develop with respect to their career motivations and aspirations. Various studies focusing on career self-management have proposed conceptually similar career self-management behaviors. For example, Kossek, Roberts, Fisher, and Demarr (1998) performed a three-stage study among professionals in the U.S. transportation industry, and De Vos et al. (2009) also performed a three-stage study among graduates in Belgium.

Human capital perspective. The fourth perspective approaches career competencies from a human capital perspective, focusing on lifelong learning and the employability of individual employees. Career competencies are structured into reflective, proactive, and interactive behaviors (Kuijpers, Meijers, & Gundy, 2011). Kuijpers (2003) distinguished four career competencies: career reflection (reflective), self-presentation (interactive), career control, and work exploration (proactive), and this framework of career competencies was refined in several empirical studies. In an empirical study among 1,579 employees in 16 Dutch organizations, Kuijpers and Scheerens (2006) discerned six different career competencies after performing factor analyses on a large sample of employees: career development ability refers to the degree to which employees are capable of realizing personal goals; reflection on capacities and reflection on motives pertain to reviewing one's own competencies, desires, and values with respect to one's career; networking involves setting up contacts that are relevant to one's career; work exploration refers to an orientation toward aligning one's own identity and competencies with the values and competencies required in a specific work situation; and career control refers to career-related planning and influencing learning and work processes. Kuijpers, Schyns, and Scheerens (2006) presented a slightly different set of six career competencies: career-actualization ability, career reflection, motivation reflection, work exploration, career control, and networking.

Development of a Framework of Career Competencies

Based on the perspectives described above, we emphasize that career competencies pertain to the individual's career as a whole and may therefore be clearly distinguished from job skills and work competencies, which are aimed at successfully performing a job. In addition, concepts such as a work–home balance and stress management should be distinguished from career competencies. These concepts may be related to career competencies (e.g., developing career competencies may help individuals to gain a healthy work–home balance), but they are not career competencies in themselves. Furthermore, we emphasize the developmental and behavioral perspectives on career competencies. Earlier studies (e.g., Eby et al., 2003) have proposed dispositional characteristics such as proactive personality and extraversion as career competencies. These dispositional concepts may be related to

career competencies (e.g., individuals with high scores for proactive personality may master career competencies more easily). According to our definition, however, career competencies concern knowledge, skills, and abilities that can be developed. Such a perspective may be fruitful for designing and evaluating interventions that assist individuals to develop and strengthen their career competencies. Based on the criteria mentioned above, we define career competencies as "knowledge, skills, and abilities central to career development, which can be influenced and developed by the individual."

The four perspectives on career competencies described above have similar views on the competencies necessary to successfully manage a career. First, all four perspectives discuss the importance of reflective career competencies, which are referred to as "knowing why," "self-knowledge skills," "the cognitive component," and "reflective behaviors." A closer examination of the specific competencies that are discerned shows that these reflective career competencies may be divided into reflection with regard to motivation (e.g., "career motivation" in Eby et al., 2003; "reflection on motives" in Kuijpers & Scheerens, 2006), and reflection with regard to qualities (e.g., "self-awareness of development" in Anakwe et al., 2000; "reflection on capacities" in Kuijpers & Scheerens, 2006).

Second, all perspectives underline the importance of communicative career competencies in discussing "knowing whom competencies," "interpersonal knowledge skills," "networking, seeking feedback, and seeking career guidance," and "interactive behaviors." Two career competencies stand out in this category: networking (e.g., King, 2004; Kuijpers et al., 2011) and self-profiling (e.g., "self-presentation" in Kuijpers, 2003; "self-nomination" in Noe, 1996). Third, the four perspectives emphasize the relevance of behavioral career competencies, which are referred to as "knowing how," "environmental knowledge skills," "the behavioral component," and "proactive behaviors." Two specific career competencies dominate in this category: work exploration (e.g., Anakwe et al., 2000; Kuijpers et al., 2011) and career control (e.g., "career planning" in De Vos et al., 2009; "creating opportunities" in Noe, 1996). Table 1 provides an overview of our theoretical integration of these perspectives.

Taking the various perspectives into account, we arrived at an integrative framework that consists of three dimensions: reflective career competencies, communicative career competencies, and behavioral career competencies. Moreover, in each dimension we discerned two specific career competencies. Reflective career competencies focus on creating an awareness of one's long-term career and on combining personal reflections and one's professional career. The two career competencies derived from this dimension are *reflection on motivation,* defined as "reflecting on values, passions, and motivations with regard to one's personal career"; and *reflection on qualities,* defined as "reflecting on strengths, shortcomings, and skills with regard to one's personal career."

