Understanding employees' professional development:

The joint influence of individual and situational factors

Monique van Rijn

UNDERSTANDING EMPLOYEES' PROFESSIONAL DEVELOPMENT

THE JOINT INFLUENCE OF INDIVIDUAL AND SITUATIONAL FACTORS

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Table of Contents

1

Introduction

Introduction

At present, employees' professional development is becoming more and more important for both organizations and employees themselves. In order for organizations to keep up in a constantly changing society and economy characterized by rapid technological changes and large scale globalization, it has become crucial that employees' continually keep learning and develop themselves professionally (e.g. Denisi, Hitt, & Jackson, 2003; Hurtz & Williams, 2009). The new knowledge, skills and abilities which are developed within an organization as a result of employees' professional development form an important source of sustainable organizational competitiveness (Aguinis & Kraiger, 2009; Kyndt & Baert, 2013). Stimulating employees' professional development can also lead organizations to having a more committed workforce, leading to an increased productivity (Judge, Higgins, Thoresen, & Barrick, 1999), and a pool of successful employees from which to choose the future senior managers within the organization (Wayne et al., 1999).

For employees, professional development can improve their employability. Nowadays employees are confronted with a work environment in which careers have shifted from lifetime employment with one organization to boundary-less careers in which employees need to manage their own careers (Arthur, 1994; Hall, 1996; 2004). This means that they have to take the initiative and responsibility of managing their own career and achieving their own career goals. The knowledge and skills developed through investment in their professional development can help them deal with these changes and can facilitate their employability (Bednall, Sanders, & Runhaar, 2014, van Dam, van der Heijden, & Schyns, 2006; Wayne, Liden, Kraimer, & Graf, 1999).

Generic aims.

Recognizing the importance of employees' professional development, recently scholars have studied factors that influence employees' professional development by taking into consideration both individual and situational factors. For example, studies have shown the effect of such individual difference factors as self-efficacy, learning goals and perceived benefits, and such situational factors as situational constraints, peer support, and work support (e.g. Maurer, Lippstrue, & Judge, 2008; Maurer, Weiss, & Barbeite, 2003; Noe & Wilk, 1993). However, most studies on employees' professional development either take an individual differences approach or a situational approach to employees' professional development (Lohman, 2005; Kwakman, 2003), and studies that take an interactive approach between these factors are rare (Orvis & Leffler, 2011). This is surprising given the fact that employee

professional development in its nature involves both employees themselves and their surroundings in the workplace (Billet, 2001; Ellström, 2001). The person-situation interactionist perspective, which suggests that the effect of a situation on behavior can vary as a function of how individuals perceive themselves (e.g. Terborg, 1981; Tett & Burnett, 2003; Wang, Noe, & Wang, 2014), seems to be a proper approach to studying employees' professional development. In line with this view, some studies on employee professional development have actually shown some promising results. Studies, for example, have shown the influence of the interaction between employees' learning goal orientation and the workplace support that they receive on employees' participation in self-development activities (Orvis & Leffler, 2011) and employees' reflection and feedback asking (Runhaar, Sanders, & Yang, 2010).

In the same vein, scholars have argued that how individuals perceive and identify themselves (i.e. their self-identity) interacts with other individual differences factors in influencing their work behaviors (e.g. Markus & Kitayama, 1991; Johnson, Chang, & Yang. 2010). Johnson et al. (2010), for example, have argued that self-identity factors and motivational factors interact in influencing employees' work behavior. Based on this theoretical model, research has shown the moderating effect of employees' self-construal on the relationship between motivational factors related to training and employees' organizational commitment (Yang, Sanders, & Bumatay, 2012), and on the relationship between the motivational factor of perceived interpersonal unfairness and counterproductive work behaviors (Yang, Johnson, Zhang, Spector, & Xu, 2013).

In order to create a deeper understanding of factors that can stimulate employees' professional development, in this thesis an interactionist approach is assumed, taking into account both interactions between different individual differences variables, between individual differences and situational variables, and between different situational variables. Against this background, the overall research question of this thesis can be formulated as:

> *To what extent do individual differences and situational factors jointly influence employees' professional development?*

In the following section, the types of employee professional development that are the focus of this thesis are introduced, followed by an elaboration on the individual differences and situational factors that are proposed to have an influence on employees' professional development

Theoretical background

Two types of employee professional development

London (1989) has defined employee professional development as the long-term personal and professional growth of the employee, with the objective to either ensure that employees maintain and expand their skills, or to ensure that employees are prepared for advancement within the organization. In line with London's (1989) viewpoint, in this thesis employee professional development is investigated from two perspectives: *employee workplace learning* in which employees develop their knowledge and skills in order to satisfy job demands and improve their job performance, and *career development* in which employees develop their knowledge and skills in order to manage their personal growth in the organizational context (Tansky & Cohen, 2001).

Employee professional development in terms of informal workplace learning

The first perspective of employee professional development is that of employee workplace learning. The content of workplace learning varies on the basis of the organizational context. For example, the learning activities engaged in by academic staff are different from those activities engaged in by salesmen (Poell, van Dam, & van den Berg, 2004). Before pointing out the learning activities that are the focus of this thesis, first the organizational context in which this project is conducted will be introduced.

Workplace in this thesis refers to the Dutch educational sector, specifically to Dutch Vocational Education and Training Schools (VET). In the Netherlands VET's are facing serious challenges. The Dutch government is currently placing a strong emphasis on educational innovation within VET schools, both in terms of changing curriculum and pedagogical approaches and methods, holding both schools and teachers responsible for students' achievements (Runhaar & Runhaar, 2012; Runhaar & Sanders, 2013). In facing these challenges, the professional development of teachers has played an important role in VET schools recently (Seezink & Poell, 2011), meaning that teachers need to continually develop themselves and engage in workplace learning.

Different from other professions, workplace learning activities engaged in by teachers are often informal instead of formal (Kwakman, 2003). Formal learning is structured, institutionally sponsored, and typically organized by an education or training institution outside of the workplace (Kyndt & Baert, 2013). Informal workplace learning, on the other hand, refers to those learning activities which are usually not institutionally sponsored, but initiated at the workplace by employees themselves with the purpose to develop their professional knowledge

and skills (Lohman, 2005; Marsick & Watkins, 2001). Although employees' knowledge and skills can be accrued through formal learning activities such as workshops, training, and management development programs (Arthur, Bennett, Edens, & Bell, 2003; Kyndt & Baert, 2013), it has been criticized for being too expensive, time-consuming, and disconnected from day-to-day work (Hall, 1996; Wilson & Berne, 1999). In this respect, informal workplace learning has certain benefits over formal learning activities. Informal workplace learning takes place at the workplace and is initiated by employees. It is thus less expensive, less time-consuming and better fitted to the learning needs of employees than formal learning activities (Hoffman, 2005). Furthermore, empirical research within six VET schools in the Netherlands has shown that teachers' participation in informal workplace learning activities is positively related to the number of students that are successfully graduating (Bednall et al., 2014).

The literature has delineated two general types of informal workplace learning activities: individual and collaborative learning activities (e.g. Kwakman, 2003; Lohman, 2005; van Woerkom, 2004). *Individual learning activities* are learning activities that are carried out individually without any assistance from colleagues or supervisors, and in which employees explore their own values, interests, attitudes, career goals, and learning style preferences (Noe, Wilk, Mullen, & Wanek, 1997). Studies have identified such individual learning activities as reflection, experimentation, studying subject matter literature, reading professional journals, and scanning external sources (e.g. browsing the internet) (e.g. van Woerkom, 2004; Kwakman, 2003; Lohman & Woolf, 2001). *Collaborative learning activities*, on the other hand, are learning activities in which teachers acquire knowledge and skills directly through interaction with others, such as knowledge sharing, asking for feedback, sharing ideas, and sharing materials with each other (e.g. Kwakman, 2003; Lohman, 2005; Noe et al., 1997; van Woerkom, 2004). Several researchers have pointed out that collaborative learning is a broad term which includes learning between dyads and learning in groups such as teams or even organizations (e.g. Digenti, 1999; Dillenbourgh, 1999; Garavan & McCarthy, 2008). In this thesis collaborative learning is thus further divided into dyadic learning and group learning.

In relation to the VET context, in this thesis informal workplace learning is operationalized by the individual learning activity of *keeping up-to-date*, the dyadic learning activity of *feedback asking from supervisors*, and the group learning activity of *knowledge sharing*. This is in line with the theoretical consideration of individual and collective learning activities and with the importance and popularity of these learning activities to our research population – teachers within Vocational Education and Training (VET) schools (e.g. Boud & Middleton, 2003; Lohman, 2005; Runhaar et al., 2010).

Keeping up-to-date is defined as an individual learning activity in which employees keep themselves up-to-date with developments in the field and acquire external knowledge by scanning the external environment (e.g. reading newspapers and professional magazines and journals) (e.g. Geijsel, Sleegers, Stoel, & Krüger, 2009). This learning activity is comparable with the individual informal learning activities of studying subject matter literature, reading professional journals, and scanning external resources, as identified in earlier studies on informal workplace learning (e.g. van Woerkom, 2003; Kwakman, 2003).

Asking for feedback from supervisors is a dyadic learning activity during which employees focus on one-to-one dyadic information sharing with their supervisor, specifically asking for feedback from their supervisor about their work (e.g. discussing a new work approach with their supervisor) (e.g. Lohman, 2005). Supervisors are an important source of feedback for employees because of their expertise, status, and visibility within the organization (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002; Vancouver & Morrison, 1995). Furthermore, a study on the feedback seeking behavior of new employees and employees who change jobs, has shown that employees actually more often ask their supervisor for feedback than their colleagues (Brett, Feldman, & Weingart, 1990). Finally, this learning activity is comparable with such collaborative learning activities as feedback asking and asking for help (e.g. van Woerkom, 2003; Runhaar et al., 2010).

Knowledge sharing is a group learning activity in which employees have productive informal meetings or chats with each other in which they share their knowledge, successes, and failures (Kwakman, 2003). This is in line with previous defined informal learning activities such as sharing ideas and materials with each other, talking with others, and collaborating with others (e.g. Lohman, 2005; Lohman & Woolf, 2001).

Employee professional development in terms of career success

Career success can be defined as "the positive psychological and work-related outcomes accumulated as the result of one's work experiences" (Seibert & Kraimer, 2001, p. 2). Following the main stream literature in the field of career success (e.g. Hughes, 1937, van Maanen, 1977), in this definition a distinction is made between objective and subjective career success. The positive work-related outcomes refer to *objective career success*, which refers to such verifiable attainments as pay, promotions, and occupational status, which are directly observable, measureable, and verifiable by a third party. The positive psychological outcomes refer to *subjective career success* which is often indicated by employees' job and career satisfaction and refers to employees' reaction to their unfolding career experiences, focusing on

the internal satisfaction that employees have about their careers (e.g. Arthur, Khapova, & Wilderom, 2005; Heslin, 2005; Judge, Cable, Boudreau, & Bretz, 1995).

Understanding employee professional development from an individual differences perspective.

Self-identity approach. When considering the influence of individual differences factors on employees' professional development, scholars have mostly concentrated on the influence of such motivational factors as self-efficacy, learning motivation, enjoyment of helping others, career motivation and desire for upward mobility (e.g. Day & Allen, 2004; Ko, Kirsch, & King, 2005; Lin, 2007; Naquin & Holton, 2002; Wayne et al., 1999). However, employees do not only differ from each other in terms of their motivation, but, even more fundamentally, in how they perceive and identify themselves, that is, their self-identity (e.g. Yang et al., 2012). Recent studies have shown that the way in which employees perceive themselves and identify themselves with others, plays an important role in influencing their work behavior (e.g. Cole & Bruch, 2006; Johnson & Chang, 2006). Based on this self-identity perspective, and in order to create a chance to fully understand the influence of employees' self-identity on their professional development, both a domain general and a domain specific self-identity factor have been taken into account: employees' self-construal and employees' career identity.

Employees' *self-construal* determines the way in which individuals define themselves and construe their self-concept with reference to their social roles, groups, and relationships (Markus & Kitayama, 1991), and plays a central role in regulating individuals' cognition, emotion, and behavior (Johnson & Chang, 2006). Empirical studies have shown that employees' self-construal has an influence on their work behaviors, such as their organizational commitment (Johnson & Chang, 2006), their perceptions of fairness in the workplace (Johnson, Selenta, & Lord, 2006) and their participation in training activities (Yang et al., 2012). This empirical evidence lends its support to the concept of self-construal being brought into the research field of employee professional development. Employees' *career identity* represents how central their career is to their identity, and determines the direction of their career motivation. Employees' career identity determines a wide range of work behaviors and career decisions, such as searching for and accepting a job, changing career plans, and seeking training and new job experiences (London, 1983; 1993; Noe, Noe, & Bachhuber, 1990).

Motivational approach. Under the view that it is employees themselves that make their career development happen (Super, 1990; van der Sluis & Poell, 2003) and the wide spread evidence of the influence of employees' motivation on their professional development (e.g. Birdi, Allen & Warr, 1997; Noe & Wilk, 1993; Runhaar et al., 2010), employees' motivation

has also been taken into consideration in this thesis. More specifically, from the motivational approach, the focus in this thesis lies on the influence of employees' career motivation and employees' learning goal orientation. Employees' *career motivation* represents their motivation to develop themselves in their jobs and careers (London, 1983; 1993). Employees' *learning goal orientation* is their motivation to develop their competences by acquiring new skills and mastering new situations through learning and training (Dweck & Leggett, 1998; Vandewalle, 1997). Learning goal orientation makes employees willing to take risks and to have a high tolerance for setbacks in order to acquire new knowledge and skills, and in favor of long-term improvements (e.g. Chadwick & Raver, 2012; Bettencourt, 2004).

Understanding employee professional development from a situational perspective

In parallel to the individual differences perspective, research has also demonstrated the effect of organizational contexts on employee professional development (e.g. Chen & Huang, 2007; Collins & Smith, 2005; Levy, Cober, & Miller, 2002), which forms the situational perspective. In this thesis, the focus on the organizational contexts lies on the influence of supervisor and organizational support, high-commitment HRM (HC-HRM) and HRM system strength. As studies on employee professional development have already shown, work support is an important factor in stimulating employees' professional development (e.g. Maurer, Lippstrue, & Judge, 2008; Maurer, Weiss, & Barbeite, 2003; Noe & Wilk, 1993). Supervisor and organizational support play an important role in creating a supportive work environment in which employees feel free to develop themselves and to make mistakes in the process (Ardichvili, 2008; Zárraga & Bonache, 2003). *Supervisor support* can be defined as employees' perception that their supervisor values their contributions and cares about their well-being by understanding, recognizing, and satisfying their concerns and needs through individual consideration of each employee (e.g. Eisenberger et al., 2002; Geijsel et al., 2009); while *organizational support* is defined as employees' beliefs that the organization values their contributions and cares about their general well-being (Eisenberger, Cummings, Armeli, & Lynch, 1997; Eisenberger, Huntington, Hutchison, & Sowa, 1986).

HC-HRM can be another form of work support for employee professional development in an organization. HC-HRM generally involves a bundle of HR practices such as selective hiring, training and development, career opportunities, performance appraisal, employment security, and participative decision making (Arthur, 1992; Combs, Liu, Hall, & Ketchen, 2006; Boselie, Dietz, & Boon, 2005), which reinforce each other and increase employees' knowledge, skills, and abilities, empower employees to act, and motivate them to do so (Becker, Huselid,

Pickus, & Spratt, 1997; Delery & Shaw, 2001; Boxall & Macky, 2009). Just as with supervisor and organizational support, HC-HRM also provides support for employees' professional development by showing employees that an employer is willing to invest in the employees, cares about their general well-being and sees them as important assets to be developed (Collins & Smith, 2006; Gilbert, de Winne, & Sels, 2011; Sanders & Yang, *in press*). Where HC-HRM focuses on the content of HRM, *HRM system strength* focuses on the process of HRM and the perceptions and understanding of employees of the HRM content. Within this process-based approach, HRM is seen as a form of communication from the employer to the employee about which work behaviors are expected, supported and rewarded. Only when HRM system strength is strong, the HR messages will be understood by all employees within the organization as the employer has intended them (Bowen & Ostroff, 2004).

Against the described theoretical background, in this thesis the individual differences perspective in terms of self-identity and motivational factors, and the situational perspective in terms of supervisor support, organizational support, and HRM, are integrated to create an interactionist perspective and to form the main research question – *'To what extent do individual differences and situational factors jointly influence employees' professional development* – which is divided into four sub questions that will be answered in the four chapters of this thesis:

1. *To what extent do employees' career identity and self-construal jointly influence employees' view on career success?*
2. *To what extent do employees' career motivation and self-construal jointly influence their participation in informal workplace learning activities?*
3. *To what extent does employees' self-construal moderate the relationship between supervisor and organizational support and employees' participation in informal collaborative workplace learning?*
4. *To what extent does employees' learning goal orientation explain the relationship between the joint influence of HC-HRM and HRM system strength on employees' knowledge sharing?*

Overview of the chapters

The hypotheses of each chapter are summarized in Table 1.This thesis consists of six chapters. In this first chapter, a general overview is given of the context, the goal of the research, and the variables used in the research. An overview of the hypotheses of the research and the longitudinal data collection for the research related to employees' informal workplace learning are also presented.

Chapter 2 discusses the joint influence of employees' career identity and self-construal on their view of career success. In Study 1 in this chapter an experimental study was conducted to investigate the effect of priming respondents with one of two types of career identity – desire for upward mobility and work centrality – on employees' objective career success view or subjective career success view respectively. In Study 2, a survey study was used to replicate the findings of the experimental study and to check the influence of self-construal on the relationship between employee career identity and their objective and subjective view toward career success.

Chapter 3 discusses the extent to which employees' career motivation and self-construal can influence their participation in three types of informal workplace learning activities: keeping up-to-date, feedback asking from supervisors and knowledge sharing. Quantitative data were used to examine the effect of employee career motivation on employees' participation in the three types of informal workplace learning activities and how employee self-construal (individual, relational, and collective self-construal) adjusts the relationship between career motivation and the three types of informal learning.

Chapter 4 narrows the research focus on the effect of the support that employees receive in their workplace (i.e. supervisor and organizational support) and their self-construal on employee participation in two informal collaborative workplace learning activities: feedback asking from supervisors and knowledge sharing among team members. More specifically, two wave quantitative data were used to examine whether supervisor support had a positive influence on employee participation in feedback asking from supervisors and whether this relationship was strengthened by employees' relational self-construal. In the same vein it was examined whether organizational support had a positive influence on employee participation in knowledge sharing and whether this relationship was strengthened by employees' collective self-construal.

Chapter 5 reports a three wave longitudinal questionnaire study, aiming at investigating the extent to which employees' learning goal orientation can be used to explain the relationship between the influence of HC-HRM and HRM system strength on the one hand and employees'

knowledge sharing on the other hand. More specifically it was expected that HRM system strength reinforces the positive effect of HC-HRM on employees' knowledge sharing, and that this joint influence of HC-HRM and HRM system strength on employees' knowledge sharing was mediated by employees' learning goal orientation.

Chapter 6 presents a general discussion of the results of the individual studies. The limitations of the individual studies are discussed, together with the theoretical and practical implications of the individual studies.

Table 1. Summary of hypothesized relationships between independent and dependent variables

	Dependent variables / Independent variables	Keeping up-to-date	Feedback asking from supervisors	Knowledge sharing	Objective career success view	Subjective career success view
Chapter 2	Desire for upward mobility (DUM)				+	
	Work centrality (WC)					+
	DUM * Interdependent self-construal				+	
	WC * Independent self-construal					+
Chapter 3	Career motivation	+	+	+		
	Career motivation * ISC*	+				
	Career motivation * RSC*		+			
	Career motivation * CSC*			+		
Chapter 4	Supervisor support (SS)		+			
	Organizational support (OS)			+		
	SS * RSC		+			
	OS * CSC			+		
Chapter 5	HC-HRM * HRM system strength			+		
	Learning goal orientation as a mediator of HC-HRM * HRM system strength			+		

* ISC = Individual self-construal, RSC = relational self-construal, CSC = collective self-construal

Research methods

Employee career success

Sample and procedure. Chapter 2 reports a mixed method research design – an experimental design in combination with a survey study – to test the effect of employee career identity and self-construal on two types of career success. In the experimental study, the sample consisted of 106 employees working in the educational, governmental, medical, and business services sectors. A study on careers was advertised via the alumni network of a Dutch university and via personal contacts on such social media as Facebook and LinkedIn. Employees who indicated that they were willing to participate in the study received an email with a link to an online questionnaire.

In the survey study the sample consisted of 72 teachers from three secondary and seven primary schools in the Netherlands, and ten supervisors. The supervisors were contacted by phone and asked whether they wanted to participate in this study together with their teachers. After the confirmation of the supervisors, each supervisor was send a paper questionnaire to fill out him/herself and a maximum of 15 paper questionnaires to distribute to their teachers. The questionnaires could be filled out both during work and leisure time, and the filled out questionnaires were send back to the researcher within two weeks after the distribution of the questionnaires.

Measures and data analysis. In the experimental study the priming technique was applied to operationalize employee career identity, and in order to measure participants' career success view, participants rated the importance of 12 indicators of career success. One-way ANOVAs were conducted for data analysis.

In the survey study teachers reported their career identity and self-construal on five-point Likert scales, while their career success was evaluated by their direct supervisors. Aiken and West's (1991) method for testing two-way interaction effects was used for data analysis.

Employee informal workplace learning

Sample and procedure. To answer the research questions related to employees' informal workplace learning a three-wave longitudinal questionnaire study was conducted in 2010, 2011 and 2012 within the teaching staff of six Dutch VET schools. The VET schools were located across the country and ranged in size from 500 to 3000 employees. During the course of these three years, eventually a sample of 689 employees within the teaching staff of these six Dutch VET schools was collected.

The analyses for the studies presented in the chapters related to employees' informal workplace learning (Chapters 3, 4 and 5), are based on the several waves of data collection within the longitudinal data collection. The analyses in Chapter 3 are based on the first wave of data collection with data of 323 teachers within four VET schools. The analyses in Chapter 4 are based on the first and second wave of data collection with data of 145 teachers within four VET schools. The analyses in Chapter 5 are based on all three waves of data collection with data of 689 teachers in all six VET schools.

Because of the longitudinal nature of the data, the data in the different chapters are related to each other (see for an overview Table 2). However, each chapter has its own focus: both Chapters 2 and 3 take employees' self-construal into account, but in interaction with different variables – in interaction with career motivation in Chapter 2 and in interaction with supervisor and organizational support in Chapter 3. Chapter 4 focuses on the mediating role of employees' learning goal orientation on the relationship between HRM and employees' informal workplace learning.

For each wave of data collection an online questionnaire was distributed via email to the employees within the teaching staff of the six VET schools who, before the first wave of data collection, had indicated to their line managers their willingness to participate in this study. The questionnaire could be filled out both during work and leisure time, and because of the length of the questionnaire[1] the teachers were provided the option to fill out the questionnaire in parts, meaning that they could stop with filling out the questionnaire and continue at a later time.

Measures and data analysis. In Chapter 3 cross-sectional data from Wave 1 have been used to test whether employees' informal workplace learning can be explained by the joint influence of employees' career motivation and self-construal. Participants rated their career motivation, self-construal and participation in informal workplace learning activities on a five-point Likert scales. The hypotheses were tested using Aiken and West's (1991) method for testing two-way interaction effects.

In Chapter 4 two-wave data (Wave 1 and Wave 2) have been used to examine the joint influence of workplace support – in terms of supervisor and organizational support – and employees' self-construal – in terms of relational and collective self-construal – on two types of informal collaborative workplace learning: feedback asking from supervisors and knowledge sharing. During the first wave of data collection participants rated their self-construal and

[1] More scales were included in the questionnaire for data collection for other projects

during the second wave of data collection participants rated supervisor and organizational support and their participation in the two types of informal collaborative learning. The Aiken and West (1991) procedure for testing two-way interaction effects was used to test the moderation hypotheses.

In Chapter 5 three-wave data have been used based on all three waves of data collection, to test the hypothesis that the joint influence of HC-HRM and HRM system strength on employees' knowledge sharing can be explained by employees' learning goal orientation. All variables (i.e. HC-HRM, HRM system strength, learning goal orientation, and knowledge sharing) were rated by the participants on five-point Likert scales. To test the hypotheses a latent growth model was used (McArdle, 2009). To test the moderation hypothesis an interaction term between HC-HRM and HRM Strength was calculated. To test the mediation hypothesis of employees' learning goal orientation a moderated mediation model was applied. The indirect effect was assessed by calculating 95% confidence intervals (CI) around the estimate of the indirect path coefficient. The indirect effect was considered statistically significant when the CI did not include zero within its limits (Yuan & Mackinnon, 2009)[2].

[2] During the course of data collection for the longitudinal questionnaire study the questionnaire has been changed, with both variables being deleted and variables being added. Since employees' self-construal in this thesis is regarded as a stable individual characteristic (e.g. Johnson, Selenta, & Lord, 2006) it has only been measured in four VET schools in the first wave of data collection. In the other two VET schools the variables of supervisor and organizational support have been added instead of employees' self-construal. In the same vein, HRM system strength in Wave 1 of the data collection was only measured within five of the six VET schools. Finally, HC-HRM was only measured at Wave 2 and Wave 3 of the data collection.

Table 2. Overview of data used in longitudinal questionnaire study

Data collected / Chapters	Data collected in	Number of VET schools	Number of respondents	Overlap of respondents with previous chapter(s)
Chapter 3	2010	4	323	*NA*
Chapter 4	2010 and 2011	4	Wave 1: 145 Wave 2: 145 (100% overlap Wave 1 and Wave 2)	All respondents of chapter 3 are also in chapter 4
Chapter 5	2010, 2011 and 2012	6	Wave 1: 433 Wave 2: 401 (overlap Wave 1: 62%) Wave 3: 339 (overlap Wave 1: 58%, overlap Wave 2: 67%)	All respondents of chapter 3 and chapter 4 are also in chapter 5.

2

An identity approach on employees' career success: The joint effect of career identity and self-construal[3]

[3] This chapter is a modified version of the article submitted as: Van Rijn, M.B., Yang, H. & Sanders, K. An identity approach on employees' career success: The joint influence of career identity and self-construal. This chapter was presented at the Kurt Lewin Institute Conference in 2012: 'What determines how people evaluate their career success? The joint effect of individuals' career identity and self-construal on their career success perspective', Zeist, The Netherlands.

Abstract

In this paper we report two studies taking an identity approach towards employee career success. In Study 1 we investigate the influence of employees' career identity – in terms of desire for upward mobility and work centrality – on their objective and subjective career success. In total 106 employees were first primed with either desire for upward mobility or work centrality and then asked about how they would evaluate career success. Results showed that desire for upward mobility had a positive impact on employees' objective view of career success, while work centrality had a positive impact on employees' subjective view of career success. In Study 2, we replicated the experimental study with a questionnaire survey and further examined how the relationship between career identity and career success is adjusted by employees' interdependent and independent self-construal. Data were collected from 72 teachers. Participants reported their own career identity and self-construal, and their supervisor evaluated their career success. The results confirmed the findings of Study 1. In addition, the results showed that the effect of desire for upward mobility on objective career success was stronger for employees with a strong interdependent self-construal. These findings are discussed in relation to the importance of employees' self-identity to their career success.

Introduction

Careers are an essential part of our lives. For most of us our career lasts a lifetime and we spend more of our waking lives working than doing anything else. In other words, our careers play a central role in our lives, and most people strive to have a successful career. Seibert and Kraimer (2001; p. 2) define career success as "the positive psychological and work-related outcomes accumulated as the result of one's work experiences". In line with the mainstream literature in the field of career success (e.g. Hughes, 1937, Van Maanen, 1977), this definition has made a distinction between objective and subjective career success. The positive work-related outcomes refer to objective career success. *Objective career success* is directly observable, measureable and verifiable by a third party and is often indicated by verifiable attainment, such as pay, promotions and occupational status. The positive psychological outcomes refer to *subjective career success*, which refers to employees' reaction to their unfolding career experiences. It focuses on the internal satisfaction that employees have about their careers. The indicators commonly used for subjective career success are employees' job and career satisfaction (e.g. Arthur, Khapova, & Wilderom, 2005; Heslin, 2005; Judge, Cable, Boudreau, & Bretz, 1995).

A successful career is important for both employees and organizations. With careers shifting from lifetime employment with one organization to boundary-less careers, there is a need for employees to manage their own career, to take initiatives and responsibilities to effectively manage their career, achieve their career goals, and have a successful career (Hall, 1996; Wayne, Liden, Kraimer, & Graf, 1999). For organizations, helping employees with their career success can lead to a more committed workforce, which will in turn increase the organizations' productivity (Judge, Higgins, Thoresen, & Barrick, 1999). Furthermore, talented employees with a successful career make up the pool of the future senior managers within the organization (Wayne et al., 1999).

Scholars have long suggested that employees' career and career development need to be understood from the perspective of employees' identity. In his theory on career development, Super (1953; 1980), for example, perceived career as "a self-identity unfolding process in the work domain" and argued that career development is the process of developing and implementing a self-concept in the work related domain: the awareness that one is different from others and an answer to the question 'Who am I?' at the workplace. Employees' career pattern, occupational success and degree of satisfaction attained from work are largely determined by the degree to which they are able to implement their prominent self-concepts in their careers (Keller, 2006; Savickas, 2002). In a similar vein, Schein (1978; 1996) used the

term of "career anchor" to differentiate employees' career concept or career identity. A career anchor is employee's self-concept consisting of self-perceived talents, needs and values (Ellison & Schreuder, 2000; Feldman & Bolion, 1996; Schein, 1996). Employees develop a career anchor during the early years of their careers. Once it becomes stable, it in turn influences employees' career choices and decisions (Schein, 1978; 1993). Similarly, London (1983; 1993) has proposed the concept of career identity to describe the extent to which employees define themselves by their work, which determines the direction of their career motivation. In other words, it prescribes employees' focus on certain work behaviors and career decisions, and by doing so influences a wide range of work behaviors and career decisions, such as searching for and accepting a new job, changing one's career plans, and seeking training and new job experiences (London, 1983; 1993; Noe, Noe, & Bachhuber, 1990). In this paper we adopt the concept of career identity to investigate the influence of employee career concept on their career success.

The influence of employees' career identity on their career development and work behaviors has indeed received some attention in past research. Empirical studies, for example, have shown that employees' career identity had an influence on their empowerment (London, 1993), choice for a certain occupational type and job satisfaction (Ellison & Schreuder, 2000), organizational commitment (Coetzee, Schreuder, & Tladinyane, 2007), and career resilience (Vuuren & Fourie, 2000). However, to our knowledge, studies on the influence of employees' career identity on career success have not been fully addressed yet.

By taking an identity approach, our first goal of this study is to investigate the influence of employees' career identity on their career success. We take into account the two types of career identity distinguished by London (1983; 1993) – desire for upward mobility and work centrality – in determining the influence of employees' career identity on their subjective and objective career success. In our view, an identity approach which complements the traditional motivational approach creates a chance to extend our understanding of employees' career success.

Second, this study also extends the identity view towards career and career development by taking a domain-general self-identity concept into account. We investigated the joint influence of a domain-specific identity factor – employees' career identity – and a domain-general identity factor – employees' self-construal – on employee career success. Super (1953; 1980) has suggested that individuals not only develop a self-concept in the work related domain, but a self-concept for each domain in their live (e.g. employees, husband, friends etc.). A full understanding of career concept needs to include other types of self-concept and adopt a

comprehensive view in examining its impacts on employee workplace behavior (Savickas, 2002). In a similar vein, researchers in the field of career counseling have argued that individuals' career identity influences their personal identity and vice versa, and that the two types of identity should be integrated with each other in order to reach occupational wellness (e.g. Dorn, 1992; Keller, 2006; Robitschek & DeBell, 2002).

Finally, the last goal that we attempt to achieve in this study is related to methodological advancement. We adopt a multi-method approach (an experimental study and a questionnaire study) to test our research hypotheses. Up till now most studies conducted in the field of career success have taken a single method approach, by conducting either a qualitative interview study or quantitative questionnaire survey. Scholars have long advocated for a multi-method or mixed-method research design to deepen our understanding and to increase the study accuracy and validity (Campbell & Fiske, 1959; Jick, 1979; Hussein, 2009). In response to this call we combined an experimental study using the priming technique (Study 1) with a questionnaire study (Study 2) to investigate the relationship between employees' career identity, self-construal and career success. The experimental design helps to establish the cause-and-effect link between employees' career identity and their career success. The questionnaire study strengthens the external validity of our study, generalizing the findings to a real workplace setting.

In the next section, we first introduce and define the concepts of career identity and self-construal, theoretically reasoning how each type of career identity can trigger either employees' subjective career success or employees' objective career success and how employees' self-construal can further adjust the relationship between employees' career identity and career success. We then describe the set-up and results of the experimental and survey study that have been conducted to test our hypotheses. The paper will be concluded by a discussion of the theoretical and practical implications of our findings.

The influence of employees' career identity on their career success

London (1983) has proposed and distinguished two types of career identity: *desire for upward mobility* and *work centrality*. Employees with a desire for upward mobility identity, focus on such goals as being accomplished, recognized, dominant and advanced within the organization (London, 1983; 1993). According to their view, career and career development are externally focused and can be understood in terms of "climbing the career ladder" or "getting to the top". Recognition, for example, will require employees to stand out from the crowd, and dominance will be best displayed if employees attract attention from colleagues by assuming a

leadership position (London 1983; 1993; Noe et al., 1990). Empirical studies have also suggested that a strong desire for upward mobility leads to employees being focused on being prepared for a managerial position (Wayne et al., 1999) and having a strong focus on receiving promotions and salary increases (Judge et al., 1995; Mael, Waldman, & Mulqueen, 2001). It is then expected that:

Hypothesis 1: Career identity in terms of desire for upward mobility tends to direct employees to take an objective perspective on career success.

Employees with a work centrality identity focus their career development on improving their work. They tend to put their work in the central place of their career development. According to their view, work related processes and outcomes are the most important areas for career advancement from which one should derive satisfaction (London, 1983). Although work processes and outcomes can be evaluated by external indicators (such as promotion, recognition, and bonuses), for employees with a strong work centrality identity it is mainly experienced and evaluated by internal indicators: a strong work centrality makes employees' focus on how they can satisfy their own internal standards when it comes to improving work related processes and outcomes (London, 1983; 1993). In this respect the work centrality identity directs employees to such goals as finding significant jobs in which they can submerge themselves as autonomous professionals, use a variety of skills and can become committed to both their work and the organization (London, 1983; 1993; Noe et al., 1990). Empirical studies have also suggested that employees with a strong commitment to their work, which is the core of a work centrality identity, tend to direct their focus towards the goal of achieving job and career satisfaction (e.g. Aryee, Wyatt, & Stone, 1996; Nabi, 1999; Ng, Eby, Sorensen, & Feldman, 2005). We thus propose that:

Hypothesis 2: Career identity in terms of work centrality tends to direct employees to take a subjective perspective on career success.

The moderating effect of employees' self-construal

Self-construal refers to how individuals define themselves and construe their self-concepts with reference to their social roles, groups and relationships (Markus & Kitayama, 1991). Theoretical models and empirical evidence have shown that self-construal is a domain-general concept of self-identity and is one of the fundamental concepts in influencing

individuals' decisions and behaviors (e.g. Johnson & Chang, 2006; Johnson, Chang, & Yang, 2010; van Rijn, Yang, & Sanders, 2013; Yang, Sanders, & Bumatay, 2012).

In previous studies, the function of self-construal has been studied mainly in terms of main effects, for example, the effect of employees' self-construal on their organizational commitment (Johnson & Chang, 2006) and work values (Gahan & Abeysekera, 2009). Recently, Johnson et al. (2010) have proposed that self-construal as a domain general variable may reinforce the effect of perception and motivation on employees' behavior. In line with this reasoning, empirical studies have, for example, shown that employees' self-construal strengthens the relationship between employees' career motivation and their engagement in informal workplace learning activities (van Rijn, et al., 2013), and the relationship between employees' perceptions of training and their engagement in training activities (Yang et al., 2012). This empirical evidence lends its support to the identity factor of self-construal being brought into the relationship between employees' career identity and their career success as a moderating variable.

In the domain of social psychology, two types of self-construal have been traditionally distinguished: *interdependent* and *independent* (Markus & Kitayama, 1991). *Interdependent self-construal* tends to guide individuals to see themselves as connected to significant others or to the groups to which they belong. They act primarily according to the social norms, standards and expectations of others (Markus & Kitayam, 1991; Singelis, 1994; Johnson & Chang, 2006). Success or excellence for them is to a large extent defined by social approval and being accepted by social norms (Singelis, 1994), thus external and socially approved features as status, roles, and relationships become important in evaluating success in general. This strong focus on getting others' approval by striving to fulfill social norms and standards may make employees with a strong interdependent self-construal especially sensitive to achieving a high status and being recognized by others setting such career goals as being recognized and having a high status. In other words, an interdependent self-construal highlights the effect of employees' career identity in terms of desire for upward mobility and maximizes the effect of desire for upward mobility on employees' objective career success. We thus propose that:

Hypothesis 3: Interdependent self-construal strengthens the positive effect of desire for upward mobility on employees' taking an objective perspective on career success.

An *independent self-construal* guides individuals to see themselves as separate or unconnected from others. An independent self-construal guides individuals to construct themselves as the ones whose behavior is only made meaningful by reference to their own internal thoughts, feelings, and actions, and not by reference to the thoughts, feelings, and actions of others (Markus & Kitayama, 1991). In other words, an independent self-construal guides individuals to see themselves as an autonomous entity with its own unique qualities, driving them to act primarily according to their own thoughts and feelings, and their own self-interest (Johnson & Chang, 2006; Johnson, et al., 2010).

The fact that an independent self-construal directs individuals' attention towards their own internal thoughts, feelings, and actions makes the contextual and surrounding related factors less significant in evaluating success. In the view of independent self-construal, success or excellence should be evaluated or judged to a large extent according to meeting own internalized standards of excellence, instead of meeting those socially recognized standards (Singelis, 1994). An independent self-construal thus creates a chance for work centrality to reach its full potential and have its maximum effect on employees' view of subjective career success. We thus propose that:

Hypothesis 4: Independent self-construal strengthens the positive effect of work centrality on employees' taking a subjective perspective on career success.

Study 1

The purpose of Study 1 was to test the effect of employees' career identity on their view of career success. An experimental method was employed with the use of the priming technique. We manipulated participants' desire for upward mobility and work centrality by using the priming technique. The priming technique is an instructive manipulation which is intended to activate participants' internal mental representation, without participants realizing the relation between the activation event and the later task (Bargh & Chartrand, 2000).

The independent variables were desire for upward mobility (two levels: weak versus strong) and work centrality (two levels: weak versus strong). Employees' objective and subjective career success were the two dependent variables. We expected that participants primed with desire for upward mobility would rate indicators of objective career success as important for evaluating career success; while participants primed with work centrality would

rate indicators of subjective career success as important for evaluating career success.

Method

Sample and procedure.

Participants were 106 employees (64 women, 42 men), with a mean age of 38 years old, ranging from 22 to 68 years. Most of the participants were working in the educational sector (28.3%), the governmental sector (14.2%), the medical sector (12.3%), and the business services sector (10.4%). Their average length of work experience was between five and ten years. Regarding their educational level, 2.8% finished high school, 14.2% finished vocational training, 36.8% received a bachelor's degree, 41.5% received a master's degree, and 4.7% received a Ph.D. Preliminary analyses showed that none of the demographic variables had a significant effect on employees' view of career success, so in further analyses these variables have not been incorporated.

We advertised a study on careers via the alumni network of a Dutch university and via personal contacts on social media such as Facebook and Linkedin. Participants who were willing to take part in the study received an email with a link to an online questionnaire, and were told that they would participate in a study about careers. In this email participants were also assured that their answers would be confidential. After clicking on the link, participants were redirected to the online questionnaire, consisting of three parts.

In the first part of the questionnaire, participants were asked to provide some demographic information, such as their gender, age, education, and job. The second part of the questionnaire contained the priming materials. Participants were randomly assigned to read one of four vignettes (a strong (N = 26) and a weak (N = 25) version of desire for upward mobility, and a strong (N = 31) and a weak (N = 24) version of work centrality) (for more details see below). After reading the vignette, participants were asked to report the similarities between the career case described in the vignette and their own career. Finally, in part three of the questionnaire, participants evaluated the two types of career success by ranking the importance of twelve indicators of career success (six indicators for objective career success and six indicators for subjective career success). It took participants 10 to 15 minutes to fill out the questionnaire.

Manipulation of Two Types of Career Identity. Manipulation of employees' career identity consisted of two parts. We first manipulated desire for upward mobility and work centrality by using the priming technique. The decision of priming career identity was based on the fact that the two types of career identity co-exist in employees. Depending on situational

cues, one of them will be made significant in employees' internal mental representation (London, 1983). Following London (1983), we assumed that desire for upward mobility and work centrality are suitable for priming. We used vignettes to prime/activate participants' career identity in terms of desire for upward mobility and work centrality. The vignettes described the career case of an employee called Bo. Each independent variable was manipulated with two levels (weak versus strong). For the independent variable of *desire for upward mobility,* in the strong condition, Bo was described as someone who views career development as climbing a ladder in order to reach the top, indicated by having a big salary and promotions. In the weak condition, Bo was described as someone who views his/her career as something that provides him/her with stability in life and a good way to socialize with other people, i.e. his/her colleagues. It is thus not important for him/her to reach the top in career development. For the independent variable of *work centrality,* in the strong condition, Bo is described as someone who views work as his/her hobby. An enjoyable career for Bo means being able to develop new knowledge and skills, and to act as an autonomous professional. In the *weak condition*, Bo is described as someone who sees a career as a means for an end: work provides essentials for life (See Appendix I for the four vignettes).

Second, after having read the vignettes, participants were asked to compare and write down the similarities between the career case in the vignette and their own career. Through this similarity comparison process, participants' career identity in terms of desire for upward mobility or work centrality is expected to be further highlighted and activated. At the same time, we use the similarities that participants mentioned as a manipulation check, indicating whether the participants read the vignette carefully and understood the vignette as intended.

Measures of dependent variables. To assess the *dependent variables* of objective and subjective career success, we formulated a list of indicators encompassing both types of career success. Participants were asked to rank each of these indicators in terms of importance for evaluating career success. The most important one was given a mark of 12 and the least important one was given a mark of 1. For objective career success we used six indicators: salary, number of received bonuses, number of promotions, position within the organization, status within the organization, and job performance. For subjective career success we also used six indicators: job satisfaction, career satisfaction, attainment of set goals, enjoyment of the job, work-life balance, and amount of leisure time besides the job.

Results

Manipulation check.

In order to check whether the participants had understood the vignettes as intended, a manipulation check was conducted. Two independent raters read through the four different vignettes and the similarities that each participant had wrote down between his/her career and the career of Bo. Based on the similarities mentioned by the participants, each rater allocated each participant to one of the four versions of the vignette. For example, when similarities that participants mentioned were: 'Standing still and not being promoted', 'I'm now changing jobs in order to be able to grow', and 'Wanting to grow within your career', raters allocated them to the strong desire for upward mobility condition. When participants mentioned such similarities as: 'I don't like too much stress', 'Money is not the most important thing', 'I have been working for the same employer for a long time and have always been satisfied with this', and 'I don't want to become a manager', raters allocated them to the weak desire for upward mobility condition. Raters allocated participants to the strong work centrality condition when they mentioned such similarities as: 'Getting new jobs in order to gain new skills', 'The urge to develop new possibilities and ideas', 'Sometimes also working in my own private time', 'Keeping challenges in your work', and 'Being able and willing to keep developing yourself'. Finally, when participants mentioned such similarities as: 'Family is always number one', 'You do need to keep living when you work', 'Working closer to home gives you more time for other things', 'You work to live and don't live to work', 'That a career is not the most important thing', and 'Raising my kids was my number one priority until they became older and more independent', raters allocated them to the weak work centrality condition. The average correct allocation rate for Rater 1 was 54%, while for Rater 2 it was 65%.

This means that in respectively 46% and 35% of the cases, the raters incorrectly allocated participants to the different conditions. Participants that were either in the strong desire for upward mobility or strong work centrality conditions were incorrectly allocated by the raters in 41 cases. In 31 from those 41 cases (76%) the raters incorrectly allocated participants who were in the strong desire for upward mobility condition to the strong work centrality condition and vice versa. Similarly, participants that were either in the weak desire for upward mobility or weak work centrality conditions were incorrectly allocated by the raters in 45 cases. In 28 of these 45 cases (62%) the raters incorrectly allocated participants who were in the weak desire for upward mobility condition to the weak work centrality condition and vice versa. A possible reason for these incorrect allocations could be the short answers that the participants gave in these cases. For example, words like 'development', 'persistence', 'push

through', 'being ambitious', 'opportunities', and 'chances' were given in the two strong conditions. All of these answers are applicable to both the strong desire for upward mobility condition and the strong work centrality condition. For example, in the strong desire for upward mobility condition Bo is ambitious in terms of climbing the career ladder en uses opportunities and chances that enable him/her to climb the career ladder, however, in the strong work centrality condition Bo is also ambitious and uses opportunities and chances but then in terms of developing his/her knowledge and skills. Similarly, in case of the incorrect allocations in the two weak conditions participants gave answers like: 'setting priorities', 'fully commit to your principles', 'career is not important', and 'pleasant'. All of these answers are applicable to both the weak desire for upward mobility and the weak work centrality condition. In the weak desire for upward mobility condition Bo prioritizes his/her social life above work and a career is not important but security and friendly colleagues are, while in the weak work centrality condition Bo prioritizes his/her family above work, and family is more important than a career.

In sum, the manipulation check shows that most respondents seemed to understand the vignettes reasonably well. The raters were able to correctly allocate participants to the conditions in 54% and 65% of the cases. This also means that in 46% and 35% of the cases the raters incorrectly allocated the participants to the conditions. The results suggest that this is caused by the short answers that the participants gave which could be interpreted in more than one way, causing the raters to incorrectly allocate them to the conditions. However, the answers that these participants gave were all applicable to the condition to which they were assigned, suggesting that these participants also understood the vignettes as intended.

Hypotheses testing

Hypothesis 1 (H1) predicted that desire for upward mobility directs employees to take an objective view on career success. One-way Anova's were conducted (see Table 1 for an overview of the results) to test this hypothesis. When primed with desire for upward mobility, the participants in the strong condition rated the importance of 'number of received promotions' as an indicator of objective career success significantly higher (M = 4.35, SD = 2.48) than participants in the weak condition (M = 3.08, SD = 2,20), $F(1,49) = 3.71$, $p < .05$. For the indicators of 'number of received bonuses' ($M_{strong} = 3.15$, SD = 2.65; $M_{weak} = 2.36$, SD = 1.58) and 'status within the organization' ($M_{strong} = 5.08$, SD = 3.03; $M_{weak} = 4.48$, SD = 3.12), a similar pattern emerged, although the differences were not statistically significant. These results are in line with Hypothesis 1. However, the results for the indicators of 'salary', 'position within the organization' and 'job performance' showed the opposite: participants in the strong

condition rating it as less important (M_{salary} = 6.88, SD = 3,08; $M_{position}$ = 5.46, SD = 3.00; $M_{performance}$ = 5.54, SD = 2.58) than participants in the weak condition (M_{salary} = 7.96, SD = 2.57; $M_{position}$ = 5.84, SD = 2.93; $M_{performance}$ = 6.32, SD = 2.46), although these differences were not statistically significant. Thus Hypothesis 1 could be partially confirmed.

Hypothesis 2 (H2) predicted that career identity in terms of work centrality directs employees to take a subjective view on career success. Results of the one-way Anova analyses (see Table 2) showed that, when primed with work centrality, participants in the strong condition (M = 11.00, SD = 1.81) rated the subjective career success indicator 'job enjoyment' as more important than participants in the weak condition (M = 9.38, SD = 3.20), $F(1,53) = 5.68$, $p < .05$. A similar pattern emerged for four out of the five other indicators of subjective career success: job satisfaction (M_{strong} = 9.16, SD = 2.56; M_{weak} = 8.87, SD = 3.47), career satisfaction (M_{strong} = 7.55, SD = 2.50; M_{weak} = 6.75, SD = 2.79), attainment of set goals (M_{strong} = 6.32, SD = 3.06; M_{weak} = 5.83, SD = 2.18) and work-life balance (M_{strong} = 8.10, SD = 2.80; M_{weak} = 7.88, SD = 3.42), but the differences were not statistically significant. However, the results for the indicator of 'amount of leisure time' showed the opposite pattern: participants in the strong condition rated it as less important (M = 6.19, SD = .2.86) than participants in the weak condition (M = 6.42, SD = 3.74), although this difference was not statistically significant. Thus hypothesis 2 could be partially confirmed.

Table 1. Results of one-way Anova's of the priming effect of desire for upward mobility

Indicators of career success	Mean rank weak condition	Mean rank strong condition	One-way ANOVA	Significance level
Objective career success				
Salary	7.96	6.88	F (1, 49) = 1.83	p = .09
Received bonuses	2.36	3.15	F (1, 49) = 1.67	p = .10
Number of promotions	3.08	4.35	F (1, 49) = 3.71	p = .03*
Position in the organization	5.84	5.46	F (1, 49) = .21	p = .33
Status in the organization	4.48	5.08	F (1, 49) = .50	p = .25
Job performance	6.32	5.54	F (1, 49) = 1.22	p = .14
Subjective career success				
Job satisfaction	10.44	9.73	F (1, 49) = 1.70	p = .10
Career satisfaction	6.44	7.38	F (1, 49) = 1.26	p = .13
Attainment of set goals	6.16	6.27	F (1, 49) = .03	p = .44
Enjoyment of the job	10.40	9.96	F (1, 49) = .37	p = .27
Work-life balance	7.96	7.65	F (1, 49) = .11	p = .37
Amount of leisure time	6.56	6.54	F (1, 49) = .00	p = .48

† $p < .10$, * $p < .05$, ** $p < .01$

Table 2. Results of one-way Anova's of the priming effect of work centrality

Indicators of career success	Mean rank weak condition	Mean rank strong condition	One-way ANOVA	Significance level
Subjective career success				
Job satisfaction	8.87	9.16	F (1, 53) = .12	p = .36
Career satisfaction	6.75	7.55	F (1, 53) = 1.25	p = .14
Attainment of set goals	5.83	6.32	F (1, 53) = .44	p = .25
Enjoyment of job	9.38	11.00	F (1, 53) = .5.68	p = .01*
Work-life balance	7.88	8.10	F (1, 53) = .07	p = .40
Amount of leisure time	6.42	6.19	F (1, 53) = .06	p = .40
Objective career success				
Salary	7.92	7.87	F (1, 53) = .00	p = .48
Received bonuses	3.87	2.32	F (1, 53) = 4.83	p = .02*
Number of promotions	3.33	3.48	F (1, 53) = .04	P = .42
Position in the organization	6.79	5.45	F (1, 53) = 2.85	p = .05†
Status in the organization	5.42	4.84	F (1, 53) = .54	p = .23
Job performance	5.54	5.71	F (1, 53) = .07	p = .39

† p < .10, * p < .05, ** p < .01

Discussion

In Study 1, the effect of two types of employee career identity on employees' view of career success were investigated. The overall findings partly supported Hypotheses 1 and 2, and showed that desire for upward mobility tends to lead to employees' taking an objective view on career success, especially in terms of the importance of the 'number of received promotions'. Work centrality, on the other hand, tends to lead to employees' taking a subjective view of career success, especially highlighting the importance of 'job enjoyment'.

However, we did not find significant differences across other indicators of objective and subjective career success. We suspect that the social desirability bias might be one of the causes for these unexpected findings. When evaluating the criteria related to career success, participants may have the tendency to present themselves in the best possible light for either favorable self-presentation or impression management (e.g. Fisher, 1993; Fisher & Katz, 2000). The question whether you work because you enjoy your job and want to develop your knowledge and skills, or you work because you want to make money and obtain a high status position within an organization is a sensitive issue, especially in the Netherlands where the study was conducted. The Netherlands can be characterized as a 'feminine' country (Hofstede, 2001). Where masculinity is about ego enhancement and stands for a preference in society for achievement and material success, femininity is about relationship enhancement and stands for a preference for modesty and caring for the weak (Hofstede, 1980; 2001). In the Dutch feminine society it is, for example, not socially accepted to boast that "I work because I want to make money and want to achieve a high status". This may explain why no matter in which condition the participants were in, the indicators of subjective career success were rated as more important than the indicators of objective career success, and the manipulation failed on the objective career success indicators of salary, position within the organization, and job performance.

To minimize the social desirability bias, in Study 2 we used behavioral indicators as a measure of employees' subjective or objective career success. This information was collected from their direct supervisor rather than reported by employees themselves. Furthermore, in Study 2 the concept of self-construal was integrated into the relationship between career identity and two types of career success.

Study 2

Method

Sample and procedure.

Data were collected from the educational sector in the Netherlands. In total 72 teachers (80.3% female) from three secondary and seven primary schools in the Netherlands filled out a survey answering questions about their career identity and self-construal. The teachers had an average age around 40. Their average length of work experience was between 16 and 20 years. Regarding their educational level, 9.7% finished vocational training, 75% received a bachelor's degree, 11.1% received a master's degree, and 2.8% received another type of education. In addition, ten supervisors of the teachers participated in this study by evaluating teachers' subjective and objective career success.

Eleven supervisors within ten schools in the Netherlands were contacted by phone. They were asked whether they were interested in participating, together with their teachers, in this study. In total ten supervisors in ten schools agreed to participate in this study. After the supervisors confirmed their participation, they received a minimum of five and a maximum of 15 paper questionnaires to distribute to their teachers. In total 130 questionnaires were distributed and 72 filled out questionnaires were returned (response rate: 55.4%). The supervisors filled out the questionnaire to evaluate the career success of each teacher under their direct supervision.

To match the teacher and supervisor questionnaires a research assistant made a list in which every teacher that was asked to participate in the questionnaire received a number. In the supervisors' questionnaire the name of the teacher that they had to evaluate was indicated, while in the teachers' questionnaire the number of the teacher was indicated. Supervisors were instructed to give each teacher the questionnaire with that teachers' number indicated on the questionnaire. After the researcher received the completed questionnaires, the teacher questionnaires and supervisor questionnaires were paired with each other. The teachers and supervisors could complete the questionnaire both during work and leisure time. In the introduction of the questionnaires they were informed about the goal of this study and assured that their responses would be kept confidential and only used for scientific purpose. All questionnaires were returned within two weeks.

Measurements

All of the items in the questionnaire were measured using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

Two types of career identity were measured with a scale developed on the basis of London's work (1983, 1993). The data were collected from teachers themselves. Desire for upward mobility was measured with six items (α = .68), e.g., *"A job with a higher social status than teaching is my wish*" and *"I want to be in a leadership position."* Five items were used to measure work centrality (α = .68), e.g., *"My work as a teacher is an important part of my life"* and *"I am proud of being a teacher.*"

Two types of self-construal were measured by adapting items form past published studies (Brewer & Chen, 2007; Triandis, 1995; Triandis, Bontempo, Villareal, & Asai, 1988; Van de Vliert, Yang, Wang, & Ren, 2013). The data were collected from teachers themselves. Seven items were used to measure interdependent self-construal (α = .70), e.g., *"What is good for my organization is also good for me"* and *"I prefer a position in a successful organization over one where I would succeed alone"*. Nine items were used to measure independent self-construal (α = .72), e.g., *"I enjoy being unique"* and *"The most important thing in my life is to make myself happy"*.

Objective and subjective career success were evaluated by each teacher's supervisor. Supervisors indicated on a five-point Likert scale (1 = never involved to 5 = totally involved) to which extent teachers participated in activities that are either related to achieving objective career success or to achieving subjective career success. Five items were used to measure objective career success (α = .86), e.g., *"To what extent is the teacher looking for career opportunities to move up?"* and *"To what extent is the teacher using every opportunity to become a supervisor?"* Six items were used to measure subjective career success (α = .87), e.g., *"To what extent is the teacher looking for ways to get the best out of the students?"* and *"To what extent is the teacher investing more time and effort to be a professional expert rather than to be a member of the school board?"*

In addition, we also collected information about teachers' demographic characteristics including age, sex, tenure, and educational level.

As the results of this study could depend on the supervisors who have evaluated teachers' career success, multilevel analysis was considered. The intra class correlations (ICCs) of objective and subjective career success were .31 and .17 respectively, meaning that 31 percent of the variance in teachers' objective career success and 17 percent of the variance in teachers' subjective career success can be explained by the supervisor who evaluated their career success, which can be considered as medium to large effects (LeBreton & Senter, 2008). Thus a multilevel analysis was conducted in SPSS 20.

Results

Descriptive statistics

Table 3 reports the means, standard deviations and correlations between the demographic variables and relevant measures. The results showed that objective and subjective career success were not related to each other (r = .19, *ns*). The two types of career identity were not related to each other (r = -.10, *ns*), and the two types of self-construal were not related to each other either (r = .05, *ns*). In line with our assumptions, desire for upward mobility was positively related to objective career success (r = .50, $p < .01$), and work centrality was related to subjective career success (r = .30, $p < .01$). Interdependent and independent self-construal, on the other hand, were not related to respectively objective career success (r = .09, *ns*) and subjective career success (r = -.15, *ns*).

Regarding the demographic variables, as shown in Table 2, sex was positively related to independent self-construal (r = .25, $p < .05$), meaning that women tended to have a stronger independent self-construal than men. Both age and tenure were negatively related to independent self-construal (r = -.34, $p < .01$ and r = -.28, $p < .01$, respectively). In subsequent analyses we thus controlled for sex, age and tenure.

Table 3. Means, standard deviations and correlations of relevant variables, Study 2

	M	SD	1	2	3	4	5	6	7	8	9
Control variables											
1. Sex	*NA*	*NA*									
2. Age	2.53	1.20	-.29*								
3. Education level	2.07	.57	-.25*	-.08							
4. Tenure	3.70	2.25	-.22	.80**	.01						
Career identity											
5.Desire for upward mobility	2.35	.59	-.12	-.12	.13	-.05					
6. Work centrality	4.26	.43	.13	.01	.01	.05	-.10				
Self-construal											
7. Interdependent	2.83	.48	-.23	.08	.06	.21	.13	.07			
8. Independent	2.97	.49	.25*	-.42**	.04	-.35**	.21	-.24*	.05		
Career success											
9. Objective	2.28	.96	-.11	-.09	-.01	-.03	.50**	.00	.09	.02	
10. Subjective	4.22	.59	-.02	-.04	-.03	-.03	-.08	.30**	.05	-.15	.19

Sex: 0 = male; 1 = female; Educational level: 1 = Vocational training; 2 = Bachelor's degree; 3 = Master's degree; Tenure: 1 = 0-5 years; 2 = 6-10 years; 3 = 11-15 years; 4 = 16-20 years; 5 = 21-25 years; 6 = 26-30 years; 7 = 31-35 years; 8 = 36-40 years; † $p < .10$, * $p < .05$, ** $p < .01$

Hypotheses testing

Table 4 reports the results of the multi-level analysis for hypotheses testing. In order to test for the predicted moderating effects of employees' self-construal, Aiken and West's (1991) method was followed. In analyzing the joint impact of desire for upward mobility and interdependent self-construal on objective career success, in model 1 we first controlled for the influence of demographic variables, work centrality and independent self-construal. In model 2, we entered the two predictor variables – desire for upward mobility and interdependent self-construal – into the equation, followed by their interaction term in model 3. A similar procedure was applied in order to test the hypothesis related to subjective career success, with the exception of the control variables and predictors, which were changed accordingly.

Hypothesis 1 (H1) predicted that desire for upward mobility would direct employees to take an objective view on career success, while Hypothesis 3 (H3) predicted that this link would be strengthened by a strong interdependent self-construal. The results in Table 3 showed a positive impact of desire for upward mobility on objective career success ($\beta = .85$, $p < .01$), which confirms H1. In Step 3, the interaction between desire for upward mobility and interdependent self-construal showed a marginally significant impact on objective career success ($\beta = .74$, $p < .10$), which is in line with H3.

The two-way interaction was further depicted to refine the moderating effect of interdependent self-construal. As shown in Figure 1, the effect of desire for upward mobility on objective career success was stronger when interdependent self-construal was strong than when interdependent self-construal was weak, thus confirming H3.

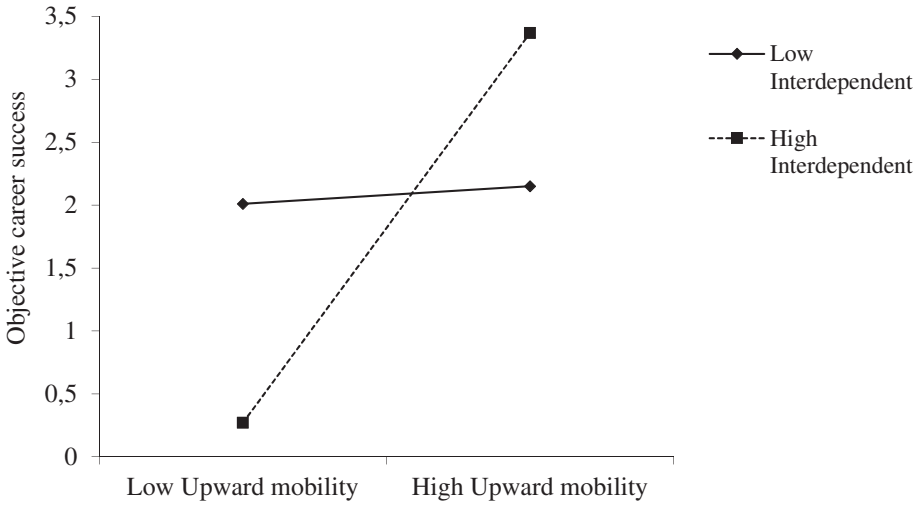
Hypothesis 2 (H2) predicted that career identity in terms of work centrality directs employees to take a subjective view on career success, and Hypothesis 4 (H4) predicted that this link would be strengthened by a strong independent self-construal. The results in Table 3 show a positive significant impact of work centrality on subjective career success ($\beta = .43$, $p < .01$), thus confirming H2. However, in Step 3 the interaction between work centrality and independent self-construal was non-significant ($\beta = .34$, *ns*), which disconfirms H4.