Communicative competencies pertain to being able to effectively communicate with significant others to improve one's chances of career success. The two

Table 1. Integration of Four Perspectives on Career Competencies in Three Overarching Categories.

	Reflective competencies	Communicative competencies	Behavioral competencies
Boundaryless career Perspective	*Knowing why* Career insight Openness to experience Proactive personality	*Knowing whom* Experience in mentoring relations Extensiveness of networks	*Knowing how* Career identity Career-related skills
Protean career Perspective	*Self-knowledge skills* Self-assessment Self-awareness Modifying self-perceptions	*Interpersonal knowledge skills* Assertiveness Conflict management Dialogue skills and effective listening Influencing others Seeking out relationships	*Environmental knowledge skills* Adapting to changing environment Exploration Flexibility Time and stress management
Career self-management Perspective	*Cognitive component* Career insight Formulating plans	Developmental feedback seeking Influence behaviors Networking Seeking career guidance Self-nomination	*Behavioral component* Boundary management Career planning Creating opportunities Job mobility preparedness Positioning behavior
Human capital Perspective	*Reflective behaviors* Career reflection Reflection on motives Reflection on capacities	*Interactive behaviors* Networking Self-presentation	*Proactive behaviors* Career actualization ability Career development ability Career control Work exploration

communicative career competencies are *networking*, defined as "the awareness of the presence and professional value of an individual network, and the ability to expand this network for career-related purposes"; and *self-profiling*, defined as "presenting and communicating personal knowledge, abilities and skills to the internal and external labor market."

Behavioral competencies focus on being able to actually shape one's career by proactively taking action. The two career competencies derived from this dimension are *work exploration*, defined as "actively exploring and searching for work-related and career-related opportunities on the internal and external labor market"; and *career control*, defined as "actively influencing learning processes and work processes related to one's personal career by setting goals and planning how to fulfill them." This proposed framework of six career competencies is the basis of and the first step in developing the Career Competencies Questionnaire (CCQ).

Research Overview

Study 1 describes the process of scale development, which involved an interview study, two qualitative pilot studies, and exploratory factor analyses (EFAs) to check the content validity of the framework and to construct the initial item set. In Study 2, we tested the internal consistency and the factorial, discriminant, and incremental validity of the CCQ. Our research hypotheses were as follows:

Hypothesis 1: The items of the CCQ show an oblique six-factor structure.
Hypothesis 2a: The CCQ has good factorial validity: the six-factor model will fit the data better than a competing one-factor or three-factor model.
Hypothesis 2b: The CCQ has good factorial validity: the six first-order career competency factors will load onto a common second-order factor.
Hypothesis 3: The CCQ has good discriminant validity: the items are positively related to, but conceptually distinct from, career motivation, general self-efficacy (GSE), task performance, and perceived employability.
Hypothesis 4: The CCQ has good incremental validity: the items have added value in the prediction of perceived employability over and above the effects of career motivation, GSE, and task performance.

Study 1: Scale Development

After performing our literature review, we undertook a number of semistructured interviews to examine whether our framework had sufficient content validity. We interviewed 22 academics and practitioners (e.g., HR professionals, managers, educational coordinators and medical officers), and also organized focus-group sessions with 43 young employees. We explicitly asked the participants their opinions on the content and the importance of our framework. In addition, we provided the interviewees with a large number of preliminary sample items and asked them to rate

which ones they found most appropriate. We also asked them for concrete examples that we could use to refine the items. Both the interviews and the focus groups were recorded and analyzed by three researchers. The analyses were performed at a thematic level, that is, the researchers analyzed the qualitative data by examining which topics were most often brought up in the semistructured part of the interviews and in the focus groups. We used this input when formulating the initial 32 items of the CCQ.