Table 4. Multilevel analyses: Impact of career identity and self-construal on career success, Study 2

	Objective career success				Subjective career success			
	Model 0	*Model 1*	*Model 2*	*Model 3*	*Model 0*	*Model 1*	*Model 2*	*Model 3*
Control variables								
Age		-.16	-.03	-.06		.00	-.01	-.02
Gender		-.29	.13	.18		.11	.05	.08
Tenure		.05	.01	.04		-.01	-.00	-.00
Career identity (CI)								
Desire for upward mobility (DUM)			.85**	.81**		.05	.04	.01
Work centrality (WC)		.11	.08	.10			.43**	.41**
Self-construal (SC)								
Interdependent self-construal (Inter)				-.13		.06	.04	.03
Independent self-construal (In)		.06	-.16	-.14				.01
Interactions between CI and SC								
DUM x Inter				.74†				
WC x In								.34
-2 Restricted Log Likelihood	179.20	177,13	161.79	153.45	116.92	123.15	117.64	118.07

† p < .10, * p < .05, ** p < .01

Figure 1. Interaction effect of desire for upward mobility and interdependent self-construal on objective career success, Study 2



Discussion

The aim of this paper was to get a deeper understanding of employees' career success from an identity perspective. We integrated two types of identity related factors, a domain specific factor in terms of employees' career identity and a domain general factor in terms of employees' self-construal into exploring employee career success. Both Study 1 and Study 2 showed that employees with a desire for upward mobility career identity have the tendency to take an objective view of career success, while employees with a work centrality career identity have the tendency to take a subjective view of career success. Besides, the findings of Study 2 showed that the effect of employees' desire for upward mobility on their objective view on career success became stronger when employees had a strong interdependent self-construal. However, contrary to expectations, independent self-construal did not strengthen the relationship between employees' work centrality and their subjective view on career success. In the next section both theoretical and practical implications of these findings and some of the limitations of this study will be discussed.

Theoretical implications

First, the empirical findings of this study supported our theoretical arguments that the self-identity or self-concept approach is an important approach towards understanding

employee career success. Most previous studies on career success conventionally concentrated on the influence of motivational factors such as employees' career motivation (Day & Allen, 2004), ambition (Judge et al., 1995), self-efficacy and career goals (Abele & Spurk, 2009). The influence of employees' career identity has not been fully addressed. This is surprising given the fact that the well-known theories on career development such as Supers' (1953; 1980) vocational development theory and Schein's (e.g. 1978; 1993) career anchors theory, have incorporated the concept of career identity, either in terms of "career self-concept" or in terms of "career anchors".

Employees' motivation and identity function differently in influencing employees' behaviors. At the core of the motivation process is goal setting. The motivation process is a conscious process in which individuals set concrete and clear goals for themselves, which are derived from activated human needs, personal values, and personality traits, or are accepted in response to external incentives. It are these specific goals that individuals set for themselves that determine the direction of their behavior, the amount of effort they exert and their degree of persistence in fulfilling their goals (Meyer, Becker, & Vandenberghe, 2004). Identity, on the other hand, is amorphous, fluid, and subconscious. It takes time before individuals' identity is fully developed and formulated, but once it has, it has an automatic effect on their cognition, emotion and behaviors (Markus & Kitayama, 1991). For employee career success, the self-identity approach provides another reason to explain why different employees focus on different aspects of career success.

Furthermore, extending the theoretical work of London (1983), the findings of Study 2 suggest that not only the domain specific self-identity factor of career identity is relevant to employees' career success, but that the domain general self-identity factor of self-construal also plays an important role. These findings are indeed in line with the career development theory of Super (1953; 1980) in which it is argued that in order to reach a full understanding of employees' careers both work-related and non-work related self-concepts should be taken into account. Recently empirical studies have begun to consider the effect of non-work related self-concepts on employee workplace behaviors such as engagement in training activities (Yang et al., 2012), counterproductive work behaviors (Yang, Johnson, Zhang, Spector, & Xu, 2013), organizational commitment (Johnson & Chang, 2006), perceptions of fairness in the workplace (Johnson, Selenta & Lord, 2006), and engagement in informal workplace learning activities (van Rijn et al., 2013). We believe that a combination of work and non-work related self-concepts will provide more depth to our understanding about employee careers and career development.

However, a lot of work is still needed to refine and clarify how the work and non-work related self-concepts are combined in influencing employees' career success. For example, our findings failed to detect the moderating effect of employees' independent self-construal on the relationship between work centrality and the subjective view on career success. A possible reason for this unexpected finding could be that employees with an independent self-construal may have their own unique view to define career success. For example, some may feel successful by standing out in more unique ways than earning a high salary and achieving a high status and may only feel successful by showing exceptional work performance, receiving awards, or being recognized as an expert. The core part is that employees with an independent self-construal are not strongly influenced by social contexts. They derive their sense of self-worth via their sense of uniqueness and exceptionality and the expression of these unique attributes (e.g. Markus & Kitayama, 1991; Johnson & Chang, 2006). Following this way of reasoning, future research needs to employ a mediating model to unfold the relationship between career identity, independent self-construal, and career success.

Limitations

Four limitations of the studies in this paper should be addressed. First, the strong focus in this paper on the influence of self-identity factors on employees' career success has led to the shortcoming that individual differences in terms of motivational factors have been downplayed. Based on the wide spread evidence of the influence of employees' motivation on their career success (e.g. Abele & Spurk, 2009; Day & Allen, 2004; Judge et al., 1995), we suggest that future research on career success should take into account both employees' self-identity and motivational factors.

Second, we have operationalized career success in terms of employees' career success view and employees' participation in activities that are either related to achieving objective career success or to achieving subjective career success. For future studies we suggest to conduct a longitudinal study in which actual career success is measured, for example, in terms of salary, number of promotions, enjoyment of the job and career satisfaction, in an effort to replicate the findings of this study.

Furthermore, we focused on the effect of employees' career identity on their career success. By doing so we dismissed the possibility that the relationship between employees' career identity and career success could also have a more dynamic character. Instead of employees' career identity influencing their career success, employees' career identity could also be developed and formed through past experiences of career success (e.g. Schein, 1993;

Super, 1953; 1980). In other words, career identity and career success may reinforce each other. By conducting a longitudinal study following a qualitative research paradigm, the dynamic relationship between employees' career identity and career success could be detected.

Finally, letting participants rank the 12 indicators of career success in order of importance in Study 1, has led to participants judging the importance of the 12 indicators in comparison with each other, instead of judging each indicator by its own merits. In doing so, the social desirability bias could have become more salient. In comparing the indicators of career success with each other, this social desirability could have led to participants ranking such socially accepted indicators as 'job enjoyment' higher than less socially accepted indicators like 'salary', irrespective of the situation that they are in, thus minimizing the influence of the experimental situations. In order to maximize the influence of the experimental situations on employees' career success view, we suggest for future studies to measure the importance of each career success indicator separately and irrespective of each other, for example, by asking participants to judge the importance of each indicator on a 5-point Likert scale.

Practical implications

The findings of our studies have some practical implications. Our results demonstrate that employees' self-identity in terms of their career identity and self-construal determines their focus on either achieving subjective or objective career success. For HR professionals it suggests that, in order to create a good fit between the employee and the organization, they should take into account employees' career identity and self-construal. Employees with a desire for upward mobility career identity should be given the opportunity within the organization to gain bonuses and promotions. This is not a motivation but a part of their identification, of "who they are". This is even more important for employees who also have an interdependent self-construal. Employees with a work centrality career identity should be given the opportunity to incorporate their own values and interests in their work and tailor their work based on their own approach so as to enjoy their job and be satisfied with their job and career in their own sense. In order to achieve such a fit between employee and organization, HR professionals may consider measuring employees' career identity and self-construal during the selection process of new employees.

In a same vein, our findings also offer some suggestions for employees regarding their career development. By asking the question "who am I?" employees may gain insight into how they view their career success and career development. To achieve the career success that

employees truly aspire, they need to find a good fit between “who they are” and “what kind of work they do”.

Appendix I: Four vignettes for priming employees' career identity

Strong desire for upward mobility

Bo is 45 years old, married to Jente, has two children and is vice-president for a large insurance company. After graduating from college, Bo was very ambitious and promised Jente to become rich or the boss of a big company within 15 years. During the first years after college Bo worked enthusiastically to become self-sufficient, starting off a number of new small businesses, none of which made any money. In the end, Jente more or less forced Bo to take a first job as an insurance seller, buy a house, and settle down. Bo turned out to be surprisingly good at selling and made a lot of money on commission very quickly. But after a few years, Bo was tired of the stress of traveling and selling and resolved instead to climb the corporate ladder. Bo believed to be a born leader and that the way to the top would be easy. After years of hard work Bo was promoted to the position of manager of the small claims department at the local branch of the insurance company, however, after that promotion Bo's career stagnated. Even though Bo received good performance evaluations, a promotion was never suggested. Frustrated with this position, Bo decided to resign from this job and solicited for a manager position with another insurance company. This turned out to be the right move for Bo. The company gave Bo every chance to climb the corporate ladder, which has let Bo to the current position of vice-president.

Weak desire for upward mobility

Bo is 45 years old, married to Jente, has two children and is working as an insurance adviser for a local insurance company close to home. After graduating from college, Bo didn't really have an idea what to do and started a number of small businesses, none of which made any money. Although Bo was not bothered by the lack of a clear goal and a lack of money, Jente was tired of trying to bring up children while living hand-to-mouth, and in the end more or less forced Bo to take a first job as an insurance adviser. Bo turned out to be surprisingly good as an insurance adviser, and finally settled down. Now, 15 years later, Bo is still working for the same insurance company, being in the same position as when starting to work for the company. Although Bo always received good performance evaluations, a promotion was never suggested. However, for Bo the lack of promotion is not really a problem. Bo has seen what happened to colleagues who got promoted. Although the promotion brought them more money, it also brought with it more responsibility. Bo's colleagues had to go on out-of-town business trips, worked longer hours, often worked late and some colleagues even had to move to a

different city for the promotion! Bo is more than satisfied with the position of insurance adviser. The job is congenial, sociable, and not too hard, and the company seems secure, which is reassuring. So why put that contentment at risk by looking for more?

Strong work centrality

Bo is 45 years old, married to Jente, has two children and works as a computer programmer for a local software company in the Netherlands. Bo has always been interested in computers and choosing which study to follow after high school was not difficult, it would be a study in computer sciences! After graduating from university Bo soon found a first job as a computer programmer for the Microsoft division in the Netherlands. After a few years working for Microsoft Bo was stuck in a rut, doing the same thing over and over again and not learning anything new. Bo then decided to search for a new job, and found a job as a computer programmer for a local internet company. Within this company Bo got the chance to develop new programming skills by using new software and new programming languages. In the time working for this company Bo came up with some revolutionary new ideas and after a few years Bo was contacted by another local software company to come work for them. Excited by the prospect to again develop new knowledge and skills, Bo decided to accept this job offer. The work at this company is interesting and there are no real rules and restrictions, Bo can work as an autonomous professional. The learning opportunities are also phenomenal, there's always something new to pick up. Bo is wildly enthusiastic about this career choice, and every weekday Bo wakes up thinking 'Great, I have to go to work today!' Even during the weekends Bo is preoccupied with work, thinking about new ideas and possibilities. Bo managed to turn a hobby into a career.

Weak work centrality

Bo is 45 years old, married to Jente, has two children and is working part-time as a computer programmer for a local software company. Bo has always had strong family values and believes that you should work to live, and not live to work. After finishing high school Bo decided to follow a study in computer sciences, thinking that a career as a computer programmer would make it possible to earn a living for a future family and still be there for them by being able to work at home. At college Bo met Jente and soon after graduating from college they got married. During their first years of marriage Bo worked fulltime as a computer programmer for an internet company. Bo took this job because it offered the opportunity to work from 9 to 5, and a large amount of vacation days was offered which gave Bo the opportunity to spend a lot

of time with Jente. However, as soon as their first son was born Bo started working part-time. In fact, when it comes to Bo's career, family matters have always been the primary criterion for career decision making. After 15 years of working for the company, Bo's job was moved to a location 50 kilometers from home and the working hours were extended which interfered with Bo's family life. Bo resigned, and remained unemployed for several months before finding the current part-time job, only a 7 minutes' drive from home: a very big plus. Bo enjoys being able to spend most time with the family. For Bo, a career is second to a family – a minor means to a major – family – end.

3

Understanding employees' informal workplace learning: The joint influence of career motivation and self-construal[4]

[4] This chapter is a modified version of a paper that has been published as: Van Rijn, M.B., Yang, H., & Sanders, K. (2013). Understanding employees' informal workplace learning: The joint influence of career motivation and self-construal. *Career Development International*, 18, 610-628.
An earlier version of this chapter was presented at the European Association of Work and Organizational Psychology conference in 2011: 'Stimulating employees' workplace learning: The role of self-construal and career identity', Maastricht, The Netherlands.

Abstract

In this study we investigated the joint influence of employees' career motivation and their self-construal on their participation in three informal workplace learning activities: keeping up-to-date, asking for feedback from supervisors and knowledge sharing. Data were collected through an online questionnaire from 323 employees from four Dutch Vocational Education and Training (VET) schools. The results showed that career motivation is positively related to all three informal learning activities and that these relationships are refined by employees' self-construal. Employees' individual self-construal strengthened the relationship between career motivation and participation in the learning activity of keeping up-to-date, while employees' collective self-construal strengthened the relationship between career motivation and participation in the learning activity of knowledge sharing. Contrary to our expectations, employees' relational self-construal did not strengthen the relationship between career motivation and participation in the learning activity of feedback asking from supervisors. Our findings suggest that both the motivational issue of "what do you want" and the self-identity issue of "who you are" are important for employee informal workplace learning. For Human Resource (HR) professionals this suggests that they should stimulate employees' career motivation, while for employees this suggests that they should engage in informal learning activities in keeping with their own style.

Introduction

Informal learning refers to those learning activities which are usually not institutionally sponsored, but initiated at the workplace by employees themselves with the purpose to develop their professional knowledge and skills (Lohman, 2005; Marsick & Watkins, 2001). An example of employee informal workplace learning is gaining new knowledge, skills and abilities by reading a book or article, asking each other for help and feedback, and sharing knowledge with each other. Informal workplace learning can benefit employees and organizations in several aspects. First, informal workplace learning reduces the cost of formal training. Formal learning activities organized in the form of workshops, training and management development programs have been criticized for being too expensive, time-consuming and disconnected from day-to-day work (Hall, 1996; Wilson & Berne, 1999). The fact that informal workplace learning is initiated by the employees themselves and takes place during work and at the workplace, makes it less expensive, less time consuming and more relevant to individual learning needs of employees than formal learning (Hoffman, 2005). Second, the knowledge, skills and abilities that employees gain by participation in informal workplace learning activities facilitates their employability and helps them deal with the continual changes in and outside their work environment (e.g. Baruch & Bozionelos, 2010; Joo & Ready, 2012; Van Emmerik, Schreurs, de Cuyper, Jawahar, & Peeters, 2011) Third, informal workplace learning also contributes to the human resources of organizations. The collective knowledge, skills and abilities which result from informal workplace learning provide a powerful source of sustainable organizational competitiveness (e.g. Barney & Wright, 1998).

The importance of informal workplace learning has stimulated numerous studies to explore factors that influence employees' participation in informal workplace learning activities in recent years (e.g. Kwakman, 2003; Maurer, Weiss, & Barbeite, 2003; Naquin & Holton, 2002). Despite its success, one of the shortcomings in the past research is that too much attention was paid to the influence of individual differences in terms of employees' motivations, such as self-efficacy and learning motivation (e.g. Birdi, Allen, & Warr, 1997; Noe & Wilk, 1993; Runhaar, Sanders, & Yang, 2010). Employees not only differ from each other in terms of their motivations, but also in terms of how they view and identify themselves, that is, in terms of their self-construal (Yang, Sanders, & Bumatay, 2012). A full understanding of employee participation in informal workplace learning needs to take both motivational and self-construal factors into account. In line with this theoretical argument, in this paper we investigate the joint influence of employees' career motivation and employees' self-construal on their participation in informal workplace learning activities

Career motivation is a concept representing the motivation of employees to develop themselves in their jobs and careers (London, 1983; 1993). It is different from other types of performance motivation, such as goal setting, self-efficacy and expectancy theory (Judge & Ilies, 2002): Career motivation emphasizes employee long-term development, and the drive derived from career motivation will continue until employees' career journey is over. By contrast, performance motivation is short-term oriented, focusing on attaining a certain goal or employee outcome, after which it wears off (e.g. Locke, 1997).

The concept of career motivation is developed under the view that "it is employees themselves that make their career development happen" (e.g. Super, 1990, Van der Sluis & Poel, 2003). Career motivation has been associated with employees' participation in a wide range of career development activities, such as searching and accepting a job, changing one's career plans, and seeking training and new job experiences (London, 1983; 1993; Noe, Noe, & Bachhuber, 1990). Because both career motivation and informal workplace learning highlight employees long term employability and sustainability and focus stronger on employees' future development than on employees' current outcomes, we expect that career motivation is an important factor in stimulating employees' informal workplace learning.

Career motivation manifests itself from three aspects: career identity, career insight and career resilience (London, 1983). Career identity is the directional component, describing the extent to which one defines oneself by one's work (e.g. London, 1983; 1993; Noe et al., 1990). Career insight is the energizing or arousal component, describing the extent to which an employee has realistic perceptions of him or herself, the organization, and career goals (e.g. London, 1983; 1993; Wolf, London, Casey, & Pufahl, 1995). Career resilience is the strength and persistence component, describing the extent to which an employee can resist career disruption in a less than optimal work environment (e.g. time pressures or lack of resources) (e.g. London, 1983; 1993; Noe et al., 1990). The three elements overlap and reinforce each other, in concert motivating employees for their career development.

Employees' self-construal is a concept which describes how individuals define themselves and construe their self-concept with reference to their social roles, groups and relationships (Markus & Kitayama, 1991). For example, employees can see themselves as unique persons and as different from others, or they can see themselves as connected and similar to others. The different self-construal's that individuals hold influences their cognition, emotions and behavior (Markus & Kitayama, 1991) Empirical studies, for example, have shown that employees' self-construal has an influence on their organizational commitment (Johnson

& Chang, 2006), their perceptions of fairness in the workplace (Johnson, Selenta, & Lord, 2006), and their participation in training activities (Yang et al. 2012).

Socio-psychological work on the self has distinguished three types of self-construal: individual, relational and collective (e.g., Brewer & Gardner, 1996; Vos, 2009). *Individual self-construal* guides people to detach themselves from their social context and to view themselves as autonomous, independent persons with their own unique qualities, acting primarily according to their own thoughts, feelings and personal goals (e.g. Johnson et al., 2006). Relational and collective self-construals represent two different types of social extensions of the self (Brewer & Chen, 2007). People with a *relational self-construal* derive their self-concept from their dyadic relationships with close significant others, for example, through a supervisor-subordinate relationship at the workplace (e.g. Brewer & Chen, 2007; Brewer & Gardner, 1996). They especially value the opinions, needs, wishes and support of their significant others in their decisions and behaviors (Cross, Bacon, & Morris, 2000). People with a *collective self-construal* derive their self-identification from their impersonal bonds with symbolic groups or social categories, for example, their team or department at work. A collective self-construal guides people to focus on social approval (e.g., Brewer & Gardner, 1996; Yang et al., 2012).

Three types of informal workplace learning activities are highlighted in this study: keeping up-to-date, feedback asking from supervisors and knowledge sharing. We chose these three types of learning activities because they present the two types of informal workplace learning identified in literature - individual and collaborative learning (e.g. Kwakman, 2003; van Woerkom, 2004) and because of their importance and popularity to our research population – teachers (e.g. Lohman, 2005). *Keeping up-to-date* is defined as an individual learning activity in which employees keep themselves up-to-date with developments in the field and acquire external knowledge by scanning the external environment (e.g. reading newspapers and professional magazines and journals) (e.g. Geijsel, Sleegers, Stoel, & Krüger, 2009). *Asking for feedback from supervisors* is an interpersonal learning activity during which employees focus on one-to-one dyadic information sharing with their supervisor, specifically asking for feedback from their supervisor about their work (e.g. discussing a new work approach with their supervisor) (e.g. Lohman, 2005). *Knowledge sharing* is a group learning activity in which employees have productive meetings or informal chats with each other in which they share their knowledge, successes and failures (Kwakman, 2003).

In sum, this study aims at understanding employee informal workplace learning from the perspectives of employee motivation and self-identification. It makes two contributions to the literature on employee workplace learning. First, the link between career motivation and

employees' informal workplace learning bridges two research fields, career and career development on one hand, and employees' professional development on the other hand. This connection broadens our view on how to stimulate employees' professional development. Second, the integration of self-construal into the link between career motivation and informal workplace learning offers us a comprehensive view about the influence of individual differences on informal workplace learning.

In the next sections we first reason the hypotheses regarding the influence of career motivation on employees' participation in the three types of informal workplace learning activities, and the moderating role played by self-construal in these relationships. In order to test our hypothesis, we collected data from 323 Dutch teachers. We conclude this paper by discussing the theoretical and practical implications of our findings.

The influence of career motivation on employee informal workplace learning

Career motivation stimulates employees to engage in informal workplace learning activities. The element of career identity prescribes the direction of motivation. When employees identify their career as managing tasks and improving their knowledge and skills for their jobs, they are willing to use every opportunity to participate in learning activities. The element of career insight energizes employees to participate in informal learning activities. If employees believe that learning can help them achieve their career goals, they will then actively participate in any type of learning activity in any possible way. The element of career resilience stimulates employees to be ready to take a risk in the informal learning process. Taken together, we argue that career motivation is relevant to and has a significant influence on employee participation in informal workplace learning.

Empirical studies have shown that career motivation is positively related to employees' interest and participation in workplace learning activities. Maurer et al. (2003), for example, found that both career identity – in the format of job involvement – and career insight were positively related to employees' positive attitudes towards and participation in development activities. Noe and Wilk (1993) showed that the level of career exploration – a concept which is similar to career insight – is positively related to the amount of hours that employees spent in development activities. We thus propose that:

Hypothesis 1: Career motivation is positively related to employees' participation in (a) keeping up-to-date, (b) feedback asking from supervisors, and (c) knowledge sharing.

Moderating effect of employees' self-construal

More and more studies suggest that the employees' motivation-behavior link, on which Hypothesis 1 is based, is contingent on many other factors, such as employees' abilities and the opportunities created by organizations (e.g. Reinholt, Pedersen, & Foss, 2011), employees' identification with teams or organizations (Knippenberg, 2000) and even their own self-construal (Johnson et al., 2006). In this paper we base ourselves on the self-construal approach (Johnson, Chang, & Yang, 2010; Yang et al., 2012) to refine the relationship between employee career motivation and their participation in the three types of informal workplace learning.

The function of motivation and self-construal for individuals' behavior can be described in an analogy: Self-construal factors are like the guidelines of an organization, which provide a general direction for organizational development, while motivational variables are like the action plans which directly drive organizations to achieve their goals. Just as we need both guidelines and action plans to understand how an organization is running, we need both motivational and self-construal variables to understand how employees behave at the workplace.

A growing body of research has provided evidence to this theoretical argument. For example, Johnson et al. (2010) proposed a theoretical model in which three types of employee organizational commitment (i.e. continuous, affective and normative commitment) can be distinguished by a joint effect of a motivational factor (i.e. regulatory focus) and the self-construal factor. In their study on employees' organizational commitment, Yang et al. (2012) demonstrated that the effects of motivational factors related to training (i.e. training-related benefits and supervisor support for training) on employees' organizational commitment are subject to their self-construal. We thus assume that employees' self-construal will refine the links between career motivation and the three types of informal workplace learning.

As said before, employees with a strong individual self-construal act primarily according to their own thoughts and feelings and are especially motivated by their own personal goals. Research from Zettler, Friedrich and Hilbig (2011) has shown that employees who are mainly concerned by their self-interest (in our term, a strong individual self-construal) focus only on achieving their own career goals and feel unconnected to organizational or team goals. In relation to the three types of learning activities, the individual-oriented learning activity of keeping up-to-date seems to suit the characteristics of employees with a strong individual self-construal best: this type of learning activity creates more freedom for employees to set their own goals, to have the flexibility to arrange their learning tasks accordingly and to accomplish

their own goals without having to take into account the goals and interests of others. We thus expect that:

Hypothesis 2: Individual self-construal strengthens the positive relationship between career motivation and employees' keeping up-to-date.

Employees with a strong relational self-construal are especially motivated by the thoughts, feelings and support of significant others. Johnson et al. (2010) have argued that in the workplace, supervisors are likely targets for becoming the significant other of employees with a strong relational self-construal because of supervisors' status and visibility within the organization. Yang et al. (2012) found that employees with a relational self-construal engaged to a significantly greater extent in training activities when the amount of support from their supervisor was higher. We argue that the strong need that employees with a relational self-construal have to connect to significant others and to receive their support and input will reinforce their career motivation in the direction of interpersonal learning activities. We therefore expect that:

Hypothesis 3: Relational self-construal strengthens the positive relationship between career motivation and employees' asking for feedback from supervisors.

The identification to groups and the strong need for social approval of employees with a strong collective self-construal has proven a strong motivator for employees to engage in workplace learning (Niles, 1995). Regarding the three types of learning activities, especially the group learning activity of knowledge sharing, in which employees share their knowledge, skills and abilities with the other group members, seems to fit the desire and focus of employees with a collective self-construal optimally. A strong preference for social approval embedded in a collective construal will regulate employees' career motivation in the direction of group learning activities. The findings from Van Emmerik, Jawahar, Schreurs and de Cuyper (2010)'s study have shown that a strong identification with a team (in our term, a collective self-construal) has a positive influence on group learning. We thus expect that:

Hypothesis 4: Collective self-construal strengthens the positive relationship between career motivation and employees' knowledge sharing.

Method

Participants

The sample consisted of 323 employees within the teaching staff from four Dutch Vocational Education and Training (VET) schools. The percentage of male participants was 69.9%. The participants' mean age was 50 years old, ranging from 22 to 64 years old. Regarding their current job position, 84.8% of the participants were teachers, 7.9% were instructors or teaching assistants and 7.3% had another function (e.g., tutor, internship coordinator, project leader). Their average length of work experience was about 10 years, and ranged from less than half a year to more than 20 years. Regarding their education level, 11.7% had finished vocational training, 66.1% had received a bachelor's degree, 19% had received a master's degree and 3.2% had received an alternative education.

Procedure

The Dutch government currently places a strong emphasis on educational innovation in Vocational Education and Training (e.g., changing the curriculum and pedagogical approaches and methods). The continuous changes occurring in this type of educational organizations require the implementation of informal workplace learning for the teaching staff, which makes the Vocational Education and Training (VET) schools an ideal institution to conduct our study.

The four VET schools chosen in this study are located across the country, ranging in size from 500 employees to 3000 employees. We contacted the VET schools through the human resource managers and research managers within the schools. They then helped to send the invitation to line managers and teaching staff for participation. After the teaching staff indicated to be interested in participating in the study, one of the researchers introduced the study to them during a presentation at their school; explaining the purpose of the study. They were assured that their answers would be fully confidential: Only the researchers had access to the filled in questionnaires, reported results could not be traced back to individual teachers, and their e-mail addresses would only be used to send them the link to the online questionnaire. After the employees' confirmation, line managers provided us with the e-mail addresses of the employees who were willing to participate.

An online questionnaire was distributed via e-mail to these participants. Two reminders were sent out during the two weeks after the initial distribution. The questionnaire consisted of 194 questions.[5] It took participants about 30 minutes to complete the questionnaire. Due to the

[5] More scales were included in the questionnaire for data collection for other projects.

length of the questionnaire, we provided participants with the opportunity to fill in the questionnaire in parts – they could stop filling in the questionnaire and continue at a later point. The participants could fill in the questionnaire during either their work hours or leisure time. In total, we sent out 711 questionnaires and 323 completed questionnaires were returned (response rate: 45.4%).

Measures

All of the items in the questionnaire were measured using a five-point Likert scale (*1 = strongly disagree* to *5 = strongly agree*).

Three types of learning activities. Keeping up-to-date was measured by a scale used by Geijsel et al. (2009), consisting of four items (e.g. "I keep myself up-to-date about the developments in education" and "I read professional literature.", α = .75). *Asking for feedback from supervisors* was measured by two items used by van Woerkom (2003): "When I think that I haven't done a good job, I talk about it with my supervisor" and "I ask my supervisor for advice on a regular basis" (α = .81). *Knowledge sharing* was measured by five items derived from the work of van Woerkom (2003) (e.g. "I share my knowledge and experiences with my team members on a regular basis" and "I discuss with my team members what I think is important in my job.", α = .85).

Using another sample of 148 employees within the teaching staff from two other Dutch VET schools, we empirically tested the structure of the three learning activities. A principal factor analysis with varimax rotation was conducted on the 11 items representing the informal workplace learning activities. The results showed three factors with the eigenvalues of 4.39, 1.49 and 1.35. Five items loaded on the first rotated factor, which was interpreted as measuring *knowledge sharing* (explained variance: 26.7%). Four items loaded on the second rotated factor, which was interpreted as measuring *keeping up-to-date* (explained variance: 24.3%), and the final two items loaded on the third rotated factor, which was interpreted as *asking for feedback from supervisors* (explained variance: 14.8%). Together, the three factors explained 65.8% of the total variance. The minimum loading of the 11 items was .59, and all of their cross loadings were lower than .30.

The measure of career motivation was adopted from the work of London (1983; 1993). The scale consists of 12 items, measuring career motivation from three aspects: career identity, career insight, and career resilience (α = .71). This approach has also been used in previous studies (e.g. Day & Allan, 2004; Wolf et al., 1995). Example items are: "My work as a teacher

is an important part of my life", "I know my strengths when it comes to my work (the things that I do well)", and "I am willing to take risks at my work (actions with uncertain outcomes)".

Three types of self-construal were measured using the instrument developed by Vos (2009). The reliability and the validity of the scale have been supported using multiple samples (e.g., Vos, 2009; Yang et al., 2012). Six items were used to measure individual self-construal ($\alpha = .67$), e.g., "I am someone who is comfortable doing my own thing" and "I think I am a unique individual, with unique attributes." Six items were used to measure relational self-construal ($\alpha = .78$), e.g., "I enjoy maintaining personal relationships with others" and "It is important for me to be accepted by my significant others." Six items were used to measure collective self-construal ($\alpha = .82$), e.g., "I like to describe myself as a member of the groups to which I belong" and "It is very important to my identity to belong to a group."