We subsequently performed a consultation with a panel of experts and a pilot study, both of which were performed simultaneously. In this panel of experts, 10 academic researchers in the field of Occupational and Organizational Psychology (four PhD students, three assistant professors, one associate professor, and two full professors) checked the 32 items for clarity and potential overlap. The main aim of this consultation was to check the questionnaire with regard to content (i.e., whether the experts felt our items reflected the competencies well) and with regard to technical issues (e.g., potential overlap in items, clear formulations). In the pilot study, we administered the initial 32 items of the CCQ to 81 students (aged 16–30 years) who were on full-time internships. Their mean age was 22 years ($SD = 2.14$) and 67.9% were female. We also consulted supervisors/coaches: two teachers (one male and one female) and one career coach (female). This pilot study was primarily aimed at checking whether our items were understandable to our target group (e.g., to prevent the use of jargon).

After performing and evaluating the interview study and the qualitative pilot studies, we ran EFA to reduce the overinclusive set of 32 items and to select the items for the measurement instrument. In accordance with our integrated framework of career competencies, we expected to find a six-factor structure in the data (Hypothesis 1).

Method

The data for the EFA were derived from students from five Dutch intermediate vocational schools. These students had all received intermediate vocational education, being educated in a specific job industry for 3 to 4 years (e.g., health care, metal industry, administrative work). They had all completed multiple internships, ending with a full-time internship period of 4 days per week. A total of 243 questionnaires were distributed in the first four institutions by the researchers. After we obtained informed consent, the participants filled out a paper-and-pencil questionnaire. A researcher was constantly present during this process to answer potential questions and to collect the completed questionnaires. All 243 questionnaires were completed and returned to the researchers. Another 40 questionnaires were sent to a team leader at the fifth institution by mail. A total of 17 completed questionnaires were returned. In total, 283 were distributed, resulting in a total response of 260 questionnaires (response rate = 91.9%). A number of participants had to be excluded from the analyses due to missing and/or clearly incorrect answers (e.g., straight lines on a page), or because they did not meet the age criterion of 16 to 30 years. This selection criterion was added because our study was part of a program aimed at young employees with a

maximum age of 30 years. A total of 41 questionnaires were excluded, resulting in a total of 219 participants. The mean age of the participants for the EFA was 18.9 years ($SD = 1.6$) and 59.8% were male. They worked an average of 19.2 hours per week ($SD = 11.3$) and the majority had jobs/internships in the fields of animal welfare (23.3%), agriculture and fishery (32.0%), and the flower industry (31.5%).

Measurement Instruments

Career competencies were measured with the 32-item CCQ. The items were measured on a 5-point Likert-type scale ranging from 1 (*completely disagree*) to 5 (*completely agree*). All of the subscales were measured with five items, except for networking (7 items). An example of an item on reflection on motivation was, "I know what I like in my work"; an example of an item on reflection on qualities was, "I know my strengths in my work"; an example of an item on networking was, "I know how to ask for advice from members of my network"; an example of an item on self-profiling was, "I am able to show others what I want to achieve in my career"; an example of an item on work exploration was, "I know how to search for developments in my area of work"; and an example of an item on career control was, "I can make clear career plans."

Results

The results of our interview and focus group study provided support for the content validity of our framework of career competencies: the participants underlined the importance of our framework and the way in which we conceptualized the six career competencies into three dimensions. In addition, the participants of the interview study provided us with valuable advice on selecting and formulating items by giving concrete examples and by emphasizing certain aspects (e.g., that networking pertains to significant others both within and outside the organization an individual works in). Their feedback assisted in the formulation of the initial 32 items of the CCQ. After consulting with the panel of experts, we rephrased 3 items that showed too much overlap. Based on the results of the pilot study among 81 students we also refined 7 of the 32 items because they were unclear, too difficult, or contained jargon.

Subsequently, we performed EFA with principal components extraction. As we hypothesized that the six career competencies would be part of a second-order construct, we expected the dimensions to be related. For this reason, we used an oblique rotation method (Fabrigar, Wegener, MacCallum & Strahan, 1999). We extracted six factors in our analyses, concordant with our integrative framework of six career competencies. These six factors explained a total of 58.56% of the common variance, most of it being attributable to the first factor (29.32%). Overall, virtually all of the 32 items loaded highest onto the factor that the panel of experts placed them in (except 1 item for networking), thereby supporting the content validity of the items. We deleted one item on reflection on motivation and one item on reflection on qualities based on feedback suggesting potential overlap during the

pilot studies. We had deliberately included these two potentially overlapping items to determine which would have the highest factor loading. Accordingly, we deleted those with the lowest factor loadings. After deleting these initial items, the criterion for other possible item removals was a low factor loading (< .55), on the basis of which we deleted 1 item on reflection on motivation (.53), 3 items on networking (.01, .11, and .30), 2 items on self-profiling (.37 and .41), 2 items on work exploration (.19 and .24), and 1 item on career control (.14). The results for the items on reflection on qualities were somewhat ambiguous because they loaded onto the same factor as reflection on motivation (loadings between .57 and .66). These results seemed to indicate one common factor for the reflective career competencies. However, both our literature review and our interviewees indicated otherwise. We ran an additional EFA on these 8 items and found that they clearly loaded onto two separate factors, with loadings between .65 and .78 for reflection on motivation, and loadings between .59 and .88 for reflection on qualities. Based on these results, we decided to maintain two separate factors.

In total, 11 items were deleted from the initial item pool, resulting in a 21-item CCQ. We included these 21 items in the second step of the EFA, again extracting six factors. Together, these factors explained 74.67% of common variance, with the highest variance attributable to the first factor (35.17%). All items loaded highly onto their expected factors, with loadings between .72 and .91. The correlations between factors were all between .16 and .44, the latter being between reflection on motivation and reflection on qualities. Despite this relatively high positive correlation, the items on reflection on motivation and reflection on qualities loaded onto clearly separate factors. Loadings onto their proposed factor were between .85 and .91, with cross loadings between .37 and .56. We concluded that the 21 items show an oblique six-factor structure, thereby confirming Hypothesis 1.

Study 2: Scale Validation

After reducing the initial item set to 21 items, we administered the CCQ to a new group of young employees. First, we tested the factorial validity by comparing several competing models, whereby we expected that the six-factor model would show the best fit (Hypothesis 2a) and that the six factors would load onto a common second-order factor (Hypothesis 2b). We analyzed both Hypotheses 2 and 3 with structural equation modeling (SEM). Second, we examined the discriminant validity by comparing career competencies with several related constructs (Hypothesis 3), outlined briefly below. Third, we investigated the incremental validity of the CCQ items using linear regression (Hypothesis 4).

Career Competencies and Related Constructs

Before describing our methods below, here we provide a brief outline of the constructs we consider related but not equivalent to career competencies. These are

measured when testing Hypothesis 3. *Career motivation,* typified as having a positive attitude and intention with regard to one's career, can be considered a motivational predictor of actually performing career-related behaviors (Ajzen, 2005; Giles & Rea, 2002). Earlier studies show that positive motivation toward career-related behaviors was predictive of actual behaviors, both for employees and for students (Millar & Shevlin, 2003; Van Hooft & De Jong, 2009) and that a high score on career motivation predicted a higher score on both objective and subjective career success (Day & Allen, 2004). Based on these findings, we expected that career motivation would be different from, but positively related to, career competencies.

General self-efficacy (GSE) refers to the perceived ability to perform across a variety of different situations (Bandura, 1997; Eden, 2001; Judge, Erez, Bono & Thoresen, 2002). GSE captures differences among individuals in their tendency to view themselves as capable of meeting various demands in a broad array of contexts. It can be considered an evaluation of one's competencies in general. Thus, we argue that GSE and career competencies are positively related but conceptually different.

Task performance refers to fulfilling the core processes required by the job, and it is a widely used measure to assess subjective performance (Goodman & Svyantek, 1991). Self-rated performance has been shown to be related to the experience of successful career development, and it is an important indicator of career success according to the "contest-mobility" perspective (Ng, Eby, Sorensen & Feldman, 2005). This implies that task performance and career competencies may both be predictors of successful career development. In other words, individuals who perceive themselves as competent in managing their career may also feel competent in managing their job. Therefore, we expect that the concepts of career competencies and task performance are positively related, though conceptually different constructs.

Perceived employability has been defined in different ways, although the common denominator is the perception of an ability to gain equivalent or better work in the present and in the future (Fugate, Kinicki & Ashforth, 2004; Van der Heijde & Van der Heijden, 2006). Recent studies on employability have focused on the individual level (De Cuyper, Bernhard-Oettel, Berntson, De Witte & Alarco, 2008; De Cuyper & De Witte, 2008; Forrier & Sels, 2003). Perceived employability can be characterized as one's perception of an ability to keep the job that one has or to get the job one desires (Rothwell & Arnold, 2007). Findings have shown that perceived employability is related to individual motivation at work (Fugate et al., 2004), general wellbeing (De Cuyper et al., 2008), proactive coping with change, and performance (Fugate & Kinicki, 2008). We consider perceived employability to be an outcome of career competencies, because mastering these competencies should lead individuals to have a more positive perception of their ability to find and retain employment. As such, we view perceived employability as conceptually distinct from, but positively related to, career competencies.