In addition, we also collected information about the participants' demographic characteristics including age, sex, tenure, educational level, current job position and number of working hours per week.

As the participants are nested within teams, multi-level analysis was considered. However, the intra class correlations (ICCs) of keeping up-to-date, asking for feedback and knowledge sharing were relatively low (.03, .07 and .11 respectively). This means that 97%, 93% and 89% of the variance of respectively keeping up-to-date, asking for feedback and knowledge sharing should be explained by individual-level differences. Given the low ICCs and in combination with our main interest in this study, we decided to analyze our data at the individual level (Bickel, 2007).

Results

Checks for common method variance

The cross-sectional data collection process made this study vulnerable to common method bias, especially in terms of correlational analysis. To check for common method bias we performed Harman's one-factor test (Podsakoff & Organ, 1986). Using varimax rotation, we factor-analyzed all of the variables of interest. The results showed 12 factors with eigenvalues greater than one, accounting for 65.63% of the variance. The first factor accounted for 21.08% of the total variance. Although no specific rules have been explicated on how many factors should be expected from this factor analytic procedure (Podsakoff & Organ, 1986), researchers have suggested that a first factor that accounts for between 20 to 25 percent of the total variance is a sign that common method variance is not of great concern (e.g. Aulakh & Gencturk, 2000; Tansky & Cohen, 2001). Furthermore, analyses of the scree plot showed that

the scree plot converged on 14 components, which suggests that no single factor could explain a significant proportion of the total variance.

Confirming the structure of the measures

Before testing the hypotheses, we performed confirmatory factor analyses (CFA) (using LISREL 8.8) to clarify the structure of each measure used in this study.

The three types of informal workplace learning activities were measured using an 11-item scale. Because in literature on informal workplace learning two basic forms of informal learning – individual and collaborative – are identified (e.g. Kwakman, 2003; Lohman, 2005; van Woerkom, 2004) we compared the proposed three-factor model with both the one-factor model and the two-factor model (the items of keeping up-to-date were loaded on one factor and the items of knowledge sharing and feedback asking were loaded on the other factor). As shown in Table 1, fit indices of the one-factor model were: χ^2 (44) = 495.12, GFI = .78, TLI = .78, CFI = .79, RMR = .12, RMSEA = .18; and of the two-factor model were: χ^2 (43) = 240.92, GFI = .88, TLI = .87, CFI = .89, RMR = .10, RMSEA = .12. They both were not satisfactory. By contrast, fit indices of the three-factor model became satisfactory (χ^2 (41) = 92.66, GFI = .95, TLI = .96, CFI = .97, RMR = .05, RMSEA = .06), suggesting that the participants distinguished between the three informal workplace learning activities well.

For the 12 items in the career motivation scale, the fit indices showed that a one-factor model fits the data better than a three-factor model. Fit indices for the three-factor model were not satisfactory, χ^2 (51) = 424.65, GFI = .80, TLI = .74, CFI = .76, RMR = .17 and RMSEA = .16. However, with the one-factor solution all of the fit indices improved to an acceptable level: χ^2 (42) = 115.79, GFI = .94, TLI = .92, CFI = .95, RMR = .08, and RMSEA = .07 (see also Table 1). This suggests that it is better to treat career motivation as an overall construct rather than three separated dimensions.

For the factor structure of self-construal researchers have used both a two-factor model were individual self-construal was loaded on one factor and relational and collective self-construal was loaded on the other factor (e.g. Johnson & Chang, 2006), and a three-factor model (e.g. Yang et al., 2012). For the 18 items in the self-construal scales we thus compared the three factor model with both the one-factor model and the two-factor model. The results in Table 1 show that fit indices reached the satisfactory level only for the three-factor model (χ^2 (129) = 268.83, GFI = .91, TLI = .95, CFI = .95, RMR = .05, RMSEA = .06), not for the one-factor model (χ^2 (135) = 870.23, GFI = .77, TLI = .80, CFI = .83, RMR = .08, RMSEA = .13) and the

two-factor model (χ^2 (134) = 599.70, GFI = .83, TLI = .85, CFI = .88, RMR = .06, RMSEA = .10).

Descriptive statistics

Table 2 reports the means, standard deviations and intercorrelations between the control variables and relevant measures. The results showed that the three informal workplace learning activities were moderately related to each other ($r_{\text{keeping up-to-date and asking for feedback}}$ = .23, $r_{\text{keeping up-to-date and knowledge sharing}}$ = .36, $r_{\text{asking for feedback and knowledge sharing}}$ = .35, *ps* <.01). Career motivation was positively related to keeping up-to-date (r = .37, *p* <.01), asking for feedback (r = .36, *p* <.01) and knowledge sharing (r = .47, *p* <.01). The three types of self-construal were also positively related to the three informal workplace learning activities: Individual self-construal was positively related to knowledge sharing (r = .15, *p* <.01); relational self-construal was positively related to all three learning activities ($r_{\text{keeping up-to-date}}$ = .20, *p* <.01, $r_{\text{asking for feedback}}$ = .17, *p* <.01, $r_{\text{knowledge sharing}}$ = .26, *p* <.01); and collective self-construal was positively related to both keeping up-to-date (r = .20, *p* <.01) and knowledge sharing (r = .26, *p* <.01). The overall correlational pattern suggests that both self-construal and career motivation are relevant to informal workplace learning (see Table 2).

As shown in Table 2, age was negatively related to asking for feedback (r = -.12, *p* <.05); educational level was negatively related to asking for feedback (r = -.18, *p* <.01); and tenure was positively related to keeping up-to-date (r = .18, *p* <.01). We then controlled for the demographic variables (age, sex, educational level and tenure) in further analyses.

Table 1. Overall fit indexes for the three measures

Model	χ^2	*df*	*GFI*	*TLI*	*CFI*	*RMR*	*RMSEA*
Informal learning activities							
Three factor model	92.66	41	.95	.96	.97	.05	.06
Two factor model	240.92	43	.88	.87	.89	.10	.12
One factor model	495.12	44	.78	.78	.79	.12	.18
Career motivation							
Three factor model	424.65	51	.80	.74	.76	.17	.16
One factor model	115.79	42	.94	.92	.95	.08	.07
Self-construal							
Three factor model	268.83	129	.91	.95	.95	.05	.06
Two factor model	599.70	134	.83	.85	.88	.06	.10

Table 2. Means, standard deviations and correlations of the relevant variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Age	49.8	9.58										
2. Sex	*NA*	*NA*	-.11									
3. Educational level	2.0	.65	.22**	.01								
4. Tenure	6.1	2.01	.57**	-.15*	.20**							
5. Individual self-construal	3.66	.55	-.06	-.04	.03	-.03						
6. Relational self-construal	3.88	.57	-.03	.19**	.01	-.05	.28**					
7. Collective self-construal	3.04	.69	.02	-.01	-.02	.06	.17**	.62**				
8. Career motivation	3.72	.45	-.11	.09	-.05	-.08	.37**	.37**	.31**			
9. Keeping up-to-date	4.01	.64	.07	.03.	.09	.18**	.12*	.20**	.20**	.37**		
10. Asking for feedback	2.96	1.07	-.12*	.06	-.18**	-.10	.13*	.17**	.08	.36**	.23**	
12. Knowledge sharing	3.75	.71	.01	.06	-.09	-.00	.15**	.26**	.26**	.47**	.36**	.35**

Sex: 0 = male; 1 = female; Educational level: 1 = vocational training; 2 = bachelor's degree; 3 = master's degree; Tenure: 1 = less than half a year; 2 = half a year; 3 = one year; 4 = two years; 5 = five years; 6 = 10 years; 7 = 20 years, 8 = more than 20 years; *p < .05, **p < .01

Hypotheses testing

Hierarchical regression analyses were conducted for hypotheses testing. Following the procedure of Aiken and West (1991), we standardized the predictors before calculating the interaction terms. In the first step of the analysis of the joint impact of career motivation and individual self-construal on keeping up-to-date, we controlled for the influence of demographic variables, relational, and collective self-construal. In the second step, we entered the two predictors – career motivation and individual self-construal – into the equation, followed by their interaction term in the third step. A similar procedure was applied in order to test the hypotheses relating to asking for feedback and knowledge sharing, with the exception of the control variables and predictors, which were changed accordingly.

Hypothesis 1a (H1a) proposed that career motivation is positively related to employees' keeping up-to-date, while Hypothesis 2 (H2) proposed a moderating effect of individual self-construal on this link. The results presented in Table 3 showed a significant positive effect of career motivation on keeping up-to-date ($B = .23$, $p < .01$), which confirms H1a. In Step 3, the interaction between career motivation and individual self-construal showed a significant effect on keeping up-to-date ($B = .07$, $p < .05$), which is in line with H2. The two-way interaction was then depicted. As shown in Figure 1, career motivation had a stronger effect on keeping up-to-date when individual self-construal was strong ($B_{simpleslope} = .30$, $p < .01$) than when it was weak ($B_{simpleslope} = .17$, $p < .01$). This finding confirms H2.

Hypothesis 1b (H1b) proposed a positive main effect of career motivation on asking for feedback, and Hypothesis 3 (H3) proposed a moderating effect of relational self-construal on this link. The results presented in Table 4 showed a significant positive effect of career motivation on asking for feedback ($B = .38$, $p < .01$), which confirms H1b. The interaction term of career motivation and relational self-construal did not show a significant effect on asking for feedback in Step 3 ($B = .01$, *ns*), which was not in line with H3.

Hypothesis 1c (H1c) proposed a positive effect of career motivation on employees' knowledge sharing. Hypothesis 4 (H4) proposed that this link would be moderated by a collective self-construal. The results in Table 5 showed a significant positive effect of career motivation on knowledge sharing ($B = .31$, $p < .01$), thus confirming H1c. In Step 3, this impact was further qualified by the interaction term of career motivation and collective self-construal ($B = .07$, $p < .05$). A depiction of this interaction effect shown in Figure 2 reveals that career motivation had a stronger effect on employees' knowledge sharing when collective self-construal was strong ($B_{simpleslope} = .38$, $p < .01$) than when it was weak ($B_{simpleslope} = .25$, $p < .01$), which is consistent with the function of collective self-construal proposed in H4.

Table 3. Regression analyses: Impact of career motivation and self-construal on keeping up-to-date

	Keeping up-to-date								
	Step 1			Step 2			Step 3		
	B	SE	*t*	*B*	SE	*t*	*B*	SE	*t*
Control variables									
Age	-.00	.00	-.52	-.00	.00	-.20	-.00	.01	-.13
Sex	.01	.09	.12	-.00	.08	-.05	-.03	.08	-.30
Educational level	.06	.06	1.00	.06	.05	1.17	.06	.05	1.16
Tenure	.05	.02	2.23*	.05	.02	2.51**	.05	.02	2.35*
Predictor 1: Career motivation (CM)									
CM				.23	.04	5.39**	.23	.04	5.51**
Moderator: Self-construal (SC)									
Individual (ISC)				-.06	.04	-1.49†	-.06	.04	-1.44†
Relational (RSC)	.03	.06	.49	-.01	.05	-.20	-.01	.05	-.25
Collective (CSC)	.08	.05	1.62†	.04	.05	.89	.03	.05	.71
Interactions between CM and SC									
CM*ISC							.07*	.04	1.78*
F	2.57*			5.77**			5.52**		
R^2	.06			.15			.16		
ΔR^2				.09			.01		

Note. *B* = unstandardized regression weight; SE = standard error; *t* = *t* value. †p < .10, * p < .05, ** p < .01

Table 4. Regression analyses: Impact of career motivation and self-construal on feedback asking from supervisors

	Feedback asking from supervisors								
	Step 1			Step 2			Step 3		
	B	SE	*t*	*B*	SE	*t*	*B*	SE	*t*
Control variables									
Age	-.01	.01	-.56	-.00	.01	-.42	-.00	.01	-.38
Sex	.08	.15	.51	-.02	.15	-.16	-.02	.15	-.16
Educational level	-.22	.10	-2.22*	-.23	.10	-2.38**	-.23	.10	-2.35**
Tenure	-.02	.04	-.40	.00	.04	.02	.00	.04	.00
Predictor 1: Career motivation (CM)									
CM				.38	.08	5.06**	.38	.08	5.03**
Moderator: Self-construal (SC)									
Individual (ISC)	.06	.07	.88	-.05	.07	-.70	-.05	.07	-.71
Relational (RSC)				.12	.09	1.28†	.12	.09	1.29†
Collective (CSC)	.06	.07	.87	-.11	.08	-1.27†	-.11	.08	-1.28†
Interactions between CM and SC									
CM*RSC						.01	.06	.15	
F	1.54†			4.96**			4.39**		
R^2	.04			.14			.14		
ΔR^2				.10			.00		

Note. *B* = unstandardized regression weight; SE = standard error; *t* = *t* value. †p < .10, * p < .05, ** p < .01

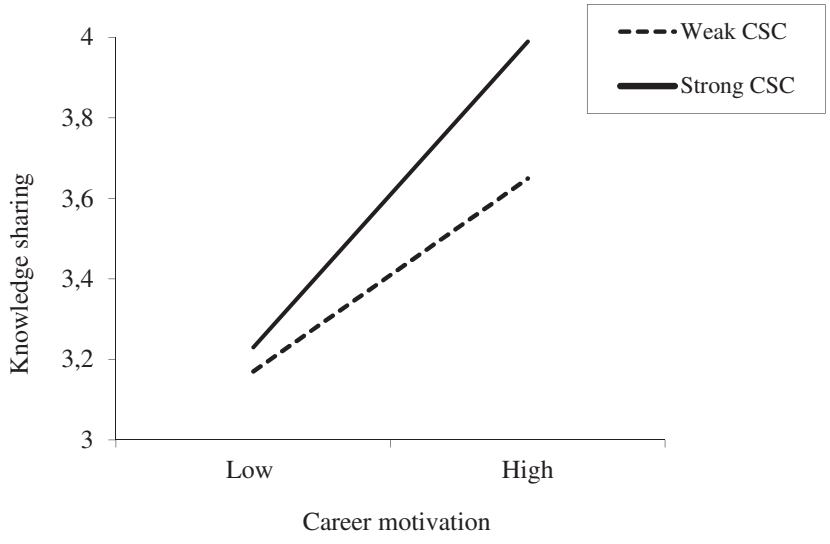
Table 5. Regression analyses: Impact of career motivation and self-construal on knowledge sharing

	Knowledge sharing								
	Step 1			Step 2			Step 3		
	B	SE	*t*	*B*	SE	*t*	*B*	SE	*t*
Control variables									
Age	.00	.01	.73	.01	.01	1.42†	.01	.01	1.70*
Sex	-.05	.10	-.51	-.03	.09	-.32	-.02	.09	-.27
Educational level	-.08	.06	-1.29†	-.06	.06	-1.13	-.06	.06	-1.03
Tenure	-.00	.03	-.03	-.01	.02	-.22	-.01	.02	-.46
Predictor 1: Career motivation (CM)									
CM				.31	.04	7.01**	.31	.04	7.13*
Moderator: Self-construal (SC)									
Individual (ISC)	-.01	.04	-.12	-.08	.04	-1.91*	-.09	.04	-2.19*
Relational (RSC)	.15	.05	3.31**	.00	.05	-.01	.00	.05	.08
Collective (CSC)				.10	.05	1.94*	.10	.05	1.94*
Interactions between CM and SC									
CM*CSC							.07	.04	1.87*
F	2.16**			9.25**			8.69**		
R^2	.05			.23			.24		
ΔR^2				.18			.01		

Note. *B* = unstandardized regression weight; SE = standard error; *t* = *t* value. †p < .10, * p < .05, ** p < .01

Figure 1. Interaction effect of career motivation and individual self-construal (ISC) on keeping up-to-date

Figure 2. Interaction effect of career motivation and collective self-construal (CSC) on knowledge sharing



Discussion

The purpose of this study is to unfold the dynamics of employee informal workplace learning from both motivational and self-construal perspectives. The findings support our assumption that career motivation has an overall positive effect on all three types of informal workplace learning activities. Further they demonstrate that these positive relationships are refined by employees' self-construal: A strong individual self-construal strengthens the positive effect of career motivation on keeping up-to-date to a larger extent than a weak individual self-construal; a strong collective self-construal strengthens the positive effect of career motivation on knowledge sharing to a larger extent than a weak collective self-construal. In the following section, we will further discuss the theoretical implications of these findings, point out some limitations of this study and conclude with some practical suggestions.

Theoretical implications

First, the positive relationships between career motivation and informal workplace learning create a chance to connect the research on employees' professional development with the research on career and career development. Research on employees' professional development traditionally tends to emphasize the principles of learning and the motivational variables that are directly and closely related to learning, such as learning motivation (e.g. Noe & Wilk, 1993) and learning goal orientation (e.g. Runhaar et al., 2010). Our findings suggest an alternative route to stimulating employees' professional development by enhancing employee career motivation and encouraging their career development.

Second, our findings provide direct evidence that self-construal factors are important to our understanding of employee informal workplace learning. Socio-psychological studies have demonstrated that individuals' self-construal plays a central role in regulating their cognition, emotion and behavior in general (Markus & Kitayama, 1991) and work-related attitudes and behaviors in specific (Johnson et al., 2006; Johnson & Chang, 2006; Yang et al., 2012). Surprisingly, when it comes to the research on informal workplace learning, the effect of self-construal factors has rarely been explored. In this regard, the moderating effects of self-construal suggest that self-construal factors are also relevant to employee participation in informal workplace learning activities.

Integration of self-construal factors into informal workplace learning research helps us understand informal workplace learning at a deeper level. Up to now studies have been inclined to treat employee informal workplace learning as a connected whole (e.g. Birdi et al., 1997; Hurtz & Williams, 2009; Maurer, Lippstreu, & Judge, 2008). The findings of the interaction

effects suggest that self-construal factors can differentiate the three types of informal workplace learning, suggesting that each type of learning activity must have its unique characteristics. Future research needs to treat each of them separately instead of as a connected whole.

Third, as a byproduct, our findings clarify the construct of career motivation. There is a debate on whether career motivation should be treated as a one-dimensional construct (e.g. Carson & Bedeian, 1994; Wolf et al., 1995) or a multi-dimensional construct with career identity, career insight and career resilience as its separate dimensions (e.g. London, 1993; Noe et al., 1990). The results of the confirmatory factor analysis in which the one-factor model was directly contrasted to the three-factor model tend to favor a one-dimensional construct, suggesting that identity, insight, and resilience are connected with each other rather than isolated from each other in describing employee career motivation.

Limitations

Four limitations of this study should be addressed. First, self-construal was used as a representative of employees' identification related factors. In fact, at the workplace employees can identify themselves with some specific and salient targets, such as their organization, their team or their profession. Future studies may adopt those domain specific factors as an indicator of the employee identification process to validate the findings from this study.

Second, when interpreting our findings, one needs to be aware of several shortcomings related to the sample used in this study. Teachers work in a profession and a work environment in which learning is the core business. This strong focus on learning can make teachers more interested in their own learning than employees from other professions and work environments. This effect may even be stronger because of the self-selection of the participants: Only after we explained the purpose of the study to the participants, participants decided whether or not to participate in this study. It could be the case that only those teachers that were already interested in their own learning and development participated in this study. Furthermore, the mean age of the participants in our sample is quite high (M = 50 years). The negative relation between participants' age and their career motivation (r = -.11) suggests that older employees may have a weaker urge to engage in informal learning than the younger employees. All these shortcomings raise a question about the generalizability of the research findings. We thus suggest that future studies need to sample employees from different ages, types of organizations, and professions to reconfirm the findings of this study.

Third, both the self-report data and the cross-sectional data collection process made this study vulnerable to common method bias. Self-reported data tend to inflate the relationship

between the independent and dependent variable, which results in an independent variable that artificially explains more of the variance in the dependent variable than when the independent and dependent variable are collected from different sources. Bozionelos, Bozionelos, Polychroniou and Kostopoulos (2014), however, argue that the bias from self-reported data may be overstated. They found that the self-assessment of personality (the self-report measure) actually explained less variance in the dependent variable of mentor receipt than the peer assessment of personality (data from different sources). In addition, research by Evans (1985) has shown that correlated errors caused by common method bias do not produce invalid interactions. Instead, increasing the correlated error strongly reduces the size of the interaction effect, thus reducing the chance of finding a significant interaction effect. Regardless of this disadvantage, we still detected the effect of the interaction between career motivation and self-construal and the learning activities of keeping up-to-date and knowledge sharing. We therefore believe that the concepts of career motivation and self-construal are closely connected to employee informal workplace learning. Nonetheless, in future studies the problem of common method bias could be avoided by, for example, using a longitudinal research approach.

Fourth, the results of this study fail in confirming the moderating role of relational self-construal in the relationship between career motivation and asking for feedback from supervisors. There is a plausible explanation for this unexpected finding. Even though employees with a strong relational self-construal value the feedback from significant others highly, these significant others do not necessarily have to be their supervisor, but can also be a peer colleague or workplace friend. Future research needs to identify the dyadic target from whom employees would like to ask for feedback in the workplace.

Practical implications

Our findings have some practical implications for both Human Resource (HR) professionals and employees. Our findings demonstrate that career motivation stimulates employees' participation in informal workplace learning. HR professionals can encourage employee professional development by enhancing their career motivation, for example by arranging different management practices like coaching functions by supervisors, helping employees set clear career goals for themselves, providing positive and constructive performance feedback, and providing job challenges. Furthermore, in designing effective learning programs for employees HR professionals may consider taking employees' self-construal into account. An accurate evaluation of employees' self-construal can help HR professionals to offer 'suitable' learning activities and to achieve the best learning outcomes.

For employees, our findings offer some suggestions regarding how to engage in informal workplace learning activities. We suggest that employees should tailor and build up their own informal workplace learning activities in keeping with their style. Individualized learning styles based on "who you are" may actually benefit employees most. For example, employees with a strong collective identity may benefit most if they engage in learning activities that are organized in groups (e.g. knowledge management teams).

All in all, our findings suggest that not only the motivational issue of "what do you want" is important for employee informal workplace learning, but that the self-identity issue of "who you are" also plays an important role in stimulating employees' informal workplace learning.

4

The effect of supervisor and organizational support on employees' informal collaborative learning: The moderating role of interdependent self-construal[6]

[6] This chapter is a modified version of the article submitted as: Van Rijn, M.B., Yang, H., & Sanders, K. 'The effect of supervisor and organizational support on employees' informal collaborative learning: The moderating role of interdependent self-construal.
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Abstract

In this study, we investigate the joint influence of the situational factors of supervisor and organizational support and the self-identity factor of employees' self-construal on employees asking for feedback from supervisors and knowledge sharing. A two wave questionnaire study was performed in which data were collected from 145 teachers from four Dutch Vocational Education and Training (VET) schools in 2010 and 2011. Consistent with our expectations, the results showed that organizational support was positively related to employee knowledge sharing, and this relationship was further strengthened by a collective self-construal. In addition, supervisor support was positively related to asking for feedback from supervisors, however, this relationship was not reinforced by employee relational self-construal. Our findings suggest that both employees' situation and their identity should be taken into account when stimulating their collaborative learning.

Introduction

To maintain a competitive advantage, organizations must stay ahead in creating and transferring knowledge within their unit. Argote and Ingram (2000) pointed out that employees play the most critical role in the process of creating and transferring knowledge within their organization. Although employees' knowledge and expertise are often accrued through formal learning activities such as workshops, training and management development programs, such formal learning activities have been criticized for being too expensive, time-consuming and disconnected from day-to-day work (Hall, 1996; Wilson & Berne, 1999). Studies have now started to highlight the importance of employee informal learning (e.g. Bednall, Sanders, & Runhaar, 2013; van Rijn, Yang, & Sanders, 2013; van Woerkom, 2003; 2004). Informal learning refers to those learning activities that, instead of being institutionally sponsored, are initiated at the workplace by employees themselves, with the purpose of developing employees' professional knowledge and skills (Lohman, 2005; Marsick & Watkins, 2001). Because informal learning takes place at the workplace and is initiated by employees themselves it is more relevant to individual learning needs, less expensive, and less time-consuming than formal learning (Hoffman, 2005). Argote, Ingram, Levine, and Moreland (2000) have argued that the interactions among employees are most important when it comes to collaborative learning.

Collaborative learning is a broad term that includes learning between dyads, teams and organizations (Garavan & McCarthy, 2008). Digenti (1999) defines collaborative learning as "the interaction of two or more people engaged in value-creating activities based on improving, practicing, and transferring learning skills" (p. 45), while Dillenbourg (1999) defines it as "a situation in which two or more people learn or attempt to learn something together" (p. 1). A distinction can be made between two types of collaborative learning: dyadic learning and group learning. The former focuses on learning dynamics between two individuals, while the latter is studied on the basis of group dynamics (van Rijn et al., 2013). The purpose of this paper is to gain an understanding of the underlying psychological mechanisms of employee participation in dyadic and group informal learning. With this piece of knowledge, practitioners and managers alike can use it to encourage employee informal workplace learning.

The importance of informal collaborative learning for organizational management and development has also attracted researchers' attention. Many studies have been conducted on examining individual differences and situational factors that influence employee participation in informal collaborative learning. Studies on individual differences, for example, have shown that self-efficacy, the enjoyment of helping others, and reciprocal benefits, positively affected employees' attitudes towards knowledge sharing (Ko, Kirsch & King, 2005; Lin, 2007). Studies

on the influence of situational factors have shown that transformational leadership has a positive effect on employees' feedback asking (e.g. Levy, Cober, & Miller, 2002; Runhaar, Sanders, & Yang, 2010) and that a social climate of trust and cooperation within an organization has a positive effect on employees' knowledge sharing (e.g. Chen & Huang, 2007; Collins & Smith, 2006).

Despite these interesting and significant findings, past research has three limitations. First, few studies have made a distinction between the two types of informal collaborative learning, although researchers have theoretically suggested the distinction between dyadic and group collaborative learning (e.g. Digenti, 1999; Dillenbourg, 1999; Garavan & McCarthy, 2008). This shortcoming sets an obstacle for us to fully appreciate the nature of each type of informal collaborative learning. Second, most studies have only paid attention to the motivational factors that stimulate employees to engage in informal collaborative learning. However, recent studies suggest that when it comes to employee workplace behavior, the way that employees perceive themselves and identify themselves with others, with their team, and with their organization plays an important role (e.g. Cole & Bruch, 2006; Johnson & Chang, 2006; van Rijn et al., 2013; Yang, Sanders, & Bumatay, 2012). For example, Johnson, Chang and Yang (2010) proposed that employees' self-identities – individuals' sense of self in relation to others – influence employees' organizational commitment. An insightful understanding of employee informal collaborative learning thus needs to take employees' identity-related factors into account. Third, in a review of studies on employees' knowledge sharing, Wang and Noe (2010) found that although researchers have investigated the direct relationship between personal characteristics, situational factors and knowledge sharing, studies on the interaction between employees' personal characteristics and situational factors are still lacking.

In this paper we attempt to overcome these three limitations by examining dyadic and group learning separately, by taking employee self-construal into account, and by exploring the joint effect of situational factors and employees' identity on two types of informal collaborative learning: asking feedback from supervisors and knowledge sharing. This study makes two contributions to the existing literature on employee informal collaborative learning. First, a scrutiny of two types of informal collaborative learning provides an explanation of the inconsistent findings from past research. A distinction between dyadic and group learning suggests informal collaborative learning can take different forms. It is not necessary that all factors have a consistent effect on both types of informal collaborative learning activities. Such a separation between dyadic and group learning creates a chance for us to recognize the unique characteristics of each learning activity. Second, the findings from this study broaden our view

on the factors that influence employees' participation in informal collaborative learning: employees' participation in informal collaborative learning is not only determined by their situational circumstances, but also influenced by how they perceive themselves and how they connect with others around them. The joint influence of those two types of factors suggests that in facilitating employee informal collaborative learning we need to take both employee identity and their situational circumstances into account.

Dyadic learning in this study takes the form of *asking for feedback from supervisors* (Levy, Albright, Cawley, & Williams, 1995; van Rijn et al., 2013). During this activity, employees get informal feedback (e.g. on their work performance) from a specific partner – their supervisor – in a one-to-one dyadic relationship (Lohman, 2005). Group learning in this study is represented by *knowledge sharing*. In this activity, employees discuss their work experiences, successes and failures, and share their knowledge with a group instead of with a specific person (e.g. Kwakman, 2003). Situational factors in this study refer to two types of support that employees receive within their work environment: supervisor and organizational support. *Supervisor support* is defined as employees' perception that their supervisor values their contributions and cares about their well-being by understanding, recognizing, and satisfying their concerns and needs through individual consideration of each employee (e.g., Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002; Geijsel, Sleegers, Stoel, & Krüger, 2009); while *organizational support* is defined as employees' beliefs that the organization values their contributions and cares about their general well-being (Eisenberger, Cummings, Armeli, & Lynch, 1997; Eisenberger, Huntington, Hutchison, & Sowa, 1986).

We highlight those two situational factors for two reasons. First of all, from a psychological perspective, participation in informal collaborative learning activities confronts employees with a kind of social dilemma (e.g., Cabrera & Cabrera, 2002; Dawes, 1980). On the one hand, employees can gain benefits from participation in informal collaborative learning activities. For example, asking for feedback from their supervisors can improve employees' job performance, and knowledge sharing can facilitate employees to gain expert status or public praise or rewards from their organization. On the other hand, participation in informal collaborative learning also can make employees vulnerable. By asking for feedback, employees may expose potential shortcomings to their supervisors with a consequence of being evaluated as lacking confidence or being incompetent. By sharing knowledge, an employee may lose his or her competitive advantage over other employees in the organization, or the shared information could be used against them (e.g. Cabrera & Cabrera, 2002; Szulanski, 1996). In line with this view, Zárraga and Bonache (2003) propose that a work environment in which

employees feel stimulated, supported and trusted can overcome the drawbacks of engaging in informal collaborative learning activities. Supervisor and organizational support in this sense play an important role in creating such a supportive work environment (e.g. Ardichvili, 2008; Zárraga & Bonache, 2003).

Second, the effects of a supportive supervisor and organization on informal collaborative learning have been documented in some studies. For example, research by Chen and Huang (2007) has shown that an organization in which employees feel stimulated, supported and secure is positively related to both knowledge sharing and knowledge application within the organization. Levy et al.'s study (2002) has shown that when supervisors were perceived as transformational, likeable and competent, employees reported greater intentions to seek feedback from their supervisors. In line with these arguments, in this paper we highlight the role of employees' supervisor and organizational support on their participation in informal collaborative learning.

Regarding employees' identity related factors, we focus on individuals' interdependent self-construal – a concept that refers to how individuals define themselves and construe their self-identity with reference to their social roles, groups and relationships (Markus & Kitayama, 1991). This factor has proven to have an extensive influence on all aspects of life, playing a central role in regulating individuals' cognition, emotions and behavior (e.g. Johnson & Chang, 2006; Markus & Kitayama, 1991). Recent work on self-construal in the field of social psychology has distinguished two types of interdependent self-construal: relational and collective (e.g. Brewer & Gardner, 1996; Vos, 2009). Both relational and collective self-construals emphasize the interdependency and the relatedness between oneself and others.