Method

Participants and Procedure

The data from Study 2 were obtained from intermediate vocational students in two different Dutch educational institutions. The participants were on full-time internships at the end of their intermediate vocational education. After obtaining informed consent, the participants filled out the questionnaires during school hours with at least one researcher present. A total of 214 questionnaires were distributed, of which 212 were returned (response rate = 99.1%). The mean age in Study 2 was 19.5 years ($SD = 1.8$), with 46.2% female. The participants worked an average of 27.0 hours per week ($SD = 11.2$), with the majority of this group employed in the fields of health and wellbeing (54.7%) and general industry (22.2%).

Measurement Instruments

All items were measured on a 5-point Likert-type scale ranging from 1 (*completely disagree*) to 5 (*completely agree*).

Career competencies were measured with the 21-item CCQ. Reflection on motivation, self-profiling, and work exploration were each measured with 3 items, while reflection on qualities, networking, and career control were each measured with 4 items. All items are shown in Table 2. Cronbach's alphas of the scales are presented in Table 3.

Career motivation was measured using a self-constructed 5-item scale based on Ajzen (2005) and Day and Allen (2004). An example of an item is, "I believe it is important to think about my career" ($\alpha = .87$, indicating a good internal consistency, according to John & Benet-Martinez, 2000). This scale was positively related to the six career competencies and the other scales that were used, but no extremely high values were found, supporting the validity of this scale. Detailed information can be found in Table 3.

GSE was measured using a validated Dutch adaptation of a 10-item scale designed by Teeuw, Schwarzer, and Jerusalem (1994). This scale has been shown to be positively related to positive emotions and work engagement (Ouweneel, 2012) and to wellbeing stress appraisal, and social relationships (Luszczynska, Gutiérrez-Doña, & Schwarzer, 2005). A sample item is, "Whatever happens, I will manage" ($\alpha = .89$).

Task performance was measured using a validated 9-item scale based on the questionnaire designed for this concept by Goodman and Svyantek (1999). This scale has been shown to be related to the organizational climate and person–job fit (Goodman & Svyantek, 1999), to be positively related to general health and job satisfaction, and negatively related to emotional exhaustion (Akkermans, Brenninkmeijer, Blonk, & Koppes, 2009). A sample item is, "You achieve the goals in your job" ($\alpha = .86$).

Finally, perceived employability was measured using an adapted version of the validated questionnaire from De Cuyper and De Witte (2008). This scale has been shown to be positively correlated with job satisfaction and employee wellbeing, and

Table 2. Means, Standard Deviations, Squared Multiple Correlations, and Standardized Loadings of the First-Order and Second-Order Confirmatory Factor Analysis ($N = 212$).

Items	M	SD	R^2	Loadings first order	Loadings second order
Reflection on motivation	4.03	0.66			0.77
I know what I like in my work			.39	0.63	
I know what is important to me in my career			.66	0.61	
I can clearly see what my passions are in my work			.53	0.82	
Reflection on qualities	3.85	0.63			0.73
I know my strengths in my work			.66	0.66	
I am familiar with my shortcomings in my work			.38	0.64	
I am aware of my talents in my work			.62	0.73	
I know which skills I possess			.54	0.74	
Networking	3.61	0.67			0.74
I know a lot of people *within* my work who can help me with my career			.47	0.62	
I know a lot of people *outside* of my work who can help me with my career			.25	0.59	
I know how to ask for advice from people in my network			.48	0.78	
I am able to approach the right persons to help me with my career			.56	0.71	
Self-profiling	3.72	0.65			0.83
I can clearly show others what my strengths are in my work			.36	0.67	
I am able to show others what I want to achieve in my career			.66	0.78	
I can show the people around me what is important to me in my work			.62	0.73	
Work Exploration	3.49	0.73			0.67
I know how to find out what my options are for becoming further educated			.55	0.67	
I know how to search for developments in my area of work			.56	0.68	
I am able to explore my possibilities on the labor market			.48	0.58	
Career control	3.41	0.72			0.70
I can make clear career plans			.55	0.84	
I know what I want to have achieved in my career a year from now			.42	0.74	
I can create a layout for what I want to achieve in my career			.54	0.80	
I am able to set goals for myself that I want to achieve in my career			.59	0.72	

Table 3. Correlation Matrix of the Six Career Competencies With Career Motivation, General Self-Efficacy, Performance, and Employability (N = 212).

	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Career competencies	3.68	0.51	.90										
2. Reflection on motivation	4.03	0.66	.76**	.77									
3. Reflection on qualities	3.85	0.63	.53**	.73**	.82								
4. Networking	3.61	0.67	.51**	.41**	.76**	.76							
5. Self-profiling	3.72	0.65	.51**	.54**	.52**	.76**	.77						
6. Work exploration	3.49	0.73	.36**	.40**	.41**	.42**	.67**	.77					
7. Career control	3.46	0.72	.58**	.42**	.49**	.54**	.54**	.80**	.81				
8. Career motivation	3.97	0.70	.35**	.28**	.41**	.38**	.37**	.33**	.49**	.87			
9. General self-efficacy	3.60	0.56	.41**	.47**	.50**	.55**	.39**	.44**	.23**	.49**	.89		
10. Performance	3.72	0.49	.38**	.52**	.39**	.50**	.36**	.43**	.38**	.53**	.60**	.86	
11. Perceived employability	3.46	0.63	.32**	.36**	.48**	.40**	.35**	.38**	.29**	.39**	.52**	.50**	.84

Note. Cronbach's αs are displayed italicized on the diagonal.
*p < .05. **p < .01.

negatively correlated with job insecurity (De Cuyper & De Witte, 2008; De Cuyper et al., 2008). We changed some minor words from Flemish to Dutch, retaining the original content. The scale consisted of 8 items. Sample items from this scale are, "I would be able to find a different, equivalent job" and "I am able to get different jobs with my current employer" ($\alpha = .84$).

Results

Factorial Validity

The first step of the confirmatory factor analyses (CFAs) included the 21 items in the first-order measurement model of the six proposed career competencies. Multiple indices were used to test the adequacy of fit based on their frequent use in the CFA literature and their suitability for comparing models (Tabachnik & Fidell, 2007). We tested three possible CFA models: a one-factor model (with all 21 items loading onto one latent factor), a three-factor model (with latent reflective, communicative, and behavioral factors), and a six-factor model (with the six individual career competencies). The one-factor model showed a poor fit to the data: $\chi^2 (189) = 665.08, p < .001$, comparative fit index (CFI) $= .75$, Tucker–Lewis index (TLI) $= .72$, goodness of fit index (GFI) $= .75$, root mean square error of approximation (RMSEA) $= .11$. The three-factor model also showed poor model fit: $\chi^2 (186) = 484.46, p < .001$, CFI $= .84$, TLI $= .82$, GFI $= .81$, RMSEA $= .09$. The hypothesized six-factor model showed the best fit to the data: $\chi^2 (174) = 253.45, p < .001$, CFI $= .96$, TLI $= .95$, GFI $= .91$, RMSEA $= .046$. This model fitted the data significantly better than the one-factor and the three-factor models ($\Delta\chi^2 (15) = 411.63, p < .001$, and $\Delta\chi^2 (12) = 231.01, p < .001$, respectively). As shown in Table 2, the regression weights of all of the variables loading onto their respective factors are between .58 and .84. In line with Hypothesis 2a, the six-factor model was confirmed to be the best fitting first-order model.

In the second step, we performed a second-order CFA to see whether the six proposed career competencies would constitute an overarching construct of career competencies (i.e., whether career competencies constitute a multidimensional construct). The fit indices of the second-order model were $\chi^2 (171) = 261.69, p < .001$, CFI $= .95$, TLI $= .94$, GFI $= .90$, RMSEA $= .05$. The first-order factor loadings onto the second-order construct were all between .67 and .85 (see Table 2 for details of the first-order and second-order CFA analyses). These results confirm Hypothesis 2b, stating that the six first-order factors all load onto a common second-order factor, the overarching construct of career competencies.

Discriminant Validity

We calculated bivariate correlations for the career competencies scales using the constructs of career motivation, GSE, task performance, and perceived employability. The means, standard deviations, and correlation matrix can be found in Table 3.

Table 4. Fit statistics of discriminant validity analyses ($N = 212$).