In the next section we first propose that supervisor support stimulates employee participation in asking for feedback from supervisors and organizational support encourages employee participation in knowledge sharing. Further, we reason those relationships are influenced by employees' self-construal. We tested our hypotheses in a data set collected in two waves from 145 teachers in the vocational education sector in the Netherlands. The paper will conclude with a discussion of the theoretical and practical implications of our findings.

Influence of supervisor and organizational support on employees' informal collaborative learning

Because of their expertise, status and visibility, supervisors are an important source of feedback for employees (Vancouver & Morrison, 1995; Eisenberger et al., 2002). However, asking for feedback from supervisors can have several drawbacks for employees. For example,

asking for feedback from supervisors may indicate employees' low ability, incompetence, or insecurity. A supportive supervisor can help employees deal with these difficulties. By understanding, recognizing and satisfying employees' concerns and needs, supportive supervisors create a close interpersonal relationship with their employees. A study on supervisor support and commitment, for example, showed that supervisor support lead to employees becoming affectively committed to their supervisor, meaning that they strongly identified themselves with their supervisor and were emotionally attached to their supervisor (Stinglhamber & Vandenberghe, 2003). A close interpersonal relationship between supervisor and employees encourages employees to ask their supervisor for feedback because they expect that the supervisor will support them. Research has shown that supportiveness of feedback sources (in our case, supervisors) increases feedback asking frequency (Williams, Miller, Steelman, & Levy, 1999). Research on the effect of leader-member exchange (LMX) relationships has also shown that a high level LMX relationship with a supervisor in which there is mutual trust, reciprocal respect and liking, leads to employees directly asking their supervisors for feedback (Lee, Park, Lee, & Lee, 2007). In the same vein, relationships with supervisors which are characterized by mutual trust, respect for employees' ideas and consideration of their feelings have a negative effect on the perceived costs related to asking feedback from supervisors (VandeWalle, Ganesan, Challagalla, & Brown, 2000). All these empirical findings suggest that supervisor support based on a close interpersonal relationship with employees stimulates employees to ask their supervisors for feedback because employees perceive less drawbacks of asking for feedback and expect that their supervisor will be supportive instead of being judgmental. We thus propose that:

Hypothesis 1: Supervisor support is positively related to employees' asking for feedback from supervisors.

Knowledge sharing is a group learning activity that is also associated with certain risks for employees, such as losing their competitive advantage over colleagues or the possibility that the shared information will be used against them (e.g. Cabrera & Cabrera, 2002; Hinds & Pfeffer, 2003; Szulanski, 1996). Researchers have consistently argued that mutual trust is one of the most important factors that can help employees overcome the risks of knowledge sharing (e.g. Bouty, 2000; Pan & Scarbrough, 1998; Zárraga & Bonache, 2003). Hinds and Pfeffer (2003) suggest that mutual trust not only concerns trust between the employees that share knowledge with each other but also employees' trusting their organization that their knowledge

sharing is not putting their organizational position or career at risk (e.g. downsizing or shared information being used against the employees by the organization). Organizational support in this sense plays an important role in creating mutual trust between employees and between employees and their organization by showing that the organization is committed to its employees and supports employees in their knowledge sharing. In other words, organizational support creates a climate of psychological safety in which employees feel that they can employ themselves without facing negative consequences to their self-image, status or career (Edmondson, 2004; Kahn, 1990). Studies have shown that the feeling of working in a "safe" environment has a positive effect on individuals' intentional and actual knowledge sharing (e.g. Carmeli & Gittell, 2009; Zhang, Fang, Wei, & Chen, 2010).

Social exchange theory (Blau, 1964) suggests that employees feel obliged to reciprocate the commitment and support of the organization. Rhoades, Eisenberger, & Armeli, 2001), for example, argued that organizational support creates a felt obligation among employees to care about the organization's welfare and to work towards the organization's goals. The way in which employees reciprocate organizational support can be diverse, such as through normative commitment (i.e. employees' sense of obligation to act in the best interests of the organization) (Panaccio & Vandenberghe, 2009), affective commitment to the organization (Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001), job performance (Sturges, Conway, & Liefooghe, 2010), and less absenteeism (Eisenberger et al., 1986). In line with this argument, we consider employees' knowledge sharing as one of the ways in which employees reciprocate the organizational support in order to help the organization reach its goals. We thus expect that:

Hypothesis 2: Organizational support is positively related to employees' knowledge sharing.

Moderating effect of relational and collective self-construal

Relational self-construal guides individuals to view the self as connected to significant others. It means that individuals with a strong relational self-construal derive positive feelings about the self from their connections with close or significant others (e.g. Brewer & Chen, 2007; Cross, Bacon, & Morris, 2000). Johnson et al. (2010) have suggested that in the workplace, supervisors are likely targets for becoming the significant other of employees because of their status and visibility within the organization. In line with these arguments, we expect that employees with a strong relational self-construal consider the opinions, needs, wishes and support from their supervisors to be of particular importance. When it comes to employees'

collaborative learning, relational self-construal may particularly guide employees to pay attention to opinions and attitudes of their supervisors. When supervisors support them and show a positive attitude towards them, employees with a strong relational self-construal may feel more confident about themselves, be open about their shortcomings, and be willing to ask for feedback from their supervisors as a way to improve their work. On the contrary, employees with a weak relational self-construal are not sensitive to their relationship with their supervisor, and will be less influenced by the attitude that their supervisor holds about them. The connection between supervisor support and asking for feedback from their supervisors will be less strong in this case. In summary, we propose that:

Hypothesis 3: Relational self-construal strengthens the relationship between supervisor support and employees' asking for feedback from supervisors.

Collective self-construal guides individuals to see themselves as connected to the groups to which they belong (e.g. their team at work). It means that individuals with a strong collective self-construal are sensitive to the norms and goals of the group, and the common good of the group and fulfilling their responsibilities as group members is most important to them (e.g. Brewer & Gardner, 1996; Johnson et al., 2010). Johnson, Selenta and Lord (2006) have shown that within organizations, group information such as how supportive and fair one's organization is becomes especially salient to employees who have a strong collective self-construal. In line with these findings, we expect that when it comes to employees' collaborative learning, collective self-construal may particularly guide employees to pay attention to the support that they receive from their organization. When they perceive that the organization supports and recognizes them they may feel more confident that their knowledge sharing will not be used against them and thus more willing to fulfill their responsibilities as members of the organization and share their knowledge with others. Employees with a weak collective self-construal, on the other hand, are less sensitive to and feel less obliged to reciprocate the support that they receive from their organization, making the connection between organizational support and knowledge sharing less strong. We thus propose that

Hypothesis 4: Collective self-construal strengthens the relationship between organizational support and employees' knowledge sharing.

Method

Participants

Participants included 145 employees from the teaching staff of four Dutch Vocational Education and Training (VET) schools. The sample consisted of 104 males (71.7%). The participants' mean age was 50 years, ranging from 22 to 63 years. Regarding their current job position, 86.9% of the participants were teachers, 7.6% were instructors, and 4.8% had another function (e.g. mentor, examiner, project leader). The average amount of work experience of the participants was about 10 years, ranging from one year to more than 20 years. Regarding their education level, 66.2% of the participants had a bachelor's degree, 21.4% had a master's degree, 6.9% had received vocational training, and 4.8% had received an alternative education.

Procedure

VET schools were chosen for the data collection because of the continuous educational innovations, concerning both the curriculum and the pedagogical approaches and methods that are taking place in this type of school in the Netherlands. Employee collaborative learning then emerges as an important issue for both the schools and the teachers.

The four VET schools that participated in this study ranged in size from 500 to 3000 employees. The VET schools were contacted through the human resource (HR) managers within the schools, who in turn invited line managers and teachers to participate in this study. Line managers of the VET schools provided us with the email-addresses of teachers who were willing to participate in this study, after which an online questionnaire was distributed to the teachers via e-mail.

As part of a longitudinal study, data collection was managed through a joint effort of three inter-linked research teams in the Netherlands. The data collection involved in this study took place in 2010 and 2011, with one year in between. In 2010 the VET schools were contacted through the HR managers and research managers within the schools. They sent out the invitation to participate in this study to line managers who in turn contacted the teaching staff. The line managers then provided us the email addresses of employees within the teaching staff who had confirmed their willingness to participate in this study. A questionnaire including a measure of employees' self-construal was distributed to 711 participants, and 323 participants returned the questionnaire (response rate = 45.4%). In 2011, based on the e-mail addresses that were provided to us in 2010 by the participants, we sent a questionnaire including the measures of supervisor support, organizational support and employees' informal collaborative learning to those 323 participants. In total, 145 participants corresponded, completed, and returned

questionnaires (response rate = 44.9%). Thus the total dataset used in this study concerns 145 participants.

Participants could fill in the questionnaire both during work and leisure time. In the introduction of the questionnaire, we assured the participants that their responses to the questionnaire would be kept confidential.

Measures

Detailed information about the scales measuring the study variables is reported in Table 1. All of the items were measured using a five-point Likert scale (*1 = strongly disagree* to *5 = strongly agree*). The demographic information that we collected included sex (0 = female, 1 = male), age, tenure (1 = less than a half year, 2 = a half year, 3 = one year, 4 = two years, 5 = five years, 6 = ten years, 7 = twenty years, 8 = more than twenty years) and educational level (0 = something else, 1 = vocational education, 2 = bachelor degree, 3= master degree).

Employees within the teaching staff from the VET schools are nested within teams. A multi-level analysis was conducted to check how much variance can be explained at the team level and at the individual level. The intra class correlations (ICCs) were relatively low (.02 and .19 respectively for asking for feedback from supervisors and knowledge sharing). This means that 98 percent of the variance of feedback asking from supervisors and 81 percent of the variance of knowledge sharing can be explained by individual-level differences. Given these relatively low ICCs and our research interest in individual-level differences in this study, we decided to analyze the data at the individual level (Bickel, 2007).[7]

[7] A multilevel analysis was conducted for knowledge sharing, however, the results were the same as the results of the hierarchical regression analysis. In line with our research interest in individual-level differences, it was decided to report the outcomes of the hierarchical regression analysis.

Table 1. Information about scales used to measure the study variables

Scale	Resource	Items	α	Example item
Independent support variables				
Supervisor	Geijsel et al., 2009	5	.92	My supervisor takes the beliefs of individual teachers seriously
Organizational	Eisenberger et al., 1986	5	.92	The school cares about my opinions
Moderator self-construal variables				
Relational	Vos, 2009	6	.75	I think that close others have much influence on my identity
Collective	Vos, 2009	6	.83	In my thoughts I mostly focus on groups to which I belong
Dependent collaborative learning activities variables				
Feedback asking	Van Woerkom, 2003	2	.83	I ask my supervisor for advice on a regular basis
Knowledge sharing	Van Woerkom, 2003	5	.83	I share my knowledge and experiences with my team members on a regular basis

Data analysis

The hypotheses were tested with hierarchical regression analyses. Following the procedure of Aiken and West (1991), the independent variables were standardized before calculating the interaction terms. In the analysis of the joint impact of supervisor support and relational self-construal on asking for feedback from supervisors, the influence of demographic variables, organizational support, and collective self-construal was controlled in the first step. The two predictors – supervisor support and relational self-construal – entered the model in the second step, followed by their interaction term in the third step. A similar procedure was used to test the hypotheses related to knowledge sharing.

Results

Data clarification

Between Wave 1 and Wave 2 of data collection, 178 participants dropped out of our study. To rule out the influence of the self-selection of participants on the results, we checked whether participants who completed the questionnaire once significantly differed from participants who completed the questionnaire twice on all demographic variables of sex, age, tenure, and educational level, and the self-identity factor of self-construal. Results show that there are no significant differences on these demographic variables and the self-identity factor of self-construal between participants who remained and those who dropped[8]. Although this check cannot rule out the issue of self-selection completely, it to some extent ensures the representativeness of our sample.

Confirming the structure of the measures

A confirmatory factor analyses (CFA) was conducted using LISREL 8.8 to verify the structure of the concerned variables measured in this study.

For the structure of informal collaborative learning, we compared the one-factor general model with the two-factor model with dyadic and group learning as two sub-factors. The fit indices of the one-factor general model were not satisfactory: χ^2 (13) = 55.31; GFI = .90; TLI = .77; CFI = .85; RMSEA = .15; RMR = .12. The fit indices improved significantly when the two-factor model was tested (χ^2 (12) = 10.47; GFI = .98; TLI = 1.00; CFI = 1.00; RMSEA = .00; RMR = .02). This finding suggests that participants differentiate between the two types of informal collaborative learning.

Supervisor support and organizational support are both theoretically and empirically considered two different factors in previous studies (e.g., Yang et al., 2012). We first tested the two-factor model. The indices of CFA results showed that the two-factor model is acceptable (χ^2 (32) = 39.95; GFI = .95; TLI = .99; CFI = .99; RMSEA = .04; RMR = .05). When the two-factor was constrained into a one general factor, the fit indices became inferior and unacceptable (χ^2 (33) = 507.78; GFI = .58; TLI = .75; CFI = .82; RMSEA = .32; RMR = .13). This finding is

[8] In total 56 females (32.6%) and 116 males completed the questionnaire once, and 41 females (28.3%) and 105 males completed the questionnaire twice, F(1, 315) = .68, p >.05. The mean age of participants was 48 and 51 years respectively for participants completing the questionnaire once and twice, F(1, 306) = 2.36, p >.05. The average length of work experience for both groups of participants was about 10 years, F(1, 271) = .51, p >.05, Most participants of both groups had a bachelor's degree (66.2% and 64.8% respectively for participants who completed the questionnaire once and twice),,F(1, 313) = 1.46, p >.05. There was also a non-significant difference in participant's relational self-construal, F(1, 321) = .54, p >.05 and collective self-construal, F(1, 321) = .461, p >.05.

in line with previous studies on supervisor support and organizational support (Maertz, Griffeth, Campbell, & Allen, 2007; Stinglhamber & Vandenberghe, 2003).

Following the same procedure, we checked the structure of the two types of interdependent self-construal. Results showed that a two-factor model (χ^2 (50) = 70.41; GFI = .92; TLI = .97; CFI = .97; RMSEA = .05; RMR = .04) fits the data better than a one-factor model (χ^2 (51) = 87.02; GFI = .91; TLI = .95; CFI = .86; RMSEA = .07; RMR = .05). Overall these findings confirm the structure of the measures used in this study.

Descriptive statistics

Table 2 reports the means, standard deviations and correlations of the relevant variables. The two types of informal collaborative learning activities were moderately related to each other (r = .24, $p < .01$). Supervisor support was positively related to asking for feedback (r = .40, $p < .01$) but not related to knowledge sharing (r = .05, *ns*).
Organizational support was positively related to both knowledge sharing (r = .26, $p < .01$) and asking for feedback from supervisors (r = .29, $p < .01$). Relational and collective self-construal were not related to asking for feedback (r = .00, $p > .05$ and r = .04, $p > .05$ respectively), but positively related with knowledge sharing (r = .17, $p < .05$ for both relational and collective self-construal).

Both types of support were related to each other (r = .48, $p < .01$) and also the two types of self-construal were related to each other (r = .59, $p < .01$). Thus in further analyses we controlled for one type of support (self-construal) when testing the effect of the other type of support (self-construal).

None of the demographic variables were related with the two types of informal collaborative learning. However, they showed some correlation with the situational variables (e.g. educational level is negatively related to organizational support, r = -.19, $p < .05$) and with self-construal variables (e.g. sex is negatively related to relational self-construal, r = -.26, $p < .01$). So, we controlled for sex and educational level in further analyses.

Table 2. Means, standard deviations and correlations of the relevant variables

	M	SD	1	2	3	4	5	6	7	8	9
Control variables											
1. Age	51	9.1									
2. Sex	*NA*	*NA*	.09								
3. Educational level	2.1	.69	.22**	-.06							
4. Tenure	6.1	1.87	.48**	.16	.14						
Support variables											
5. Supervisor Support	3.60	.91	.11	.13	-.04	.11					
6. Organizational Support	3.53	.76	.02	.20*	-.19*	-.16	.48**				
Self-construal											
7. Relational	3.90	.53	.06	-.26**	.15	-.06	.04	.12			
8. Collective	3.06	.71	-.02	.03	-.00	.09	.15	.24**	.59**		
Collaborative learning activities											
9. Asking for feedback	2.74	1.01	-.03	.03	-.09	-.00	.40**	.29**	.00	.04	
10. Knowledge sharing	3.68	.59	.16	-.06	-.02	-.12	.05	.26**	.17*	.17*	.24**

† $p < .10$, * $p < .05$, ** $p < .01$

Hypotheses testing

H1 proposed a positive relationship between supervisor support and employee participation in asking for feedback from supervisors, and H3 proposed a moderating effect of relational self-construal on this link. The results in Table 3 showed a positive impact of supervisor support on asking for feedback from supervisors (b = .34, p < .01) after organizational support was controlled (b = .14, p <.10). This finding confirms H1. The interaction effect of supervisor support and relational self-construal on asking for feedback, however, did not reach statistical significance (b = .02, *ns*), which does not confirm H3.

H2 predicted a positive relationship between organizational support and employee participation in knowledge sharing. H4 further proposed a moderating effect of collective self-construal on this link. The results in Table 4 showed a positive impact of organizational support on knowledge sharing (b = .17, p < .01) after supervisor support was controlled, thus confirming H2. In step 3, the interaction term of organizational support and collective self-construal showed a significant impact on knowledge sharing (b = .10, p < .05), which is in line with H4.

We further depicted the two-way interaction. As shown in Figure 1, when collective self-construal was strong, organizational support had a positive effect on employee participation in knowledge sharing ($b_{simple\ slope}$ = .27, p < .01). When collective self-construal was weak, this positive link became insignificant ($b_{simpleslope}$ = .07, *ns*). These findings support H4 concerning the function of collective self-construal.

Figure 1. Interaction effect of organizational support and collective self-construal on knowledge sharing

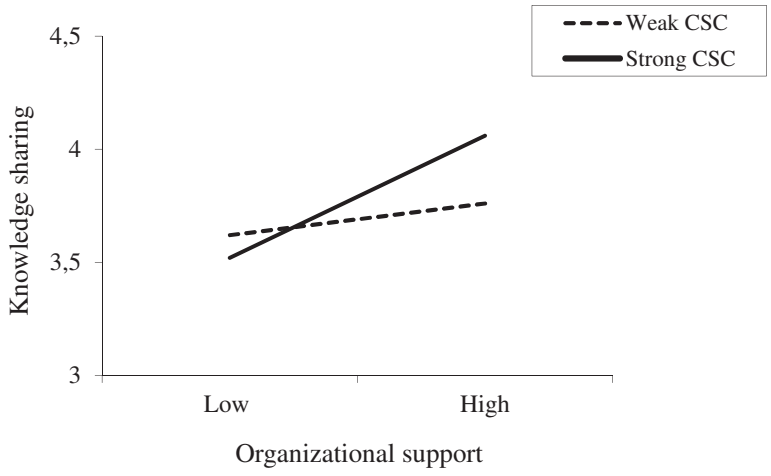


Table 3: Regression analyses: Impact of supervisor support and relational self-construal on feedback asking from supervisors

	Feedback asking from supervisors								
	Step 1			Step 2			Step 3		
	B	SE	*t*	*B*	SE	*t*	*B*	SE	*t*
Control variables									
Sex	-.07	.18	-.39	-.11	.18	-.58	-.10	.19	-.54
Educational level	-.05	.12	-.39	-.07	.12	-.60	-.07	.12	-.61
Organizational support	.31	.09	3.48**	.14	.10	1.49†	.14	.10	1.47†
Collective self-construal	-.03	.08	-.36	-.03	.10	-.34	-.04	.10	-.36
Predictors									
Supervisor support (SS)				.34	.09	3.98**	.35	.09	3.98**
Relational self-construal (RSC)				-.02	.10	-.15	-.01	.10	-.13
Interactions between support and self-construal									
SS*RSC							-.02	.07	-.34
F	3.40**			5.16**			4.41**		
R^2	.09			.18			.19		
ΔR^2				.09			.01		

Note. *B* = unstandardized regression weight; SE = standard error; *t* = *t* value. $^{\dagger}p < .10$, * $p < .05$, ** $p < .01$

Table 4: Regression analyses: Impact of organizational support and collective self-construal on knowledge sharing

	Knowledge sharing								
	Step 1			Step 2			Step 3		
	B	SE	*t*	*B*	SE	*t*	*B*	SE	*t*
Control variables									
Sex	-.02	.11	-.17	-.10	.11	-.88	-.10	.11	-.89
Educational level	-.03	.07	-.46	.02	.07	.24	-.00	.07	-.03
Supervisor support	.03	.05	.58	-.05	.05	-.92	-.05	.05	-.94
Relational self-construal	.10	.05	1.92*	.04	.06	.68	.03	.06	.46
Predictors									
Organizational support (OS)				.17	.06	2.97**	.17	.06	2.96**
Collective self-construal (CSC)				.04	.06	.68	.05	.06	.84
Interactions between support and self-construal									
OS*CSC							.10	.05	1.93*
F	1.17			2.47**			2.69**		
R^2	.03			.10			.12		
ΔR^2				.07			.02		

Note. *B* = unstandardized regression weight; SE = standard error; *t* = *t* value. $^{\dagger}p < .10$, * $p < .05$, ** $p < .01$

Discussion

The purpose of this study was to improve our understanding on the factors that influence employees' participation in informal collaborative learning activities. First, our findings confirm that two types of informal collaborative learning are not only theoretically but also empirically distinguishable. Results from the CFA analysis showed that the two-factor model fits the present data better than the one-factor model, suggesting that employees can make a distinction between dyadic learning and group learning. Regression analysis further showed that the two types of learning are sensitive to different situational and identity related factors, indicating that the underlying dynamics of the two types of informal collaborative learning are different. Overall, these findings empirically support our argument that collaborative learning can take (at least) two forms, dyadic learning and group learning.

In addition, the findings of the regression analysis showed that collective self-construal strengthens the effect of organizational support on employees' participation in knowledge sharing. This finding supports the argument that employees' workplace behavior is influenced not only by situational factors (e.g., supervisor and organizational support), but also by employees' self-identification process (Johnson et al., 2010; Yang et al., 2012). However, our findings failed to detect the moderating effect of relational self-construal on the relationship between supervisor support and employees' participation in asking for feedback. This suggests that the influence of self-construal on employee workplace behavior may be more complicated than what the theory has assumed. In the next section we elaborate further on the theoretical and practical implications of those findings and point out some of the limitations of this study.

Theoretical implications

First, the findings of our study clarify some inconsistent findings regarding the influential factors on employees' participation in informal collaborative learning activities detected in previous studies. In past research, informal collaborative learning has often been operationalized in terms of one general learning activity (e.g. Ardichvili, 2008; Zárraga & Bonache, 2003), which lead to some inconsistencies in research findings. For example, some studies found that organizational support stimulated informal collaborative learning in terms of knowledge sharing (e.g. Chen & Huang, 2007) whereas other studies did not (e.g. Lu, Leung, & Koch, 2006). Some suggest that a supportive supervisor is key to stimulating employees to engage in informal collaborative learning (e.g. Whitaker, Dahling, & Levy, 2007), whereas others argue that a supportive work environment actually plays a leading role (e.g. van der Rijt, van den Bossche, van de Wiel, Segers, & Gijselaers, 2012). From our point of view, the mix of

different forms of informal collaborative learning might be the cause of this confusion. In line with our expectation, our findings suggest that it is meaningful to differentiate between different types of informal collaborative learning activities: each type of informal collaborative learning has its own unique characteristics and each one corresponds to its own influential factors. Supervisor support may encourage dyadic learning but not group learning, and organizational support has a stronger influence on group learning than on dyadic learning. Given these findings, we suggest that informal collaborative learning in future studies should be scrutinized instead of generalized.

Second, the theoretical implications of the interaction effect of organizational support and collective self-construal can be appreciated from two aspects. In the first aspect, this interaction effect once again supports the function of employee identity for employee workplace attitude and behavior. To our knowledge, so far, the concept of employee self-construal has been empirically linked to employee organizational commitment (Johnson & Chang, 2006), their willingness to participate in training (Yang et al., 2012), and their participation in informal collaborative learning. These fruitful links echo the tenet that self-identity – as one of the fundamental psychological concepts – widely takes part in shaping employee workplace behaviors (Johnson et al., 2010). In the second aspect, the interaction effect is also meaningful to our understanding of employees' knowledge sharing (e.g. Chen & Huang, 2007; Collins & Smith, 2006). It reveals that the effect of organizational support on employees' knowledge sharing is contingent on employees' self-construal. Thus, it sets a boundary condition for the positive effect of organizational support: if organizational support is expected to achieve its maximum effect, employees' self-construal needs to be taken into account.

However, our findings failed to detect an interaction effect of supervisor support and relational self-construal on asking for feedback. Previous studies on the joint effects of supervisor support and employees' relational self-construal have demonstrated a mixed pattern. For example, in their survey study, Johnson et al. (2006) found a significant interaction effect of supervisor support and employees' relational self-construal on employees' satisfaction with their supervisor. However, the interaction effect could not be replicated in their follow-up experimental study. Yang et al. (2012), on the other hand, did find a significant interaction effect of supervisor support and employees' relational self-construal on employees' affective commitment. But their data were collected from collectivistic-oriented Philippine employees.

One possible reason for this mixed pattern could be the strong direct-effect of supervisor support. In Johnson et al.'s (2006) study in which the interaction effect did not reach a significant level, the effect of supervisor support on supervisor satisfaction (the outcome

variable) was β = .67, p <.001. In this study the effect of supervisor support on feedback asking is rather moderate (b = .34, p <.01), however it is more than twice as large as the effect of organizational support (b = .14, p < .10). In Yang et al.'s (2012) study, on the other hand, in which the interaction effect did reach a significant level, the direct effect of supervisor support on the outcome was comparable to the direct effects of the other variables in the study (e.g. b = .14, p <.05 for supervisor support and b = .14, p <.05 for organizational support). Thus it is very likely that the strong effect of supervisor support rules out the effect of relational self-construal on the outcomes. If supervisor support overshadows the effect of relational self-construal, then this triggers a question: which workplace situational factors could have a joint effect with employees' relational self-construal on influencing employee
workplace behavior?

Limitations

At least two limitations of this study should be addressed. First, the highlight of the influence of employee self-identify factors on informal collaborative learning in this study comes with downplaying the influence of individual motivational related factors, such as self-efficacy or learning motivation. Future research should balance these two types of factors in exploring the influence of individual differences on employees' informal collaborative learning.

Second, between wave one and wave two data collection, 178 participants dropped out of our study. Unfortunately it is not possible to go back and find out what caused these participants to not participate in wave two data collection, which leaves us with some questions for further clarification. Although results showed that there are no significant differences between participants who completed the questionnaire once and twice on the demographic variables, it may be the case that those participants who participated in both waves of the data collection have a stronger interest in informal collaborative learning than those participants who only participated in wave one data collection. If this is the case, this may imply a problem of self-selection, which may have exaggerated the relationship between the two types of support and informal collaborative learning. This exaggeration, on the other hand, would have set a constraint on detecting an interaction effect between situational factors and self-construal.

Practical implications

The findings of this study also have some practical implications. When it comes to stimulating employees to engage in informal collaborative learning, HR managers need to take both employees' work situation and their identification into account, and match different types

of informal collaborative learning with different work environments and employee self-identity factors. For example, when stimulating employee participation in asking for feedback from their supervisor, HR professionals need to pay attention not only to employees, like teaching them how to ask questions, but also to their supervisors, teaching them to be supportive, stimulating and trustworthy. A supervisor-subordinate dyadic training program may be specific and efficient in this regard.

If an organization wants to stimulate knowledge sharing, it should create a work environment in which employees are supported to discuss and share their work-related experiences with each other, this is especially important for employees with a strong collective self-construal. Such an environment can be created by, for example, affording work time for participation in group learning activities and providing proximity to each other's work areas.

5

The influence of HRM content and process on employees' knowledge sharing: The mediating role of learning goal orientation[9]

[9] This chapter is a modified version of the article submitted as: Van Rijn, M.B., Yang, H., Sanders, K., & Bednall, T.C. The influence of HRM content and process on employees' knowledge sharing: The mediating role of learning goal orientation.
An earlier version of this chapter was presented at the conference of the American Educational Research Association in 2013: 'Joint effect of teachers' learning goal orientation and schools HRM practices on teachers' knowledge sharing: A three wave study, San Francisco, USA.
This chapter was presented at the International Conference of the Dutch HRM Network Conference in 2013: 'The influence of HRM content and process on employees' knowledge sharing: Testing the mediating role of learning goal orientation in a longitudinal study, Leuven, Belgium.

Abstract

In this study we investigated the joint influence of HRM content (high-commitment HRM (HC-HRM)) – and HRM process (HRM system strength) on employees' knowledge sharing. Moreover we examined whether this relationship can be explained by employees' learning goal orientation. Longitudinal data from 689 teachers from six Dutch Vocational Education and Training (VET) schools were used to test these hypotheses. In line with our expectations, the results showed that HRM system strength strengthened the relationship between HC-HRM and employees' knowledge sharing. This interaction was further mediated by employees' learning goal orientation. Our findings imply that both HRM content and HRM process should be taking into account when stimulating employees' knowledge sharing. In addition it suggests that employees' motivation is one of the paths to understand why and how HRM content and process work in stimulating desired workplace behavior.

Introduction

In today's economy organizations have to compete in a complex and challenging context that is constantly changing by factors such as rapid technological changes and large scale globalization (e.g. DeNisi, Hitt, & Jackson, 2003; Hitt, Keats, & DeMarie, 1998). By now it is generally accepted that the organization's knowledge is one of the most important sources for gaining competitive advantage (e.g. Foss & Pedersen, 2002; Spender & Grant, 1996). Therefore, organizations need to be able to effectively capitalize on the knowledge of their employees (e.g. Barney, 1995; Barney & Wright, 1998). According to Cabrera and Cabrera (2005) it is the *knowledge sharing* that takes place among employees that enables organizations to actually use the knowledge of the employees. Or as Wang and Noe (2010) put it: "Knowledge sharing is the fundamental means through which employees can contribute to knowledge application, innovation, and ultimately the competitive advantage of the organization" (p. 115). Research confirms a positive effect of knowledge sharing on team performance and sales growth, and a negative effect on production costs (e.g. Arthur & Huntley, 2005; Collins & Smith, 2006; Mesmer-Magnus & DeChurch, 2009). This context sets a challenge for Human Resource (HR) professionals in terms of understanding the dynamics of, and further stimulating employees' knowledge sharing from the perspective of Human Resource Management (HRM).