Model description	χ^2	df	CFI	TLI	GFI	RMSEA
Five-factor hypothesized model	116.34	61	.96	.94	.93	.07
Four factors: career competencies and career motivation collapsed	214.26	70	.89	.86	.89	.10
Four factors: career competencies and general self-efficacy collapsed	240.21	70	.87	.83	.88	.11
Four factors: career competencies and performance collapsed	234.40	70	.88	.84	.88	.11
Four factors: career competencies and employability collapsed	178.54	70	.92	.89	.89	.09
One-factor null model	482.31	77	.69	.64	.77	.16

Note. χ^2 = chi-square; df = degrees of freedom; CFI = comparative fit index; TLI = Tucker–Lewis index; GFI = goodness of fit index; RMSEA = root mean square error of approximation.

All constructs were positively related to each other, but no extremely high correlations were found. This suggests that although the constructs are significantly correlated, they are distinct. To further examine the discriminant validity of career competencies, we compared the overarching latent factor of career competencies with latent factors for career motivation, GSE, performance, and perceived employability. Each factor was operationalized by two indicators representing parcels of the items, except for the latent factor of career competencies (which consisted of six indicators). We tested whether a five-factor model (using all constructs as separate factors) was superior to a one-factor model (collapsing all constructs into one factor) or to four-factor models (collapsing career competencies and one other construct at a time). As expected, the one-factor model showed a poor fit to the data. Dividing the model into the hypothesized five-factor model increased the fit significantly: $\Delta\chi^2$ (16) = 365.97, $p < .001$, CFI = .96, TLI = .94, GFI = .93, RMSEA = .07. This five-factor model also fitted the data better than any of the four-factor models, as displayed in Table 4. These results suggest that career competencies are indeed conceptually distinct from career motivation, GSE, performance, and perceived employability, thereby confirming Hypothesis 3.

Incremental Validity

We performed linear regression with SPSS 20 to examine the incremental validity of the career competencies construct. In the first step, we tested the effects of career motivation, GSE, and task performance on perceived employability. The effect of GSE was significant ($\beta = .35$, $p < .001$), but the effects of career motivation and task performance were not ($\beta = -.04$, ns and $\beta = .08$, ns, respectively). When the career competencies construct was added to the regression in the second step, it showed a significant positive association with perceived employability

($\beta = .36$, $p < .001$). The effect of GSE on perceived employability also decreased ($\beta = .24$, $p < .001$). As initial support for incremental validity was found, Hypothesis 4 was confirmed.

General Discussion

Career competency research is a relatively new and promising research area that may be especially relevant for young employees. In the current study, we presented an integrated framework of career competencies, developing and preliminarily validating the CCQ.

Development and Validation of the CCQ

The literature in the field of career competency research exhibits four perspectives: the boundaryless career perspective (e.g., Defillippi & Arthur, 1994), the protean career perspective (e.g., Mirvis & Hall, 1994), the career self-management perspective (e.g., King, 2004), and the human capital perspective (e.g., Kuijpers, 2003). Building on these, we developed an integrated framework consisting of six career competencies: reflection on motivation, reflection on qualities, networking, self-profiling, work exploration, and career control. Based on this framework, we designed the CCQ, which we tested and preliminarily validated in two samples of young employees in a transitional phase from education to the labor market.

The results of the EFA and CFA indicate that the six career competencies selected for our framework are indeed separate entities that together constitute the overarching multidimensional concept of career competencies. The multidimensionality of the concept also indicates that the total sum scores of the scales may be used as an indicator of individual differences in career competencies (Rubio, Berger-Weger, & Tebbs, 2001). We also found initial support for discriminant and incremental validity. The results confirmed that career competencies are associated with, but conceptually different from, related concepts in the field of career development, such as general self-efficacy (GSE), career motivation, perceived performance, and perceived employability. These results point to the value of career competencies in career-related research and interventions.

As Arnold and Cohen (2008) stated, more empirical research is needed with regard to understanding and measuring career competencies. This study attempted to make a contribution by integrating the available literature and by creating and empirically testing the CCQ. A clearer understanding of career competencies could add to our knowledge of career development by providing more insight into the knowledge, skills, and abilities that individuals need to successfully navigate their careers. Gaining more knowledge about the career competencies of young employees is particularly valuable because it provides further insight into the way in which starting employees develop, or could be assisted in the development of, their careers.

Limitations and Suggestions for Future Research

A number of limitations of our study need to be addressed, as well as directions and suggestions for future studies. First, we could not examine test–retest reliability because the data sets used in this study were cross-sectional in nature. This also prevented a test of predictive validity. In addition, some of the factors identified in the final version of the CCQ only contained three items. This raises some doubts with regard to the stability of the subscales. It would therefore be useful to replicate the current study with a longitudinal design to further investigate the reliability and stability of the CCQ.

A second limitation concerns the research group used for this study. The current study focused explicitly on young workers who had just started their careers (students with full-time internships). Future studies might replicate the findings among different age groups, different educational groups, and in different industries, allowing our results to be generalized to a larger population of workers.

Third, the value of subjective measures is increasingly being emphasized in the literature (e.g., Rothwell & Arnold, 2007), but a common method bias due to the use of subjective measures might have been a problem. We would therefore recommend future researchers include more objective outcome measures and ratings from significant others in their studies. It would, for example, be interesting to see whether career competencies are related to actual career growth (e.g., number of promotions) and whether supervisors or colleagues judge the career competencies of an employee similarly to the employee's own judgment.

Finally, although we argued that contextual factors and dispositional characteristics are conceptually distinct from career competencies, they may be important concepts for career development. For example, individuals who score high for proactive personality and extraversion may master career competencies faster. In a similar vein, individuals who have mastered career competencies may be better at managing stress and finding a healthy balance between work and home. Future studies should therefore further investigate this interplay of career competencies, contextual factors, and dispositional characteristics.

Practical Implications

The findings of the current study have important implications with respect to several practical issues. First, the CCQ may be used in educational settings and in HRM policies as a diagnostic tool to monitor intern (where ''work'' refers to their internship in the questionnaire) and employee progress toward and in the labor market. The questionnaire could be used to determine the specific competencies that need to be developed to make a successful transition to working life, looking at progress in each competency. In addition, monitoring the mastery of career competencies during the school-to-work transition could provide insights into specific challenges young workers face when starting their career.

The integrative framework of six career competencies offers many possibilities for use in interventions. It may, for example, be used in employability programs. Reflecting on personal motivation and qualities, being able to effectively communicate career needs, and being able to proactively seek opportunities and set goals are all competencies that could be important predictors of employability. Training employees to master these competencies may therefore be a fruitful starting point with respect to increasing their employability. This may especially be the case when combined with interventions that increase participants' self-efficacy. Mastering career competencies and gaining an increased sense of career-related self-efficacy could be a successful basis for effective career self-management.

A career competencies perspective may also be of value to current and future career counseling practitioners who might use the CCQ as a monitoring tool or to gather information that can be used as input for their programs and advice (e.g., determining the training programs, workshops, or lectures a particular employee should participate in). The CCQ may, for example, be used to diagnose the problem areas for employees who have lost their job and are seeking new employment, and for students who are not sure about what they want in the future but who are about to enter the labor market. It may also be used as a diagnostic tool in stimulating resilience and the optimal functioning of employees. By regularly administering the CCQ, career counselors could support employee development through advice on specific areas of career self-management.

Conclusion

The conceptualization and measurement of career competencies is still in its early stages. This study presented an integrative framework of career competencies and used this framework to develop the CCQ, which we preliminarily validated in two samples of young employees. We hope this study will stimulate further discussion, research, and the development of interventions with respect to career competencies and career self-management, especially for young employees. Given the changes to contemporary labor markets, we believe that the concept of career competencies will become essential for understanding career development and employability in the future.

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Marthe Huibers is educated in work and organizational psychology and she currently works as a trainer and advisor on crisis and disaster management at Trimension, the Netherlands. During her final year of master's, she wrote her thesis on career competencies and employability of young employees with intermediate vocational education. In this thesis, she contributed to the development and preliminary validation of the career compentencies questionnaire. Besides her daily job as a trainer and advisor, Marthe likes a good debate and she works as a volunteer at a school for complementary education for motivated young people from socially and economically deprived areas in the Netherlands.

Roland W. B. Blonk is educated in clinical psychology at the University of Amsterdam, the Netherlands and received his PhD on treatment outcome studies. Currently he is employed at TNO Work and Employment, one of the largest applied research institutes in Europe. At TNO, he is the manager of a large-scale research program aimed at unemployed and low-skilled workers. He holds a special chair at the University of Utrecht aimed at two research topics: (1) work-related psychological complaints and return to work and (2) social inclusion and employability. Besides his work and his family life, he likes to run long distances and to sail at sea and the Atlantic Ocean.