Knowledge sharing can be defined as "the provision of task information and know-how to help others and to collaborate with others to solve problems, develop new ideas, or implement policies or procedures" (Wang & Noe, 2010, p. 117). Recent research has revealed numerous factors that play a role in influencing employees' knowledge sharing within an organization. For example, at the individual level, studies have shown the positive influence of employees' career motivation (van Rijn, Yang, & Sanders, 2013), self-efficacy (Cabrera, Collins, & Salgado, 2006), and the enjoyment of helping others (Lin, 2007). At the organizational level, researchers have argued that HR practices such as recruitment and selection, training and development, performance management and rewards are vital for knowledge sharing among employees (e.g. Currie & Kerrin, 2003; Hunter, Beaumont, & Lee, 2002). For example, research showed the positive effects of the quality of performance appraisal (Bednall, Sanders, & Runhaar, 2014*)* and commitment-based HRM (Collins & Smith, 2006) on knowledge exchange among colleagues.

Despite these fruitful findings, there are at least three shortcomings in the past research. First, in relation to the effect of HRM, there is lack of integration of different HR approaches on employee knowledge sharing. In HRM research a distinction has been made between a content-based and a process-based approach (Bowen & Ostroff, 2004; Sanders, Shipton, &

Gomes, *in press*). Within the *content-based* approach attention has been paid to the influence of individual and bundles of HR practices oriented towards some overarching goal (Arthur, 1994; Dyer & Reeves, 1995; Lepak, Liao, Chung, & Harden, 2006; Wright & McMahan, 1992). Within the *process-based* approach, the emphasis is on how the HRM system is administered, with research focusing on the psychological processes through which employees' attach meaning to HRM (e.g. Bowen & Ostroff, 2004; Messersmith, Patel, & Lepak, 2011; Nishii, Lepak, & Schneider, 2008). According to Bowen and Ostroff (2004) HRM content *and* process need to be integrated effectively in order to link to employee behavior and ultimately organizational performance. However, until now, researchers have studied the influence of HRM content and process mostly separately, with a few exceptions (e.g. Bednall, et al, 2014; Sanders & Yang, *in press*). Sanders et al. (*in press*) and Guest (2011) on this point call for more studies on this topic. In line with this call we fill in this research gap by examining the joint effect of HRM content – in terms of high commitment HRM (HC-HRM) – and HRM process – in terms of HRM system strength – on employees' knowledge sharing.

Second, although there is consensus that HRM is the means through which employees' attitudes and behaviors can be shaped, *how* HRM translates into effective employee attitudes or work behaviors is a research area that still needs attention (Boxall, 2012; Gavino, Wayne, & Erdogan, 2012; Lepak et al., 2006). Based on the ability-motivation-opportunity (AMO) model, which states that employees' motivation is one of the key mechanisms through which HRM influences employees' attitudes and behaviors (Lepak et al., 2006; Jiang, Lepak, Hu, & Baer, 2012), we investigate whether the joint influence of HC-HRM and HRM system strength on employees' knowledge sharing can be explained by employees' motivation in terms of their learning goal orientation. By doing so, we are opening a new window to understand the so-called 'black box' between HRM and employees' behaviors.

Third, most studies on examining the effects of HRM have been cross-sectional (Sanders, Bainbridge, Kim, Cogin, & Lin, 2012; Van de Voorde, Paauwe, & Veldhoven, 2010; Wright, Gardner, Moynihan, & Allen, 2005). It thus remains unclear whether HRM actually contributes to employees' attitudes and behaviors, or whether employees' attitudes and behavior contribute to HRM. There is necessity in the HRM field to conduct more longitudinal research (Bednall, 2013; Boxall, 2012; Gerhart, Wright, McMahan, & Snell, 2000; Wright, Gardner, Moynihan, Park, Gerhart, & Delery, 2001; Wright & Haggerty, 2005). In order to draw causal conclusions, in this study we employ a longitudinal study, with data being collected in 2010, 2011 and 2012 from 689 Dutch teachers in six Vocational Education and Training (VET) schools. We apply a latent growth model (McArdle, 2009) to demonstrate whether and

how HC-HRM, HRM system strength, and employees' learning goal orientation stimulate employees' knowledge sharing over time.

This paper is organized as follows. First, we lay out the research background by reviewing the literature on HRM content in terms of HC-HRM, HRM process in terms of HRM system strength, and the AMO model which explains how employees' motivation transfers the influence of HRM to employees' attitudes and behaviors. We then propose the jointed effect of HC-HRM and HRM system strength on employees' knowledge sharing, and how this jointed effect is mediated by employees' learning goal orientation. In the next sections we describe our research context, sample, study procedure and data analysis approach, and then outline our findings. We conclude this paper by discussing the theoretical and practical implications of our findings.

Theoretical Background

HC-HRM and HRM system strength

Within the content-based approach, HC-HRM (Huselid, 1995; Walton, 1985) has attracted the attention of researchers (Combs, Liu, Hall, & Ketchen, 2006; Collins & Smith. 2006). HC-HRM generally involves a bundle of HR practices such as selective hiring, training and development, career opportunities, performance appraisal, employment security, and participative decision making (Arthur, 1992; Combs et al., 2006; Boselie, Dietz, & Boon, 2005). The main idea of these kinds of bundles is that single HR practices reinforce each other and increase employees' knowledge, skills, and abilities, empower employees to act, and motivate them to do so (Becker, Huselid, Pickus, & Spratt, 1997; Delery & Shaw, 2001; Boxall & Macky, 2009). Several studies have provided direct evidence for the existence of this synergy of HR practices. In their meta-analysis on the influence of HC-HRM systems on organizational performance, Combs et al. (2006), for example, found that the relationship between HC-HRM and organizational performance was stronger when HC-HRM was depicted as a system, than when individual high commitment HR practices were considered. Similarly, Michie and Sheehan (2005) found that a synergy of HRM practices explained greater variance in organizational performance in terms of sales growth, labor productivity, and profitability than the HRM practices explain as a set of independent variables.

In addition to the content-based approach towards HRM, Bowen and Ostroff (2004) have introduced the term *HRM system strength* to address a process-based approach, focusing on the perceptions and understanding of employees of the HRM content. In this process-based

approach HRM is seen as a form of communication from the employer to the employee about which work behaviors are expected, supported and rewarded. Built on the co-variation model of the attribution theory of Kelley (1973), Bowen and Ostroff (2004) argue that in order for HR messages to be understood by all employees, a strong HRM system should be created in which HR messages are *distinctive* – HRM stands out from the environment and is highly observable for employees; *consistent* – HR messages and their effects are the same across modalities and time; and *consensual* – there is agreement among individuals about the HR messages and their effects.

Research on the effect of HRM content and process has evolved over three stages. In the first stage, studies explored the direct relationship between HRM content and employee behaviors. The findings have shown positive relationship between HRM content – in terms of HC-HRM – and such employee behaviors as employees' job satisfaction (Gould-Williams, 2004), organizational commitment (Steijn & Leisink, 2006), effort (McClean & Collins, 2011), and turnover (Huselid, 1995). In the second stage, research focus has shifted to the HRM process. The general pattern of results has demonstrated that a strong HRM system, meaning that employees can make sense of HR practices and understand what is expected from them, is positively related to employees' affective commitment (Sanders, Dorenbosch, Reuver, 2008), work satisfaction, vigor, and intention to quite (Li, Frenkel, & Sanders, 2011), organizational citizenship behaviors (Messersmith et al., 2011) and organizational identification (Frenkel, Restubog, & Bednall, 2012). In a related vein, Nishii et al. (2008) found that employees' understanding of HR practices, in terms of their attribution about management's motives underlying the implementation of the HR practices, influenced their commitment and satisfaction. At the third stage, studies have started to explore the jointed influence of HRM content and HRM process. Empirical evidence has shown the moderating effect of HRM process on relationships between HRM content and employees' attitudes and behaviors. For example, research showed that HRM system strength reinforced the relationship between HC-HRM and affective organizational commitment and innovative behavior (Sanders & Yang, *in press*) and reinforced the relationship between the quality of performance appraisal and employees' engagement in learning activities (Bednall et al, 2014*)*. In this paper, we take this interactive perspective to explore the jointed influence of HRM content and HRM process on employees' knowledge sharing.

The AMO model and learning goal orientation

The Ability Motivation Opportunity (AMO) model has been proposed to explain the dynamics of HRM in shaping employees' workplace behavior (Jiang et al., 2012; Lepak et al., 2006). First, HRM influences employees' *ability* to perform. For example, training activities increase employees' abilities to perform their jobs. Second, HRM influences employees' *motivation* to perform, for example, by providing incentives and rewards which make employees motivated to exert more effort at work and work towards the organizational goals in order to receive the incentives and rewards. Third, HRM can create *opportunities* for employees to perform, for example, through such HR practices as employee involvement, participation and empowerment, which create opportunities for employees to put their knowledge and skills into practice.

When it comes to knowledge sharing, we expect that the motivational factors play a more important role than the ability and opportunity factors in transferring HRM functions. When sharing knowledge, employees are confronted with a kind of social dilemma (e.g. Cabrera & Cabrera, 2002; Dawes, 1980). On the one hand, knowledge sharing is accompanied by certain benefits. For example, by sharing their knowledge with each other employees can improve their job performance and receive praise or rewards from their organization. On the other hand, knowledge sharing is accompanied by certain risks. By sharing knowledge employees can lose their status in the organization and there is a risk that knowledge sharing will not be reciprocated by colleagues (e.g. Cabrera & Cabrera, 2002; Currie & Kerrin, 2003; Szulanski, 1996). In this social dilemma employee motivation becomes more significant than ability and opportunity factors. Besides, even though employees may have the ability and the opportunity to share knowledge, organizations can only utilize the knowledge of employees when employees are motivated to actually share this knowledge with each other (Wright, McMahan, & Williams, 1994; Jiang, et al. 2012). With this view we highlight the motivational factors in our study.

Among numerous motivational factors, we specifically emphasize employees' learning goal orientation. Learning goal orientation can be defined as individuals' motivation to develop their competences by acquiring new skills and mastering new situations through learning and training (Dweck & Leggett, 1988; Vandewalle, 1997). Although learning goal orientation has often been treated as a stable trait (e.g. Chen, Gully, Whiteman, & Kilcullen, 2000; Parker & Collins, 2010), it has also been treated as a state characteristic that can be weaker or stronger dependent on the situation individuals are in (Button, Mathieu, & Zajac, 1996; VandeWalle, Brown, Cron, & Slocum Jr, 1999; Bednall, Sanders, & Van Rijn, 2013). Based on the motivated

action theory (MAT) of goal-oriented behavior that states that there is a dynamic interplay between goals that are currently activated within the individual and the features of the situation the individual is in, DeShon and Gillespie (2005) have argued that when researchers are interested in understanding individuals' behavior in a particular context or time, goal orientation should be treated as a situational specific state that is unstable over time. More specifically, according to the MAT individuals' perception of the situation is affected by the current active goals within the individual, while the features of the situation increase the activation of goals within the individual that are relevant for the situation. In other words, the behavior of the individual is aimed at reducing discrepancies on the current activated goals which will lead individuals to use actions that have the highest expectancy for achieving the active goals in the particular situation (DeShon & Gillespie, 2005). In a similar vein, in their meta-analysis on studies investigating goal orientation, Payne, Youngcourt, & Beaubien (2007) found that although learning goal orientation was relatively stable over the short term, in the long term it became more and more unstable. Following this reasoning, in this study we investigate employees' learning goal orientation in terms of a state characteristic.

Hypotheses Development

The joint influence of HC-HRM and HRM system strength on employees' knowledge sharing

In order to overcome the risks of knowledge sharing, employees need support and trust from their organization (Bouty, 2000; Pan & Scarbrough, 1998; Zárraga & Bonache, 2003). HC-HRM is designed to provide support and trust by showing employees that an employer is willing to invest in the employees, cares about their wellbeing and sees them as important assets to be developed, instead of disposable factors of production (Collins & Smith, 2006; Gilbert, de Winne, & Sels, 2011; Wood & Menezes, 1998; Sanders & Yang, *in press*). According to the social exchange theory (Blau, 1964), employees' feel obliged to reciprocate the commitment and support of the organization. Building on this social exchange theory, Eisenberger, Huntington, Steven Hutchison and Sowa (1986) have argued that employees' develop a global believe about the extent to which organizations care about their general wellbeing and value their contributions, and that they reciprocate this perceived organizational support by favorable work behaviors. Furthermore, Eisenberg et al. (1986) and Eisenberger, Fasolo and Davis-LaMastro (1990) have argued that perceived organizational support is positively influenced by such organizational practices as pay, job enrichment and influence on organizational policies. This argument is supported by a study from Rhoades, Eisenberger, & Armeli (2001) which showed that the relationship between organizational rewards, procedural justice, supervisor

support and employees' affective commitment was mediated by employees' perceived organizational support. In other words, employees can perceive the high commitment HR practices as evidence that the organization supports them and cares about their general well-being (e.g. Kwon, Bae, & Lawler, 2010). Studies have also shown that when organizations provide this kind of support and trust to the employees through HC-HRM, employees become highly involved in the organization, internalizing the organization's goals and working hard to accomplish the organization's goals (e.g. Arthur, 1994; Gilbert et al., 2011; Whitener, 2001). Thus for organizations that emphasize the importance of employees' knowledge sharing, HC-HRM will encourage employees to take the risks of knowledge sharing in favor of the organizations' goals.

However, HC-HRM does not necessarily lead to highly committed employees that work towards the goals of the organization (Bowen & Ostroff, 2004; Sanders & Yang, *in press*; Wall & Wood, 2005). As Bowen and Ostroff (2004) argued, only when HC-HRM is delivered in such a way that employees are able to understand HC-HRM as employers intended, the high commitment HR practices will be effective. If there is a weak HRM system, employees will understand HC-HRM idiosyncratically, meaning that employees may have a different understanding of HC-HRM (Bowen & Ostroff, 2004): Some employees' understand the importance of knowledge sharing to the achievement of the organization's goals and in turn share their knowledge with each other, while others do not understand the importance of knowledge sharing for the organization and thus are less willing to share their knowledge with their colleagues. In contrast, if there is a strong HRM system, all employees will understand HC-HRM in the same manner and will react to HC-HRM by sharing their knowledge with each other, thus the positive effect of HC-HRM on employees' knowledge sharing is reinforced. We thus expect that:

Hypothesis 1. The relationship between HC-HRM and employees' knowledge sharing is moderated by HRM system strength. The stronger the HRM system, the more positive the relationship.

The mediating effect of learning goal orientation

Learning goal orientation motivates employees to develop their competences by acquiring new skills and mastering new situations through learning and training, and leads employees to view achievement situations as opportunities to acquire new knowledge and skills (Dweck & Leggett, 1988; Vandewalle, 1997). In order to acquire new knowledge and skills,

learning goal orientation makes employees willing to take risks and to have a high tolerance for setbacks in favor of long-term improvements (e.g. Chadwick & Raver, 2012; Bettencourt, 2004). As discussed, knowledge sharing is accompanied by certain risks, such as employees losing their status in the organization or employees seeming to be incompetent because of a lack of knowledge (e.g. Cabrera & Cabrera, 2002; Currie & Kerrin, 2003; Szulanski, 1996). However, knowledge sharing also affords employees the opportunity to learn something new by having to respond to questions about their knowledge, and by affording them the opportunity to reexamine their own knowledge based on the knowledge that was exchanged during the knowledge sharing process (Swift, Balking, & Matusik, 2010). Studies have shown that employees' learning goal orientation is positively related to their engagement in interactive learning activities, such as feedback seeking and innovative behavior, despite the risks involved in such activities, such as receiving information that is damaging to their self-image or the rejection of their innovative ideas by colleagues (e.g. Bednall et al., 2013; Janssen & Prins, 2007; Runhaar, Sanders, & Yang, 2010; VandeWalle, Ganesan, Challagalla, & Brown, 2000). Learning goal orientation may lead employees to perceive knowledge sharing as a learning opportunity, and thus may make them willing to take the risks of knowledge sharing in favor of learning something new (Swift et al., 2010; Wang & Noe, 2010).

In line with the AMO model, we argue that HC-HRM provides the base for creating a work environment that stimulates employees' learning goal orientation (e.g. Jiang et al., 2012; Lepak et al., 2006). By employing HR practices such as training and development, career opportunities and participative decision making, HC-HRM shows that learning is appreciated, acknowledged, and supported within the organization. Employees then take opportunities to pursue learning and dare to take the risk of making mistakes during their learning process. Empirical studies have also shown that a supportive work environment stimulates employees' learning goal orientation (Bednall et al, 2013).

A strong HRM system further reinforces the appreciation and support of learning that HC-HRM practices offer within the organization. With a strong HRM system all employees will understand the HC-HRM practices in the same manner. They will be fully aware of the appreciation, support and rewards that the organization offers for their learning efforts, thus a combination of HC-HRM and a strong HRM system will arouse employees' learning goal orientation, which in turn stimulates employee knowledge sharing. We thus propose that:

Hypothesis 2: Learning goal orientation mediates the moderated relationship of HC-HRM and HRM system strength on employees' knowledge sharing.

Method

Research background

VET schools all over the world – including the Netherlands – are facing serious challenges and both schools and teachers are increasingly held responsible for students' achievements (Runhaar & Runhaar, 2012; Runhaar & Sanders, 2013). In light of these challenges, the professional development of teachers' plays an important role (Seezink & Poell, 2011). Regarding the professional development of teachers, VET schools in our sample emphasize the importance of knowledge sharing in their HR policy. For example, in their HR documents, the VET schools stated: "One of the competencies that this school focuses on is knowledge sharing" and "This VET school invests in the exchange of knowledge on many levels".

Participants

We surveyed employees within the teaching staff of six Dutch VET schools, and collected three waves of data in 2010, 2011 and 2012. At wave one, 865 questionnaires were sent out and 433 respondents completed the questionnaire (response rate: 50%). At wave two 887 questionnaires were sent out and 401 respondents completed the questionnaire (response rate: 45%; overlap with participants in wave one: 62%). At the last wave of data collection, 820 questionnaires were sent out and 339 respondents responded (response rate: 41%; overlap with wave one: 58%; overlap with wave two: 67%). The full-information maximum likelihood (FIML) procedure was used to account for missing data on the predictor and dependent variables.

The final sample consists of 689 respondents. Their mean age was 48 years of age, ranging from 20 to 65 years old, and 61.2% of the respondents were male. Of these respondents 79.5% indicated that their primary function was as a teacher, 11.2% an instructor or teaching assistant, 1.5% a team coordinator, and 3.9% indicated that they had another function. The average length of work experience of the respondents was about ten years, ranging from less than half a year to more than 20 years. Regarding their education level, 69.2% of the respondents had a bachelor's degree, 14.7% had a master's degree, and 9.7% received vocational training.

Procedure

The VET schools were contacted through the human resources and research managers within the schools, who invited line managers and teaching staff to participate. At each wave

of data collection we contacted the line managers of the schools who – with the consent of the employees – provided us with the e-mail addresses of the employees. An online questionnaire was then distributed via e-mail to these respondents. At each wave of data collection the introduction of the questionnaire explained the purpose of the study and assured the respondents that their answers would be confidential. At each wave of data collection two reminders were sent during the two weeks after the initial distribution of the questionnaire to respondents who had not filled out the questionnaire. The respondents could fill out the questionnaire either during their work hours or leisure time, and we provided the respondents with the opportunity to fill out part of the questionnaire and resume it at a later time.

Measures

All of the items in the questionnaire were measured using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

Knowledge sharing was measured over all three waves with five items from Van Woerkom (2003). Cronbach's α was .84 in wave 1, .83 in wave 2 and .82 in wave 3 of data collection. Example items are: "I share my knowledge and experiences with my team members on a regular basis" and "I discuss with my team members our criteria for functioning well".

Learning goal orientation was measured over all three waves with the four item scale developed by Vandewalle (1997). Cronbach's α was .77 in wave 1, .83 in wave 2, and .78 in wave 3 of data collection. Example items are: "I am willing to select a challenging work assignment that I can learn a lot from" and "I often look for opportunities to develop new skills and knowledge".

HC-HRM was measured in wave 2 and wave 3. We adapted 18 items from past published studies to measure HC-HRM (Biron & De Reuver, 2012; Dorenbosch, de Reuver, & Sanders, 2006; Sanders et al., 2008). The 18 items had good reliabilities, with a Cronbach's α of .81 in wave 2 and .85 in wave 3 of data collection. Example items are: "I get the opportunity to improve my skills through training and education", "I am often asked to take part in the decision making process", and "There is a strong connection between my job performance and my salary and rewards".

HRM system strength was measured in wave 2 and wave 3 with three subscales of distinctiveness, consistency and consensus. We adapted 16 items from Delmotte, de Winne, and Sels (2012; see also Delmotte (2008). Cronbach's α for this scale was .95 for the second wave and .94 for the third wave. Example items are: "The procedures and practices developed by HR are easy to understand" (Distinctiveness), "One can have faith that the HR practices

realize the goals for which they were designed" (Consistency), and "The people in our school responsible for HR have a mutual agreement about how to deal with employees" (Consensus).

In addition, we also collected information about respondents' demographic characteristics, including age, sex, and tenure because previous research showed relations between these controls and knowledge sharing (e.g. Bednall et al., 2014).

Analysis

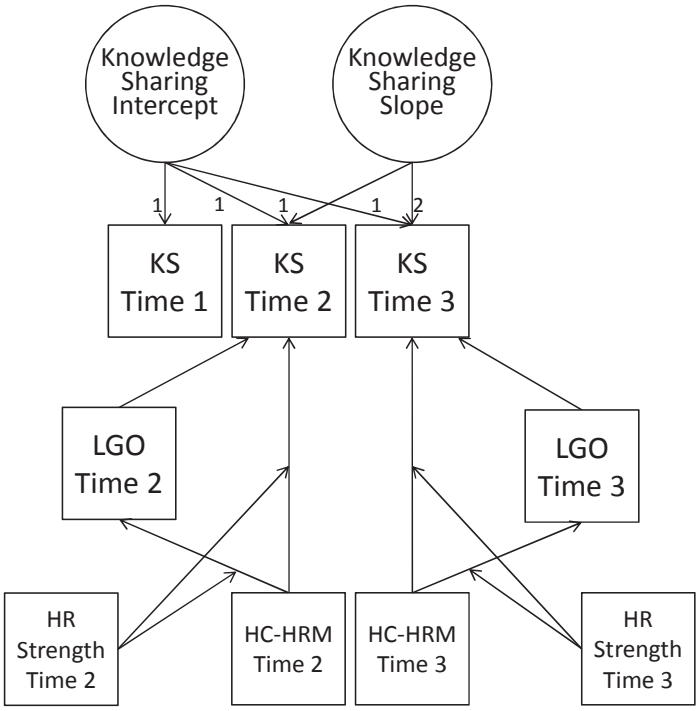
Our theoretical model proposes that HRM system strength will moderate the relationship between HC-HRM and employees' knowledge sharing, and that employees' learning goal orientation will mediate this jointed influence of HC-HRM and HRM system strength on employees' knowledge sharing. Given the longitudinal nature of data collection, we used a latent growth model (LGM) to analyze the data (McArdle, 2009). This model was tested in Mplus 7.11 using the Bayes estimator with the Markov Chain Monte Carlo (MCMC) iterative procedure to estimate model parameters. Close model fit is indicated by the 95% credible interval for the difference between the observed and replicated chi-square values including zero ($\chi^2_{\Delta OR}$), and a non-significant posterior predictive p-value (*PPP*) (Muthén & Asparouhov, 2012).

LGM is a form of longitudinal analysis which assesses systematic growth (or decline) in a variable measured on multiple occasions (McArdle, 2009). A trajectory (or line of best fit) is fitted to each individual in the sample. Each trajectory is characterized in terms of: (1) an intercept, representing a person's initial standing on a variable; and (2) a slope, representing the rate of change over time. Across the sample, the mean intercept and slope are each represented with a latent variable, thus depicting the effect of time.

In our analysis, we specified an LGM in which growth trajectories for knowledge sharing were estimated. HC-HRM, HRM system strength, and learning goal orientation were analyzed as time-varying predictors of knowledge sharing at waves 2 and 3, meaning that they can change between waves 2 and 3. Our model proposed that the jointed influence of HC-HRM and HRM system strength on employees' knowledge sharing is mediated by employees' learning goal orientation. An interaction term between the HC-HRM and HRM system strength measures was thus calculated at waves 2 and 3, which was analyzed as a third predictor of employees' learning goal orientation and knowledge sharing. The HC-HRM and HRM system strength variables were mean centered before calculating the interaction terms. The latent intercepts and slopes were also regressed on the control variables, including participants' age, gender, and tenure. This model is depicted in Figure 1.

To test for the mediating effect of learning goal orientation, we applied a mediated moderation model. We assessed the indirect effects of the jointed influence of HC-HRM and HRM system strength on knowledge sharing by calculating the 95% confidence interval (CI) around the estimate of the indirect path coefficient. The indirect effect is considered statistically significant if the CI does not include zero within its limits (Yuan & Mackinnon, 2009). To assess moderation, we generated plots showing the direct and indirect effects of HC-HRM at different levels of HRM system strength (Preacher, Rucker, & Hayes, 2007).

Figure 1. Latent growth model depicting the relationship between HC-HRM, HR system strength, learning goal orientation, and knowledge sharing



Results

Descriptive statistics

Table 1 reports the means, standard deviations and correlations among the variables. The results showed that HC-HRM and HRM system strength are positively related to employees' knowledge sharing at both waves 2 and 3 ($r = .25$ and $r = .29$, $ps < .01$, respectively for HC-HRM; and $r = .12$ and $r = .19$, $ps < .01$, respectively for HRM system strength). Furthermore, both HC-HRM and HRM system strength at wave 2 are positively related to knowledge sharing at wave 3 ($r = .20$, $p < .01$ for HC-HRM and $r = .14$, $p < .05$ for HRM system strength). HC-HRM was both at wave 2 and wave 3 also positively related with employees' learning goal orientation ($r = .15$ and $r = .29$, $ps < .01$, respectively). HR system strength was only at wave 3 positively related to employees' learning goal orientation ($r = .19$, $p < .01$).

Learning goal orientation was associated with knowledge sharing at all waves. Furthermore, learning goal orientation at wave 1 was associated with knowledge sharing at wave 2 ($r = .60$, $p < .01$) and learning goal orientation at wave 2 was also associated with knowledge sharing at wave 3 ($r = .61$, $p < .01$).

The relations between the wave 2 and wave 3 counterparts of both HC-HRM and HRM system strength were moderate and positive ($r = .63$, $p < .01$ for HC-HRM and $r = .61$, $p < .01$ for HRM system strength). Also the relations between the wave 1, 2 and 3 counterparts of learning goal orientation and knowledge sharing were moderate and positive, with correlations ranging from $r = .38$ to $r = .61$, $ps < .01$ for learning goal orientation, and $r = .53$ and $r = .57$, $ps < .01$ for knowledge sharing.

Respondents' age was negatively related with both HRM system strength and learning goal orientation at wave 2 ($r = -.12$, $p < .05$ and $r = -.17$, $p < .01$, respectively). Tenure was negatively related with HRM system strength and learning goal orientation at wave 2 ($r = -.18$, $p < .01$ and $r = -.22$, $p < .01$, respectively), and HRM system strength, learning goal orientation and knowledge sharing at wave 3 ($r = -.18$, $r = -.17$, and $r = -.15$, $ps < .01$, respectively).

None of the mean scores of the relevant measures changed significantly over the three waves of data collection.

Table 1. Means, standard deviations, and correlations among variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	48	10.4												
2. Sex	*NA*	*NA*	.15**											
3. Tenure	5.96	1.86	.65**	.16**										
Wave 1 (n = 433)														
4. LGO	4.03	.64	.01	-.07	-.00									
5. Knowledge sharing	3.86	.68	-.02	-.08	-.00	.43**								
Wave 2 (n = 401)														
6. HC-HRM	3.22	.50	-.04	.08	-.07	.18	.14*							
7. HRM system strength	2.74	.63	-.12*	.08	-.19**	.07	.03	.44**						
8. LGO	3.91	.66	-.17**	-.06	-.22**	.60**	.30**	.15*	.06					
9. Knowledge sharing	3.88	.62	.01	-.06	-.10	.43**	.57**	.25**	.12*	.36**				
Wave 3 (n = 339)														
10. HC-HRM	3.29	.56	-.06	.01	-.06	.20	.15*	.63**	.33**	.04	.16*			
11. HRM system strength	2.79	.60	-.13*	-.01	-.18**	.17	.17*	.30**	.61**	.06	.14*	.42**		
12. LGO	3.91	.60	-.19**	.03	-.17**	.38**	.21**	.18**	-.01	.61**	.23**	.10	.00	
13. Knowledge sharing	3.85	.63	-.19**	-.02	-.15**	.16	.56**	.20**	.14*	.28**	.53**	.29**	.19**	.30**

† p < .10, * p < .05, ** p < .01

Hypotheses testing

We applied a latent growth model to analyze the data. In this model, we analyzed HC-HRM and HRM system strength as time-varying covariates of knowledge sharing. We included the control variables, age, gender and tenure as time-invariant covariates of the latent intercept and slope. This model provided a close fit to the data, $\chi^2_{\Delta OR}$: [-21.566, 68.295], *PPP* = .172. With no covariates, the latent intercept of knowledge sharing was equal to 3.822 ($p < .001$) and slope equal to -0.011 ($p = .201$), suggesting that participation in knowledge sharing did not change as a function of time.

As our model employs HRM system strength as a moderator, the effects of HC-HRM depend on (i.e., are conditional on) the levels of HRM system strength at waves 2 and 3. As a result, in the following hypothesis tests, we report the main effects of HC-HRM at the mean levels of HRM system strength (and vice-versa for the main effects of HRM system strength). In Figure 2, we show the conditional effects of HC-HRM at different levels of HRM system strength.

Hypothesis 1 (H1) proposed that HRM system strength reinforces the positive effect of HC-HRM on employees' knowledge sharing. The main effects of HC-HRM on knowledge sharing were significant at wave 2 (unstandardized $\beta = .22$, $p < .001$) and wave 3 ($\beta = .22$, $p < .001$), and non-significant for HRM system strength at both wave 2 ($\beta = .02$, $p = .34$) and wave 3 ($\beta = .02$, $p = .38$). The interaction term was significant at wave 2 ($\beta = .13$, $p < .05$) and wave 3 ($\beta = .10$, $p < .05$). As shown in Figure 2a and 2b, the direct effect of HC-HRM increased when HRM system strength was high. Specifically, the direct effect reached significance when HRM system strength was greater than 1.9 (Wave 2) and 1.7 (Wave 3). Thus, H1 was supported at both waves.

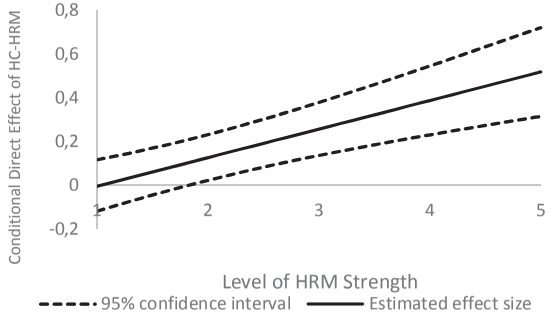
Hypothesis 2 (H2) proposed that learning goal orientation mediates the jointed influence of HC-HRM and HRM system strength on knowledge sharing. The main effect of HC-HRM on learning goal orientation approached significance at wave 2 ($\beta = .09$, $p = .091$), and was significant at wave 3 ($\beta = .11$, $p < .05$). The main effect of HRM system strength was non-significant both at wave 2 ($\beta = -.07$, $p = .15$) and wave 3 ($\beta = -.02$, $p = .37$). The interaction effect was significant at wave 2 ($\beta = .23$, $p < .001$), and approached significance at wave 3 ($\beta = .10$, $p = .068$). Learning goal orientation was positively related to knowledge sharing at wave 2 ($\beta = .17$, $p < .001$) and wave 3 ($\beta = .18$, $p < .001$). As shown in Figures 2c and 2d, the indirect effect of HC-HRM via LGO on knowledge sharing increased when HRM system strength was high. Specifically, the indirect effect reached significance when HRM system

strength was greater than 3.0 (Wave 2) and 2.9 (Wave 3). Thus, H2 was supported at both times.

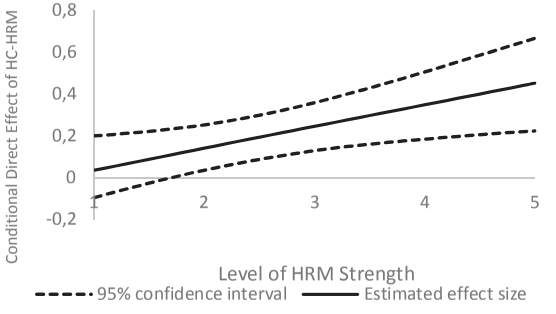
With regard to the control variables, older participants reported greater initial participation in knowledge sharing (intercept: β = . 014, p < .05), but lower participation over time (slope: β = -. 011, p < .001). In contrast, length of tenure was negatively associated with initial participation (intercept: β = -. 099, p < .01), but was associated with greater participation over time (slope: β = .037, p < .05). The effects of gender failed to reach significance.

Figure 2. Conditional direct and indirect effects of HC-HRM on knowledge sharing.

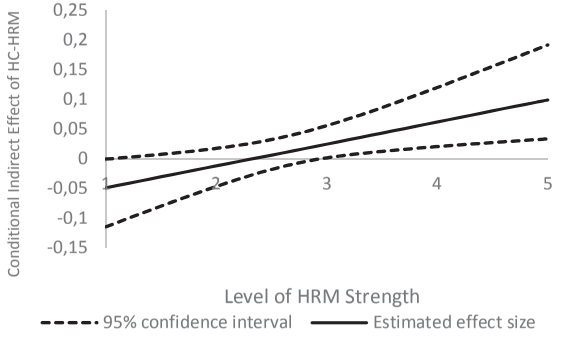
A. Conditional Direct Effect of HC-HRM on Knowledge Sharing (Wave 2)



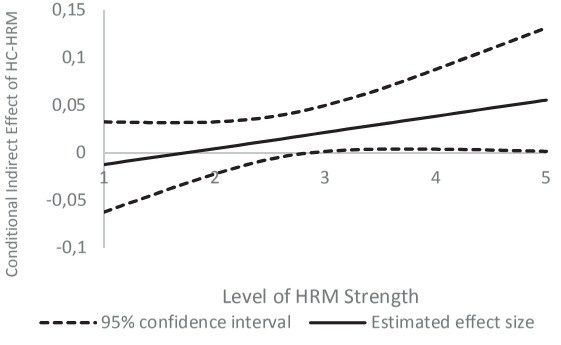
B. Conditional Direct Effect of HC-HRM on Knowledge Sharing (Wave 3)



C. Conditional Indirect Effect of HC-HRM via LGO on Knowledge Sharing (Wave 2)



D. Conditional Indirect Effect of HC-HRM via LGO on Knowledge Sharing (Wave 3)



These graphs display the moderating effects of HRM system strength on the effects of HC-HRM on knowledge sharing. The horizontal axis indicates the level of HRM system strength, based on the 1-5 Likert scale score. The vertical axis indicates the conditional effects of HC-HRM on knowledge sharing. The solid line shows the estimated conditional effect of HC-HRM on knowledge sharing. The broken lines show 95% confidence limits of the estimated conditional effect. Each conditional effect is considered statistically significant when the CI at a particular level of HRM strength does not include zero within its limits

Discussion

The purpose of this study was two-fold. First, we aimed to investigate the interplay between HC-HRM and HRM system strength on employees' knowledge sharing. Second, we tried to understand the mechanism of this interplay through employee motivational processes in terms of learning goal orientation. In line with our hypotheses, the findings showed that HC-HRM had a stronger positive effect on employees' knowledge sharing in a strong HRM system than in a weak HRM system. Furthermore, our findings confirmed that learning goal orientation mediated the joint effect of HC-HRM and HRM system strength on employee knowledge sharing. In the following section we will discuss the theoretical and practical implications of these findings and point out some of the limitations of this study.

Theoretical implications

First, our finding that HRM system strength adjusts the positive effect of HC-HRM on employees' knowledge sharing is in line with current studies on exploring the function of HRM content and process for employee workplace behavior. In those studies, the jointed effect of HC-HRM and HRM system strength has been connected to employees' reflection, informal learning activities, and innovative behavior (Bednall et al., 2014; Sanders &Yang, *in press*). From this perspective, our findings extend this list by including employee knowledge sharing. When we take a closer look at those behaviors, it seems that employees' engagement in risk-related behavior (e.g. informal learning activities, innovative behavior, and knowledge sharing) is especially sensitive to the jointed influence of HRM content and HRM process. By reflecting on their work and engaging in innovative behavior employees expose their methods to criticism and, by doing so, risk the fact of damaging their professional image and self-esteem (Runhaar et al., 2010). In the same vein, sharing knowledge with colleagues puts employees at risk of losing their status over their colleagues, or shared information being used against them (Cabrera & Cabrera, 2002; Currie & Kerrin, 2003). If our speculation is true, the HR approach

concerning HC-HRM and HRM system strength may be particularly useful for business sectors concerning innovation or for professions involving risk-taking behavior (e.g. investment professionals, researchers, and R&D staff). Clearly more empirical work is needed in this direction.

Second, the finding that learning goal orientation mediates the joint influence of HC-HRM and HRM system strength on employees' knowledge sharing furthers our understanding of how HRM translates into effective employee behaviors. From the 1990's, researchers started to empirically study the relationship between HRM and performance (e.g. Huselid, 1995; Arthur, 1994; MacDuffie, 1995). However, this type of research was criticized for being too much data-driven, and researchers called out for theoretical models that could explain the so-called 'black box' of HRM in order to answer the question *why* HRM leads to performance (e.g. Delery, 1998; Dyer & Reeves, 1995). The AMO model (Lepak et al., 2006) is one of the answers to this call (e.g. Boxall, 2012). Like any other theoretical explanation, the AMO model needs to be tested by empirical data. Our finding that learning goal orientation mediates the jointed influence of HC-HRM and HRM system strength on knowledge sharing provides direct support to this theoretical model.

Note, however, that there are different approaches in testing the AMO model. Jiang et al. (2012), for example, categorized HR practices into ability enhancing, motivation enhancing and opportunity enhancing practices to operationalize the AMO model. Their results showed a positive relationship between these HR practices and several organizational outcomes, mediated either by human capital or employee motivation. In contrast, our findings suggest that HC-HRM as a whole may arouse employee motivation, which further contributes to employee behavior. Put differently, our explanation of the AMO model is that HC-HRM content and process in combination may create an environment which stimulates employees to develop their ability, improve their motivation, and makes opportunities for employees more salient. Future research is needed to contrast different ways of testing the AMO model and uncover the exact dynamics of the AMO model underpinning the relationship between HRM and its outcomes.

Limitations

Two limitations of this study need to be addressed. First, in relation to our research interests, we highlight the function of motivational factors for the translation of HRM into employee knowledge sharing. According to the AMO model, this translation can also be understood from the perspectives of ability and opportunity enhancement. We suggest that

future research should include employees' ability and opportunities into the mediating model testing in order to gain a deeper understanding of the AMO model.

Second, despite the longitudinal design, the data in this study were collected from a single actor. Single actor data collection has been criticized for threatening the validity of conducted research because of several response biases of participants, such as their need to appear consistent and rational (consistency motive), their tendency to present themselves favorably (social desirability), or their tendency to agree or disagree with statements regardless of their content (acquiescence) (e.g. Podsakoff & Organ, 1986; Podsakoff, MacKenzie, MacKenzie, & Podsakoff, 2012; Donaldson & Grant-Vallone, 2002). The findings of this study could have been strengthened if we collected both self- and significant other report data (e.g. Kammeyer-Mueller, Steel, & Rubenstein, 2010). For example, for the measure of HC-HRM, it would be more accurate if we not only collect data from employees, but also from HR staff, line managers, or even HR documents in the organization. With a multi-actor design, HC-HRM is then a characteristic of the organization and not only an individual perception as it is treated in the current study. Similarly, the single actor self-report data for knowledge sharing could also be extended with colleague-rated or manager-rated knowledge sharing. We do believe that a longitudinal design with multi-actor data collection and multi-level data analysis will improve our research findings significantly.

Practical implications

Organizations can promote employees' knowledge sharing by employing a HC-HRM system. Within such a HC-HRM system special attention needs to be paid to HR practices that show support for employee learning, such as training and development, career opportunities and participative decision making. However, the findings of this study suggest that organizations should not only focus on the content of HRM, but also on how the content of their HRM is communicated to the employees within the organization and how it is perceived by employees. This means that HR managers and line managers should make sure that HR messages are salient, readily observable and easy to understand for employees; that different HR messages are consistent with each other and show continuity and stability over time; and that they share and send out the same vision about HRM to the employees. Furthermore, we suggest to measure on a regular basis how employees within the organization perceive HRM within the organization, in terms of distinctiveness, consistency and consensus (see also Sanders & Yang, *in press)*, whether employees perceive that there are enough learning

opportunities for them, and if they believe that employee learning is sufficiently supported within the organization.

6

Discussion

Introduction

The aim of this thesis was to generate a deeper understanding of factors influencing employees' professional development. Employee professional development in this thesis is investigated from two perspectives: employees' informal workplace learning and employees' career success. More specifically, in this thesis the focus lies on three informal workplace learning activities – keeping up to date, feedback asking from supervisors, and knowledge sharing – and two types of career success – objective career success and subjective career success.

Recognizing that employee professional development involves both employees themselves and their situation at the workplace (e.g. Billet, 2001; Ellström, 2001), scholars have investigated the influence of such individual differences factors as self-efficacy, learning motivation, and enjoyment of helping others, and such situational factors as peer support and work support (e.g. Lin, 2007; Levy, Cober, & Miller, 2002; Maurer, Weiss, & Barbeite, 2003; Maurer, Lippstreu, & Judge, 2008; Noe & Wilk, 1993). However, most studies have investigated the direct effects of either individual differences or situational factors on employees' professional development (Lohman, 2005; Kwakman, 2003), and studies on the interaction between these factors are lacking (Orvis & Leffler, 2011).

By assuming an interactionist approach (e.g. Terborg, 1981; Wang, Noe, & Wang, 2014), focusing on both interactions between different individual variables, between individual and situational variables, and between different situational variables, this thesis aims to meet the goal of generating a deeper understanding of a combination of different individual and situational factors stimulating employees' professional development. Five empirical studies have been conducted in order to examine the influence of both individual and situational factors on employees' professional development. In the next section first the main findings of these empirical studies will be summarized. This will be followed by a discussion of the main conclusions of this thesis, and the chapter will be concluded by a discussion of the limitations of the studies, future directions, and practical implications.

Main findings

In Chapter 2, two studies are reported that investigated the influence of employees' self-identity factors on their career success. Overall findings suggest that employees' career and self-identity factors need to be taken into account when one interprets why employees have different views on career success. In the first experimental study (Study 1) data were collected from 106 Dutch employees working in the educational, governmental, medical and business

services sectors, in order to investigate the influence of two types of employee career identity – desire for upward mobility and work centrality – on employees' career success. The results of this study implied that employees' with a strong desire for upward mobility tended to take an objective career success view, while employees with a strong work centrality tended to take a subjective career success view. These results where replicated and strengthened by a survey study (Study 2), conducted among 72 teachers from three secondary and seven primary schools in the Netherlands. Furthermore, in the second study the influence of the domain general self-identity factor of *employees'* self-construal was also taken into account. Results showed that the relationship between employees' desire for upward mobility and their objective view of career success was stronger when they had an interdependent self-construal. Not in line with our expectations, employees' independent self-construal did not strengthen the relationship between employees' work centrality and their subjective view of career success.

In Chapter 3, a study is reported in which the joint influence of employees' career motivation and self-construal on their participation in informal workplace learning activities was investigated. The data collected in this study were part of a three-wave longitudinal questionnaire conducted in 2010, 2011 and 2012 within the teaching staff of six Dutch Vocational Education and Training (VET) schools. More specifically, data from 323 teachers in four VET schools during the first wave of data collection were used in this study. The results showed that employees' career motivation had an overall positive effect on their participation in three informal learning activities: keeping up-to-date, feedback asking from supervisors, and knowledge sharing. Furthermore, these relationships were moderated by employees' self-construal: the relationship between career motivation and keeping up-to-date was stronger when employees' had a strong individual self-construal, and the relationship between career motivation and knowledge sharing was stronger when employees' had a strong collective self-construal. However, not in line with our expectations, the relationship between career motivation and feedback asking from supervisors was not moderated by employees' relational self-construal.

In the study reported in Chapter 4, the focus was narrowed down to the joint influence of a supportive work environment and employees' self-construal on the two informal collaborative learning activities: feedback asking from supervisors and knowledge sharing. In this study data from 145 teachers within four Dutch VET schools during the first and second wave of data collection of the longitudinal study have been used. The results showed that supervisor support was positively related to employees asking feedback from their supervisors and organizational support was positively related to employees' knowledge sharing.

Furthermore, the relationship between organizational support and knowledge sharing was strengthened by employees' collective self-construal. Contrary to our expectations, employees' relational self-construal did not strengthen the relationship between supervisor support and employees asking feedback from their supervisors.

The final study in Chapter 5, focused on the joint influence of two situational variables – HC-HRM and HRM system strength – on employees' knowledge sharing, and to what extent this relationship could be explained by employees' learning goal orientation. The three-wave longitudinal questionnaire data of 689 teachers within six Dutch VET schools were used in this study. The results showed that HC-HRM had a stronger positive influence on employees' knowledge sharing when there was a strong HRM system. Furthermore, the joint influence of HC-HRM and HRM system strength was mediated by employees' learning goal orientation.

All in all, this thesis has three important findings. First, the research results in this thesis show that employees' self-identity factors in terms of their career identity and self-construal are important factors when it comes to employees' professional development, both in terms of career success and informal workplace learning. This thesis in this respect has extended the traditional line of research into the influence of individual differences factors on employee professional development, that have mostly focused on the influence of motivational factors (e.g. Day & Allen, 2004; Ko, Kirsch, & King, 2005; Lin, 2007; Naquin & Holton, 2002; Wayne, Liden, Kraimer, & Graf; 1999). Second, the results from this thesis show that an interactionist approach is valuable in understanding employees' professional development. Overall, the findings suggest that the interaction approach can take many different forms: interactions between different self-identity factors, between motivational and self-identity factors, between situational and self-identity factors, and between different situational factors. Third, the results of Chapter 5 suggest that individual differences and situational factors not only work together in influencing employees' professional development, but that individual differences factors can also help in explaining and interpreting the effect of situational factors on employees' professional development. In other words, employees' individual differences factors can be used as an explanation for why employee professional development is subject to situational factors.

Theoretical implications

In line with the three significant findings summarized in the previous section, three theoretical implications for theory building on employee professional development will be highlighted.

First, integration of self-identity factors into employees' professional development expands our view on why employees choose different paths to develop themselves in the work related domain. Previous studies in this field have had a strong focus on the influence of motivational variables related to learning, such as employees' self-efficacy, learning goal orientation, learning motivation, perceived benefits and perceived learning qualities (e.g. Birdi, Allen, & Warr, 1997; Maurer et al. 2003; Maurer et al. 2008; Noe & Wilk, 1993; Orvis & Leffler, 2011; Runhaar, Sanders, & Yang, 2010). This strong focus on the influence of motivational factors has limited other approaches to employee professional development to develop further. By taking the view from scholars in the field of career development (Super, 1953; 1980; Schein, 1978; 1993; 1996; London, 1983; 1993), this thesis shifts the research focus from the motivational approach to the identification approach, suggesting that employee professional development is a complex system and should be viewed and studied from multiple theoretical approaches.

Second, an interactionist approach deepens our theoretical understanding of employee professional development. Previous studies have made it clear that both individual differences factors and situational factors were relevant to employee professional development (e.g. Maurer et al., 2003; Maurer et al., 2008; Noe & Wilk, 1993). This type of research has resulted in a list of relevant and irrelevant factors for employee professional development. However, the dynamics underlying those different factors have not been fully explored yet. By combining and integrating the different influential factors with each other a more meaningful picture of employees' professional development is created, which depicts the relationships among the factors listed in the previous studies and unfolds the complex nature of employees' professional development.

Theoretically it is worthwhile to mention that the interaction approach can take many different forms. The results of Chapter 2 showed that two individual differences factors – employees' self-identity in terms of their career identity and self-construal – jointly influence employees' career success. The results of Chapter 3 showed that individual differences in terms of motivation (i.e. employees' career motivation) and in terms of self-identity (i.e. employees' self-construal) work together in influencing employees' engagement in informal workplace learning activities. The results of Chapter 4 showed that situational factors – in terms of organizational and supervisor support – and individual differences factors – in terms of employees' self-construal – also jointly influence employees' engagement in informal workplace learning activities. Finally, the results of Chapter 5 showed that different situational factors – HC-HRM and HRM system strength – can also work together in influencing

employees' professional development These findings suggest that the traditional meaning of the interactionist approach – the effect of a situation on behavior can vary as a function of employees' perception of that situation (e.g. Terborg, 1981; Wang, Noe, & Wang, 2014) needs to be broadened to encompass different interactional approaches: motivation in combination with identity, identity in combination with the situation, identity factors in combination with each other, and situational factors in combination witch each other.

In addition, an interactionist approach also helps to explain why scholars have found contradictory results when it comes to the influence of individual differences and situational factors on employees' professional development. For example, Lin (2007) has found that both employees' extrinsic and intrinsic motivation influences their knowledge sharing, while Ko et al. (2005) only found an effect of employees' intrinsic motivation. In a similar vein, Lu, Leung, and Koch (2006) did not find a positive influence of organizational support on employees' knowledge sharing, while Chen and Huang (2007) did find a positive influence of organizational support on employees' knowledge sharing. An interactionist approach provides another way to integrate the seemingly contradictory findings from these previous research. For example, the results of Chapter 2 showed that the relationship between employees' desire for upward mobility and their objective career success was strengthened by a strong collective self-construal. Both the desire for upward mobility and objective career success focus on such external motivators as salary, promotions and status. These results suggest that extrinsic motivation only has an influence on the behavior of employees with a strong collective self-construal. This could explain why Lin (2007) did find an effect of extrinsic motivation and Ko et al. (2005) did not. Similarly, the results of Chapter 4 showed that the relationship between organizational support and employees' knowledge sharing was stronger for employees' with a strong collective self-construal. In other words, organizational support may only be important for employees with a collective self-construal, which could explain the contradictory findings of Lu et al's (2006) study and Chen and Huang's (2007) study.

However, contradictory to expectations, the results of Chapter 3 and Chapter 4 show that employees' relational self-construal did not have a moderating effect on the relationship between employees' career motivation and feedback asking from supervisors and the relationship between supervisor support and feedback asking from supervisors. The results of the confirmatory factor analyses in both chapters do show that employees were able to distinguish the relational self-construal, and mean scores on relational self-construal scale were reasonably high (M = 3.88 and M = 3.90 in Chapter 3 and Chapter 4 respectively). In other words, relational self-construal was present in the sample of these studies, but did not have a

moderating function. A possible reason for these non-findings could be the strong individualistic culture in the Netherlands (e.g. Hofstede 1980; 2001). In individualistic cultures, there is a strong separation between individuals' private and working life and strong interpersonal relationships at work are considered undesirable because they may lead to nepotism and thus to conflicts of interest (Hofstede, 2001). In other words, in individualistic countries the relationship between employer and employee is strictly a business transaction in which there is no room for interpersonal relationships. However, in one's private life interpersonal relationships could play an important role. In contrast to collective cultures like China, in which friendships are often times predetermined by the social context and a lot of attention is paid to remain in harmony with all relationships, in individualistic cultures friendships are a matter of personal choice and a strong source of affect (Hofstede, 2001). Thus, it could be the case that the relational self-construal of individuals in an individualistic culture such as the Netherlands does not have an influence in one's working life, but does have an influence in one's private life. For future studies it is suggested to investigate the influence of employees' self-construal on their professional development in more collectivistic cultures in which interpersonal relationships at work play a more important role, thus increasing the chance of detecting the influence of employees' relational self-construal on their professional development.

Third, the findings from Chapter 5 indicate a different approach for investigating the influence of individual differences factors on employees' professional development. In contrast to Chapters 2, 3 and 4 where an interactionist perspective is taken into account, Chapter 5 takes an explanatory perspective to investigate why situational factors work regarding employees' professional development. The meaningful explanation lies in the fact that the situational settings highlight employees' learning goal orientation, which in turn encourages employees' knowledge sharing. The present research can be extended by investigating whether the other types of motivational factors, such as employees' self-efficacy and perceived benefits of participation in development activities (e.g. Birdi et al. 1997; Maurer et al., 2003; Lin, 2007) that have been found to influence employees' professional development could also explain the relationship between situational factors such as work support and employees' professional development. Furthermore, future studies could also investigate how other meaningful psychological concepts, such as employees' organizational identity, can help to explain the influence of situational factors on employees' professional development.

Limitations

Some limitations of this thesis should be discussed. First of all, informal workplace learning in this thesis is operationalized by categorizing three different types of informal learning activities: the individual learning activity of keeping up-to-date, the dyadic collaborative learning activity of feedback asking from supervisors, and the group collaborative learning activity of knowledge sharing. These three types of informal workplace learning activities were chosen based on research showing their importance for the sample used in this thesis: teachers from Dutch Vocational Education and Training (VET) schools (e.g. Kwakman, 2003; Lohman, 2005; Lohman & Woolf, 2001). The question then arises whether these three types of informal workplace learning activities are generalizable and applicable to other professions and work contexts. Scholars have argued that the work context and learning context in which self-directed learners are working determines to a large extent how they are learning (e.g. Poell, van Dam, & van den Berg, 2004; van der Krogt, 1998). In this respect, it is suggested that future studies need to sample employees from different types of organizations and professions in order to reconfirm the current research findings in this thesis.

Second, the fact that all of the studies in this thesis have been conducted in the Netherlands presents another limitation for the generalization of the results of this thesis. According to Hofstede (1980, 2001) the Netherlands can be characterized as a strong individualistic and feminine culture (Hofstede, 1980, 2001). This cultural context could have limited our chances to detect the influence of employees' self-identity on their professional development. For example, in the strong individualistic culture of the Netherlands, the relational self-construal may not play an important role in employees' working life, thus explaining the non-findings of the moderating effects of employees' relational self-construal. Furthermore, in a strong feminine culture such as the Netherlands, individuals' prefer modesty and caring for the weak over achievement and material success (Hofstede, 2001), which could explain the non-findings in the experimental study of the influence of employees' career identity on their objective career success perspective. For future studies it is thus suggested to try to replicate and extend the findings of this thesis in countries with a strong collectivistic culture, such as China, Korea and Indonesia.

Third, as explained in the introduction, the three studies in this thesis concerning employees' professional development in terms of informal workplace learning use parts of the same dataset. Although each of these studies had its own focus with different sets of independent and dependent variables, using parts of the same dataset could be another explanation of the non-finding of the moderating effect of employees' relational self-construal

on the relationships between employees' career motivation and feedback asking from supervisors (Chapter 3) and on the relationship between supervisor support and feedback asking from supervisors (Chapter 4). All of the respondents of the study in Chapter 4 were also part of the sample of the study in Chapter 3. The non-finding of the moderating effect of employees' relational self-construal in Chapter 3 suggests that relational self-construal of these employees did not have an influence in their working lives. Using the relational self-construal of the same employees in Chapter 4 to test the moderating effect of employees' relational self-construal on the relationship between supervisor support and feedback asking from supervisors, could have diminished the chance to find this moderating effect of relational self-construal. In this sense, using parts of the same dataset can be considered as another limitation of this thesis.

Fourth, with the exception of the second study in Chapter 2, all of the data in this thesis are self-reported single actor data. This type of data has been linked to several response biases of participants, such as their need to appear consistent (consistency motive), their tendency to present themselves favorably (social desirability), and the tendency to agree or disagree with statements regardless of their content (acquiescence) (e.g. Donaldson & Grant-Vallone, 2002; Podsakoff, MacKenzie, & Podsakoff, 2012), thus threatening the validity of the conducted studies. In order to overcome this limitation, future studies should collect data from multiple actors. For example, instead of letting employees' rate their own feedback asking and knowledge sharing, supervisors can be asked to rate the feedback asking of employees and colleagues can be asked to rate the extent of knowledge sharing; and for the measure of HC-HRM data could also be collected from HR staff or line managers.

Practical implications

Based on the results of this thesis we can come up with some practical implications. First of all, the results of this thesis showed that employees' career motivation has an overall positive influence on employees' informal workplace learning in terms of keeping up-to-date, feedback asking for supervisors and knowledge sharing. It is thus important for HR professionals to stimulate employees' career motivation. This could be achieved by employing such management activities as yearly career planning conversations with supervisors which give employees a clear insight in the career goals that they want to achieve, giving clear performance feedback, and providing job challenges within the organization.

Second, participation in collaborative informal workplace learning activities can be accompanied by certain disadvantages, such as losing one's competitive advantage over other employees or being evaluated as lacking in confidence or being incompetent (e.g. Cabrera &

Cabrera, 2002; Szulanski, 1996). The results of this thesis showed that a safe environment supportive of employees' informal workplace learning can play an important role in overcoming these drawbacks. For example, supervisor support was positively related to employees' asking for feedback from their supervisors and organizational support was positively related to employees' knowledge sharing. This means that line managers within the organization should learn how they can support and stimulate employees' in their informal workplace learning, for example, by following a transformational leadership training. Organizational support for employees' informal collaborative learning, on the other hand, can be created in two ways. First of all, support can be shown by direct action, for example by affording work time for engagement in informal collaborative learning activities, providing training in communication skills for employees, and by providing work areas in close proximity of each other which makes it easier for employees to reach out to each other. Second, signals of support for informal collaborative workplace learning can be sent to employees via a HC-HRM system within the organization. Especially important in this respect is to focus on HC-HRM practices that show support for employee learning such as training and development opportunities and participative decision making. Furthermore, the results showed that the positive influence of HC-HRM is especially strong when there is a strong HRM system. This means that Human Resource (HR) messages that are sent to employees should be salient, easily observable and understandable, be consistent for all employees, and be stable over time. In other words, employers, HR professionals and managers should know how HRM within the organization is perceived by employees. In this respect it is important to assess employees' perception of HRM – in terms of distinctiveness, consistency, and consensus – on a regular basis (Sanders & Yang, *in press).*

However, in order to maximize the influence of employees' career motivation and a supportive work environment on employees' informal workplace learning, employees' self-construal should also be taken into account. For example, the results of this thesis show that employees' career motivation has an especially strong influence on their keeping up-to-date when employees have a strong individual self-construal, while the influence of employees' career motivation on their knowledge sharing is especially strong for employees with a collective self-construal. In the same vein, organizational support is especially effective for stimulating knowledge sharing by employees with a strong collective self-construal. These results suggest that it is important for both employees and organizations to have insight in employees' self-construal, which could be achieved by assessing employees' self-construal, job interviews or yearly evaluation interviews. An insight in employees' self-construal can help

employers, managers and HR professionals in designing effective learning programs for employees. For employees' with a strong individual self-construal it is important to offer opportunities for individual learning, for example by giving employees a subscription to a professional journal of their choice so they can keep up-to-date with the developments in their work field, or by affording them the chance to follow individual training courses. For employees' with a strong collective self-construal, on the other hand, it is important to show support for and offer opportunities for collective learning, for example, by encouraging them to discuss and share their work-related experiences with each other by letting them participate in knowledge management teams, or by affording them the time to arrange weekly or monthly knowledge sharing sessions with colleagues. For employees' an insight in their self-construal can help them to maximize the benefits of their learning efforts by individualizing their learning styles based on "who they are". This means that they should tailor their own informal workplace learning activities in keeping with their style. For example, employees with a strong individual self-construal should focus on participating in individual learning activities that offer them the change to focus on their own goals without having to take into account others' interests and goals. Employees with a strong collective self-construal, on the other hand, should focus on participating in collaborative learning activities in which they can work together with others in an effort to accomplish group learning goals.

In a similar vein, employees' self-identity in terms of their career identity and self-construal should also be taken into account when it comes to employee career success. A good fit between employees and organizations will enable employees to reach the type of career success that they wish to achieve and for organizations to have successful and productive employees. This means that managers and HR professionals should know the career identity of their employees. An especially appropriate time for measuring employees' career identity would be during job interviews. In order to find a good fit between employees and organizations, the offered job should fit with the career identity of the applicant. More specifically, HR professionals should place prospective employees with a work centrality identity in a position in the organization that allows them to incorporate their own values and interest in their work and to work as an autonomous professional, while prospective employees' with a desire for upward mobility should be placed in a position in the organization that allows them to grow within the organization in terms of salary and promotions, especially when these employees also have a strong collective self-construal. Similarly, for employees this means that they can maximize their career success by applying for positions that create a good fit between

"who they are" and the career development opportunities that are afforded within those positions.

References

Abele, A.E., & Spurk, D. (2009). The longitudinal impact of self-efficacy and career goals on objective and subjective career success. *Journal of Vocational Behavior*, 74, 53-62.

Aguinis, H., & Kraiger, K. (2009). Benefits of training and development for individuals and teams, organizations, and society. *Annual Review of Psychology*, 60, 451-474.

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. California, USA: Sage Publications.

Ardichvili, A. (2008). Learning and knowledge sharing in virtual communities of practice: Motivators, barriers, and enablers. *Advances in Developing Human Resources*, 10, 541-554.

Argote, L., & Ingram, P. (2000). Knowledge transfer: A basis for competitive advantage in firms. *Organizational Behavior and Human Decision Processes,* 82, 150-169.

Argote, L., Ingram, P., Levine, J. M., & Moreland, L. (2000). Knowledge transfer in organizations: Learning from the experience of others. *Organizational Behavior and Human Decision Processes,* 82*,* 1-8.

Arthur, J.B. (1992). The link between business strategy and industrial relations systems in American steel minimills. *Industrial and Labor Relations Review*, 45, 488-506.

Arthur, M.B. (1994). The boundaryless career: A new perspective for organizational inquiry. *Journal of Organizational Behavior*, 15, 295-306.

Arthur Jr, W., Bennett Jr, W., Edens, P.S., & Bell, S.T. (2003). Effectiveness of training in organizations: A meta-analysis of design and evaluation features. *Journal of Applied Psychology*, 88, 234-245.

Arthur, J.B., & Huntley, C.L. (2005). Ramping up the organizational learning curve: Assessing the impact of deliberate learning on organizational performance under gainsharing. *The Academy of Management Journal*, 48, 1159-1170.

Arthur, M.B., Khapova, S.N., & Wilderom, C. P.M. (2005). Career success in a boundaryless career world. *Journal of Organizational Behavior*, 26, 177-202.

Aryee, S., Wyatt, T., & Stone, R. (1996). Early career outcomes of graduate employees: The effect of mentoring and ingratiation. *Journal of Management Studies*, 33, 95-118.

Aulakh, P.S., & Gencturk, E.F. (2000). International principal-agent relationships: Control, governance and performance. *Industrial Marketing Management,* 29, 521-538.

Bargh, J.A., & Chartrand, T.L. (2000). The mind in the middle: A practical guide to priming and automaticity research. In H.T. Reisand, & J.M. Charles (Eds.), *Handbook of research methods in social and personality psychology* (pp. 253-285). Cambridge, UK: University Press.

Barney, J.B. (1995). Looking inside for competitive advantage. *The Academy of Management Executive*, 9, 49-61.

Barney, J. B., & Wright, P. M. (1998). On becoming a strategic partner: The role of human resources in gaining competitive advantage. *Human Resource Management,* 37, 31-46.

Baruch, Y., & Bozionelos, N. (2010). Career issues. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology, Volume 2: Selecting & developing members for the organization* (p. 67-113). Washington DC, USA: American Psychological Association.

Becker, B.E., Huselid, M.A., Pickus, P.S., & Spratt, M.F. (1997). HR as a source of shareholder value: Research and recommendations. *Human Resource Management*, 36, 39-47.

Bednall, T.C. (2013). Longitudinal research. In K. Sanders, J.A. Cogin, & H.T.J. Bainbridge (Eds.), *Research methods for Human Resource Management* (1st ed., pp. 74-96). Routledge: New York.

Bednall, T.C., Sanders, K., & Runhaar, P. (2014). Stimulating informal learning activities through perceptions of performance appraisal quality and human resource management system strength: A two-wave study. *Academy of Management Learning & Education,* 13, 45-61.

Bednall, T.C., Sanders, K., & Van Rijn, M.B. (2013). The influence of leader-member exchange and goal orientation in facilitating informal learning at work. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, USA, April 2013.

Bettencourt, L.A. (2004). Change-oriented organizational citizenship behaviors: The direct and moderating influence of goal orientation. *Journal of Retailing*, 8-, 165-180.

Bickel, R. (2007). *Multilevel analysis for applied research: It's just regression!* New York, NY, USA: The Guilford Press.

Billet, S. (2001). Learning through work: Workplace affordances and individual participation. *Journal of Workplace Learning*, 13, 209-214.

Birdi, K., Allan, C., & Warr, P. (1997). Correlates and perceived outcomes of four types of employee development activity. *Journal of Applied Psychology*, 82, 845-857.

Biron, M., & de Reuver, R. (2012). Restoring balance? Status inconsistency, absenteeism, and HRM practices. *European Journal of Work and Organizational Psychology*, 22, 683-696.

Blau, P. M. (1964). *Exchange and power in social life*. New York, USA: Wiley.

Boselie, P., Dietz, G., & Boon, C. (2005). Commonalities and contradictions in research on human resource management and performance. *Human Resource Management Journal*, 15, 67-94.

Boud, D., & Middleton, H. (2003). Learning from others at work: Communities of practice and informal learning. *Journal of Workplace Learning*, 15, 194-202.

Bouty, I. (2000). Interpersonal and interaction influences on informal resource exchanges between R&D researchers across organizational boundaries. *Academy of Management Journal,* 43, 50-65.

Bowen, D.E., & Ostroff, C. (2004). Understanding HRM-firm performance linkages: The role of the "strength" of the HRM system. *Academy of Management Review*, 29, 203-221.

Boxall, P. (2012). High-performance work systems: What, why, how and for whom? *Asia Pacific Journal of Human Resources*, 50, 169-186.

Boxall, P., & Macky, K. (2009). Research and theory on high-performance work systems: Progressing the high-involvement stream. *Human Resource Management Journal*, 19, 3-23.

Bozionelos, N., Bozionelos, G., Polychroniou, P., & Kostopoulos, K. (2014). Mentoring receipt and personality: Evidence for non-linear relationships. *Journal of Business Research*, 67, 171-181.

Brett, J.M., Feldman, D.C., & Weingart, L.R. (1990). Feedback-seeking behavior of new hires and job changers. *Journal of Management*, 16, 737-749.

Brewer, M.B., & Chen, Y-R. (2007). Where (who) ware collectives in collectivism? Toward conceptual clarification of individualism and collectivism. *Psychological Review*, 114, 133-151.

Brewer, M. B., & Gardner, W. (1996). Who is this "we"? Levels of collective identity and self representations. *Journal of Personality and Social Psychology, 71,* 83-93.

Button, S.B., Mathieu, J.E., & Zajac, D.M. (1996). Goal orientation in organizational research: A conceptual and empirical foundation. *Organizational Behavior and Human Decision Processes*, 67, 26-48.

Cabrera, Á., & Cabrera, E. F. (2002). Knowledge-sharing dilemmas. *Organization Studies,* 23, 687-710.

Cabrera, E.F., & Cabrera, A. (2005). Fostering knowledge sharing through people management practices. *International Journal of Human Resource Management*, 16, 720-735.

Cabrera, E.F., Collins, W.C., & Saldago, J.F. (2006). Determinants of individual engagement in knowledge sharing. *The International Journal of Human Resource Management*, 17, 245-264.

Campbell, D.T., & Fiske, D.W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56, 81-105.

Carmeli, A., & Gittell, J.H. (2009). High-quality relationships, psychological safety, and learning from failures in work organizations. *Journal of Organizational Behavior,* 30, 709-729.

Carson, K.D., & Bedeian A.G. (1994). Career commitment: Construction of a measure and examination of its psychometric properties. *Journal of Vocational Behavior*, 44, 237-262.

Chadwick, I.C., & Raver, J.L. (2012). Motivating organizations to learn: Goal orientation and its influence on organizational learning. *Journal of Management*. Advance online publication. doi: 10.1177/0149206312443558.

Chen, G., Gully, S.M., Whiteman, J.A., & Kilcullen, R.N. (2000). Examination of relationships among trait-like individual differences, state-like individual differences, and learning performance. *Journal of Applied Psychology*, 85, 835-847.

Chen, C. J., & Huang, J. W. (2007). How organizational climate and structure affect knowledge management: The social interaction perspective. *International Journal of Information Management*, *27,* 104-118.

Coetzee, M., Schreuder, D., & Tladinyane, R. (2007). Organizational commitment and its relation to career anchors. *Southern African Business Review*, 11, 65-86.

Cole, M. S., & Bruch, H. (2006). Organizational identity strength, identification, and commitment and their relationships to turnover intention: Does organizational hierarchy matter? *Journal of Organizational Behavior*, 27, 585-605.

Collins, C. J., & Smith, K. G. (2006). Knowledge exchange and combination: The role of human resource practices in the performance of high-technology firms. *The Academy of Management Journal*, 49, 544-560.

Combs, J., Liu, Y., Hall, A., & Ketchen, D. (2006). How much do high-performance work practices matter? A meta-analysis of their effects on organizational performance. *Personnel Psychology*, 59, 501-528.

Cross, S. E., Bacon, P. L., & Morris, M. L. (2000). The relational-interdependent self-construal and relationships. *Journal of Personality and Social Psychology*, 78, 791-808.

Currie, G., & Kerrin, M. (2003). Human resource management and knowledge management: enhancing knowledge sharing in a pharmaceutical company. *International Journal of Human Resource Management*, 14, 1027-1045.

Dawes, R. M. (1980). Social dilemmas. *Annual Review of Psychology, 31,* 169-193.

Day, R., & Allen, T.D. (2004). The relationship between career motivation and self-efficacy with protégé career success. *Journal of Vocational Behavior*, 64, 72-91.

Delery, J.E. (1998). Issues of fit in strategic human resource management: Implications for research. *Human Resource Management Review*, 8, 289-309.

Delery, J.E., & Shaw, J.D. (2001). The strategic management of people in work organizations: Review, synthesis, and extension. *Research in Personnel and Human Resources Management*, 20, 165-197.

Delmotte, J. (2008). *Evaluating the HR function: empirical studies on HRM architecture and HRM system strength* (Unpublished doctoral thesis). KU Leuven, Belgium.

Delmotte, J., De Winne, S., & Sels, L. (2012). Toward an assessment of perceived HRM system strength: Scale development and validation. *The International Journal of Human Resource Management*, 23, 1481-1506.

DeNisi, A.S., Hitt, M.A., & Jackson, S.E. (2003). The knowledge-based approach so sustainable competitive advantage. In A.S. DeNisi, M.A. Hitt, & S.E. Jackson (Eds.), *Managing knowledge for sustained competitive advantage: Designing strategies for effective human resource management* (p. 3-33). San Francisco, USA: Jossey-Bass.

DeShon, R.P., & Gillespie, J.Z. (2005). A motivated action theory account of goal orientation. *Journal of Applied Psychology*, 90, 1096-1127.

Digenti, D. (1999). Collaborative learning: A core capability for organizations in the new economy. *Reflections*, 1, 45-55.

Dillenbourg, P. (1999). What do you mean by 'collaborative learning?'. In P. Dillenbourg (Ed.), *Collaborative-learning: Cognitive and Computational Approaches* (pp. 1-19). Oxford, UK: Elsevier.

Donaldson, S.I., & Grant-Vallone, E.J. (2002). Understanding self-report bias in organizational behavior research. *Journal of Business and Psychology*, 17, 245-260.

Dorenbosch, L., De Reuver, R., & Sanders, K. (2006). Getting the HR message across: The linkage between line – HR consensus and 'commitment strength' among hospital employees. *Management Revue, An International Review of Management Studies*, 17, 274-291.

Dorn, F.J. (1992). Occupational wellness: The integration of career identity and personal identity. *Journal of Counseling & Development*, 71, 176-178.

Dweck, C.S., & Leggett, E.L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, 95, 256-273.

Dyer, L., & Reeves, T. (1995). Human Resource strategies and firm performance: What do we know and where do we need to go? *The International Journal of Human Resource Management*, 6, 656-670.

Edmondson, A. (2004). Psychological safety, trust, and learning in organizations: A group lens. In R.M.Kramer & K.S. Cook (Eds.). *Trust and distrust in organizations: Dilemmas and approaches* (p. 239-272). New York, USA: Russel Sage.

Eisenberger, R., Armeli, S., Rexwinkel, B., Lynch, P. D., & Rhoades, L. (2001). Reciprocation of perceived organizational support. *Journal of Applied Psychology,* 86, 42-51.

Eisenberger, R., Cummings, J., Armeli, S., & Lynch, P. (1997). Perceived organizational support, discretionary treatment, and job satisfaction. *Journal of Applied Psychology*, 82, 812-820.

Eisenberger, R., Fasalo, P., & Davis-LaMastro, V. (1990). Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology*, 75, 51-59.

Eisenberger, R., Huntington R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71, 500-507.

Eisenberger, R., Stinglhamber, F., Vandenberghe, C., Sucharski, I.L., & Rhoades, L. (2002). Perceived supervisor support: Contributions to perceived organizational support and employee retention. *Journal of Applied Psychology*, 87*,* 565-573.

Ellison, J.A., & Schreuder, A.M.G. (2000). The relation between career anchors, occupational types and job satisfaction of midcareer employees. *Journal of Industrial Psychology*, 26, 1-6.

Ellström, P-E. (2001). Integrating learning and work: Problems and prospects. *Human Resource Development Quarterly*, 12, 421-435.

Evans, M. G. (1985). A Monte Carlo study of the effects of correlated method variance in moderated multiple regression analysis. *Organizational Behaviour and Human Decision Processes,* 36, 305-323.

Feldman, D.C., & Bolino, M.C. (1996). Careers within careers: Reconceptualizing the nature of career anchors and their consequences. *Human Resource Management Review*, 6, 89-112.

Fisher, R.J. (1993). Social desirability bias and the validity of indirect questioning. *Journal of Consumer Research*, 20, 303-315.

Fisher, R.J., & Katz, J.E. (2000). Social-desirability bias and the validity of self-reported values. *Psychology & Marketing*, 17, 105-120.

Foss, N.J., & Pedersen, T. (2002). Transferring knowledge in MNCs: The role of sources of subsidiary knowledge and organizational context. *Journal of International Management*, 8, 49-67.

Frenkel, S., Restubog, S.L.d., & Bednall, T. (2012). How employee perceptions of HR policy and practice influence discretionary work effort and co-worker assistance: Evidence from two organizations. *The International Journal of Human Resource Management*, 23, 4193-4210.

Gahan, P., & Abeysekera, L. (2009). What shapes an individual's work values? An integrated model of the relationship between work values, national culture and self-construal. *The International Journal of Human Resource Management*, 20, 126-147.

Garavan, T. N., & McCarthy, A. (2008). Collective learning processes and Human Resource Development. *Advances in Developing Human Resources*, 10, 451-471.

Gavino, M.C., Wayne, S.J., & Erdogan, B. (2012). Discretionary and transactional human resource practices and employee outcomes: The role of perceived organizational support. *Human Resource Management*, 51, 665-686.

Geijsel, F. P., Sleegers, P. J. C., Stoel, R. D., & Krüger, M. L. (2009). The effect of teacher psychological and school organizational and leadership factors on teachers' professional learning in Dutch schools. *The Elementary School Journal*, 109*,* 406-427.

Gerhart, B., Wright, P.M., McMahan, G.C., & Snell, S.A. (2000). Measurement error in research on the human resources and firm performance relationship: Further evidence and analysis. *Personnel Psychology*, 53, 855-872.

Gilbert, C., De Winne, S., & Sels, L. (2011). The influence of line managers and HR department on employees' affective commitment. *The International Journal of Human Resource Management*, 22, 1618-1637.

Gould-Williams, J. (2004). The effects of 'high commitment' HRM practices on employee attitude: The views of public sector workers. *Public Administration*, 82, 63-81.

Guest, D.E. (2011). Human resource management and performance: Still searching for some answers. *Human Resource Management Journal*, 21, 3-13.

Hall, D.T. (1996). Protean careers of the 21st century. *Academy of Management Executive*, 10, 8-16.

Hall, D.T. (2004). The protean career: A quarter-century journey. *Journal of Vocational Behavior*, 65, 1-13.

Heslin, P.A. (2005). Conceptualizing and evaluating career success. *Journal of Organizational Behavior*, 26, 113-136.

Hinds, P. J., & Pfeffer, J. (2003). Why organizations don't "know what they know": Cognitive and motivational factors affecting the transfer of expertise. In M. Ackerman, V. Pipek, & V. Wulf (Eds.). *Sharing expertise: Beyond knowledge management* (p. 3-26). Cambridge, Mass, USA: MIT Press.

Hitt, M.A., Keats, B.W., & DeMarie, S.M. (1998). Navigating in the new competitive landscape: Building strategic flexibility and competitive advantage in the 21st century. *Academy of Management Executive*, 12, 22-42.

Hoffman, B. (2005). *Informal learning*, Alexandria, USA: ASTD Press.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values.* Beverly Hills, CA, USA: Sage Publications.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations.* Thousand Oaks, CA, USA: Sage Publications.

Hughes, E.C. (1937). Institutional office and the person. *American Journal of Sociology*, 43, 404-413.

Hunter, L., Beaumont, P., & Lee, M. (2002). Knowledge management practice in Scottish law firms. *Human Resource Management Journal*, 12, 4-21.

Hurtz, G.M., & Williams, K.J. (2009). Attitudinal and motivational antecedents of participation in voluntary employee development activities. *Journal of Applied Psychology*, 94, 635-653.

Huselid, M.A. (1995). The impact of Human Resource Management practices on turnover, productivity, and corporate financial performance. *The Academy of Management Journal*, 38, 635-672.

Hussein, A. (2009). The use of triangulation in social sciences research: Can qualitative and quantitative methods be combined? *Journal of Comparative Social Work*, 1, 1-12.

Janssen, O., & Prins, J. (2007). Goal orientations and the seeking of different types of feedback information. *Journal of Occupational and Organizational Psychology*, 80, 235-249.

Jiang, K., Lepak, D.P., Hu, J., & Baer, J.C. (2012). How does human resource management influence organizational outcomes? A meta-analytic investigation of mediating mechanisms. *Academy of Management Journal*, 44, 1264-1294.

Jick, T.D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly*, 24, 602-611.

Johnson, R. E., & Chang, C. H. (2006). "I" is to continuance as "We" is to affective: The relevance of the self-concept for organizational commitment. *Journal of Organizational Behavior*, 27, 549-570.

Johnson, R.E., Chang, C-H., & Yang, L-Q. (2010). Commitment and motivation at work: The relevance of employee identity and regulatory focus. *Academy of Management Review,* 35, 226-245.

Johnson, R. E., Selenta, C., & Lord, R. G. (2006). When organizational justice and the self-concept meet: Consequences for the organization and its members. *Organizational Behavior and Human Decision Processes*, 99, 175-201.

Joo, B.K., & Ready, K.J. (2012). Career satisfaction: The influences of proactive personality, performance goal orientation, organizational learning culture, and leader-member exchange quality. *Career Development International*, 17, 276-295.

Judge, T.A., Cable, D.M., Boudreau, J.W., & Bretz Jr, R.D. (1995). An empirical investigation of the predictors of executive career success. *Personnel Psychology*, 48, 485-519.

Judge, T.A., & Ilies, R. (2002). Relationship of personality to performance motivation: A meta-analytic review. *Journal of Applied Psychology*, 87, 797-807.

Judge, T.A., Higgins, C.A., Thoresen, C.J., & Barrick, M.R. (1999). The big five personality traits, general mental ability, and career success across the life span. *Personnel Psychology*, 52, 621-652.

Kahn, W.A. (1990). Psychological conditions of personal engagement and disengagement at work. *The Academy of Management Journal,* 33, 692-724.

Kammeyer-Mueller, J., Steel, P.D.G., & Rubenstein, A. (2010). The other side of method bias: The perils of distinct source research designs. *Multivariate Behavioral Research*, 45, 294-321.

Keller, B.D. (2006). *Beyond individual differences: The role of differentiation of self in predicting the career exploration of college students.* (Unpublished doctoral thesis). The Pennsylvania State University, United States.

Kelley, H. H. (1973). The process of causal attribution. *American Psychologist*, 28, 107-128.

Knippenberg, D. (2000). Work motivation and performance: A social identity perspective. *Applied Psychology: An International Review,* 49, 357-371.

Ko, D. G., Kirsch, L. J., & King, W. R. (2005). Antecedents of knowledge transfer from consultants to clients in enterprise system implementations. *MIS Quarterly*, 29, 59-85.

Kwakman, K. (2003). Factors affecting teachers' participation in professional learning activities. *Teaching and Teacher Education*, 19, 149-170.

Kwon, K., Bae, J., & Lawler, J.J. (2010). High commitment HR practices and top performers. *Management International Review*, 50, 57-80.

Kyndt, E., & Baert, H. (2013). Antecedents of employees' involvement in work-related learning: A systematic Review. *Review of Educational Research*, 83, 273-313.

LeBreton, J.M., & Senter, J.L. (2008). Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods*, 11, 815-852.

Lee, H.E., Park, H.S., Lee, T.S., & Lee, D.W. (2007). Relationships between LMX and subordinates' feedback-seeking behaviors. *Social Behavior and Personality,* 35, 659-674.

Lepak, D.P., Liao, H., Chung, Y., & Harden (2006). A conceptual review of Human Resource Management systems in Strategic Human Resource Management research. *Research in Personnel and Human Resources Management*, 25, 217-271.

Levy, P.E., Albright, M.D., Cawley, B. D., & Williams, J. R. (1995). Situational and individual determinants of feedback seeking: A closer look at the process. *Organizational Behavior and Human Decision Processes,* 62, 23-37.

Levy, P. E., Cober, R. T., & Miller, T. (2002). The effect of transformational and transactional leadership perceptions on feedback-seeking intentions. *Journal of Applied Social Psychology*, 32, 1703-1720.

Li, X., Frenkel, S.J., Sanders, K. (2011). Strategic HRM as process: How HR system and organizational climate strength influence Chinese employee attitudes. *International Journal of Human Resource Management*, 22, 1825-1842.

Lin, H. F. (2007). Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. *Journal of Information Science*, 33, 135-149.

Locke, E.A. (1997). The motivation to work: What we know. In M. Maehr and P. Pintrich (Eds.), *Advances in motivation and achievement, Volume 10* (p. 375-412). Greenwich, CT, USA: JAI Press.

Lohman, M.C. (2005). A survey of factors influencing the participation of two professional groups in informal workplace learning activities. *Human Resource Development Quarterly*, 16, 501-527.

Lohman, M.C., & Woolf, N.H. (2001). Self-initiated learning activities of experienced public school teachers: Methods, sources, and relevant organizational influences. *Teachers and Teaching: Theory and Practice*, 7, 59-74.

London, M. (1983). Toward a theory of career motivation. *The Academy of Management Review*, 8, 620-630.

London, M. (1993). Relationships between career motivation, empowerment and support for career development. *Journal of Occupational and Organizational Psychology*, 66, 55-69.

London, M. (1989). *Managing the training enterprise*, San Francisco, US: Jossey-Bass.

Lu, L., Leung, K., & Koch, P. T. (2006). Managerial knowledge sharing: The role of individual, interpersonal and organizational factors. *Management and Organization Review*, 2, 15-41.

MacDuffie, J.P. (1995). Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry. *Industrial and Labor Relations Review*, 48, 197-221.

Mael, F.A., Waldman, D.A., & Mulqueen, C. (2001). From scientific work to organizational leadership: Predictors of management aspiration among technical personnel. *Journal of Vocational Behavior*, 59, 132-148.

Maertz, C. P., Griffeth, R. W., Campbell, N. S., & Allen, D. G. (2007). The effects of perceived organizational support and perceived supervisor support on employee turnover. *Journal of Organizational Behavior,* 28, 1059-1075.

Markus, H.R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224-253.

Marsick, V.J., & Watkins, K.E. (2001). Informal and incidental learning. *New Directions for Adult and Continuing Education*, 2001, 25-34.

Maurer, T.J., Lippstreu, M., & Judge, T.A. (2008). Structural model of employee involvement in skill development activity: The role of individual differences. *Journal of Vocational Behavior*, 72, 336-350.

Maurer, T.J., Weiss, E.M., & Barbeite, F.G. (2003). A model of involvement in work-related learning and development activity: The effects of individual, situational, motivational and age variables. *Journal of Applied Psychology*, 88, 707-724.

McArdle, J.J. (2009). Latent variable modeling of differences and changes with longitudinal data. *Annual Review of Psychology*, 60, 577-605.

McClean, E., & Collins, C.J. (2011). High-commitment HR practices, employee effort, and firm performance: Investigating the effects of HR practices across employee groups within professional services firms. *Human Resource Management*, 50, 341-363.

Mesmer-Magnus, J.R., & DeChurch, L.A. (2009). Information sharing and team performance: A meta-analysis. *Journal of Applied Psychology*, 94, 535-546.

Messersmith, J.G., Patel, P.C., & Lepak, D. P. (2011). Unlocking the black box: Exploring the link between high-performance work systems and performance. *The Journal of Applied Psychology*, 96, 1105-118.

Meyer, J.P., Becker, T.E., & VandenBerghe, C. (2004). Employee commitment and motivation: A conceptual analysis and integrative model. *Journal of Applied Psychology*, 89, 991-1007.

Michie, J., & Sheehan, M. (2005). Business strategy, human resources, labour market flexibility and competitive advantage. *International Journal of Human Resource Management*, 16, 445-464.

Muthén, B., & Asparouhov, T. (2012). Bayesian Structural Equation Modeling: A more flexible representation of substantive theory. *Psychological Methods*, 17, 313-335.

Nabi, G.R. (1999). An investigation into the differential profile of predictors of objective and subjective career success. *Career Development International*, 4, 212-224.

Naquin, S.S., & Holton, E.F. (2002). The effects of personality, affectivity, and work commitment on motivation to improve work through learning. *Human Resource Development Quarterly*, 13, 357-376.

Ng, T.W.H., Eby, L.T., Sorensen, K.L., & Feldman, D.C. (2005). Predictors of objective and subjective career success: A meta-analysis. *Personnel Psychology*, 58, 367-408.

Niles, F. S. (1995). Cultural differences in learning motivation and learning strategies: A comparison of overseas and Australian students at an Australian university. *International Journal of Intercultural Relations,* 19, 369-385.

Nishii, L.H., Lepak, D.P., & Schneider, B. (2008). Employee attributions of the "why" of HR practices: Their effects on employee attitudes and behaviors, and customer satisfaction. *Personnel Psychology*, 61, 503-545.

Noe, R.A., Noe, A., & Bachhuber, J.A. (1990). An investigation of the correlates of career motivation. *Journal of Vocational Behavior*, 27, 340-356.

Noe, R.A., & Wilk, S.L. (1993). Investigation of the factors that influence employees' participation in development activities. *Journal of Applied Psychology*, 78, 291-302.

Noe, R.A., Wilk, S.L., Mullen, E.J., & Wanek, J.E. (1997). Employee development: Issues in construct definition and investigation of antecedents. In J.K. Ford, S.W.J. Kozlowski, K. Kraiger, E. Salas, & M.S. Teachout (Eds.), *Improving training effectiveness in work organizations* (p. 153-189). Mahwah, NJ: Lawrence Erlbaum Associates.

Orvis, K.A., & Leffler, G.P. (2011). Individual and contextual factors: An interactionist approach to understanding employee self-development. *Personality and Individual Differences*, 51, 172-177.

Pan, S. L., & Scarbrough, H. (1998). A socio-technical view of knowledge-sharing at Buckman Laboratories. *Journal of Knowledge Management,* 2, 55-66.

Panaccio, A., & Vandenberghe, C. (2009). Perceived organizational support, organizational commitment and psychological well-being: A longitudinal study. *Journal of Vocational Behavior,* 75, 224-236.

Parker, S.K., & Collins, C.G. (2010). Taking stock: Integrating and differentiating multiple proactive behaviors. *Journal of Management*, 36, 633-662.

Payne, S.C., Youngcourt, S.S., & Beaubien, J.M. (2007). A meta-analytic examination of the goal orientation nomological net. *Journal of Applied Psychology*, 92, 128-150.

Podsakoff, P.M., MacKenzie, S.B., & Podsakoff, N.P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63, 539-569.

Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management,* 531-544.

Poell, R.F., van Dam, K., & van den Berg, P.T. (2004). Organising learning in work contexts. *Applied Psychology: An International Review*, 53, 529-540.

Preacher, K.J., Rucker, D.D., & Hayes, A.F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42, 185-227.

Reinholt, M., Pedersen, T., & Foss, N.J. (2011). Why a central network position isn't enough: The role of motivation and ability for knowledge sharing in employee networks. *Academy of Management Journal.* 54, 1277-1297.

Rhoades, L., Eisenberger, R., & Armeli, S. (2001). Affective commitment to the organization: The contribution of perceived organizational support. *Journal of Applied Psychology,* 86, 825-836.

Robitschek, C., & DeBell, C. (2002). The reintegration of vocational psychology and counseling psychology: Training issues for a paradigm shift. *The Counseling Psychologist*, 30, 801-814.

Runhaar, P., & Runhaar, H. (2012). HR policies and practices in vocational education and training institutions: Understanding the implementation gap through the lens of discourses. *Human Resource Development International*, 1, 1-17.

Runhaar, P., & Sanders, K. (2013). Implementing Human Resources Management (HRM) within Dutch VET institutions: Examining the fostering and hindering factors. *Journal of Vocational Education & Training*, 65, 236-255.

Runhaar, P., Sanders, K., & Yang, H. (2010). Stimulating teachers' reflection and feedback asking: An interplay of self-efficacy, learning goal orientation, and transformational leadership. *Teaching and Teacher Education*, 26, 1154-1161.

Sanders, K., Bainbridge, H.T.J., Kim, S., Cogin, C., & Lin, V, C-H. (2012). *Strategic Human Resource Management Research: A content analysis.* Paper presented at the Academy of Management Annual Meeting, Boston, Massachusetts, USA, August 2012.

Sanders, K., Dorenbosch, L., & De Reuver, R. (2008). The impact of individual and shared employee perceptions of HRM on affective commitment: Considering climate strength. *Personnel Review*, 37, 412-425.

Sanders, K., Shipton, H., & Gomes, J. (in press). Is the HRM process important? Past, current and future challenges. *Human Resource Management*.

Sanders, K., & Yang, H. (in press). How to make sense of Human Resource Management: Employees' attribution to explain the HRM – performance relationship. *Human Resource Management*

Savickas, M.L. (2002). A developmental theory of vocational behavior. In D. Brown (Ed.), *Career Choice and Development* (pp. 149-205). San Francisco, USA: Jossey-Bass.

Schein, E.H. (1978). *Career dynamics: Matching individual and organizational needs*. Massachusetts, USA; Addison-Wesley Publishing Company.

Schein, E.H. (1993). *Career Anchors: Discovering Your Real Values*. San Francisco, USA: Jossey-Bass.

Schein, E.H. (1996). Career anchors revisited: Implications for career development in the 21st century. *Academy of Management Executive*, 10, 80-88.

Seezink, A., & Poell, R. (2011). The role of schools' perceived human resource policies in teachers' professional development activities: A comparative study of innovations toward competence-based education. *Asia Pacific Education Review*, 12, 149-160.

Seibert, S.E., & Kraimer, M.L. (2001). The five-factor model of personality and career success. *Journal of Vocational Behavior*, 58, 1-21.

Singelis, T.M. (1994). The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin*, 20, 580-591.

Spender, J.-C., & Grant, R.M. (1996). Knowledge and the Firm: Overview. *Strategic Management Journal*, 17, Special issue: Knowledge and the firm, 5-9.

Steijn, B., & Leisink, P. (2006). Organizational commitment among Dutch public sector employees. *International Review of Administrative Sciences*, 72, 187-201.

Stinglhamber, F., & Vandenberghe, C. (2003). Organizations and supervisors as sources of support and targets of commitment: A longitudinal study. *Journal of Organizational Behavior,* 24, 251-270.

Sturges, J., Conway, N., & Liefooghe, A. (2010). Organizational support, individual attributes, and the practice of career self-management behavior. *Group & Organization Management,* 35, 108-141.

Super, D.E. (1953). A theory of vocational development. *American Psychologist*, 8, 185-190.

Super, D.E. (1980). A life-span, life-space approach to career development. *Journal of Vocational Behavior*, 16, 282-298.

Super, D.E. (1990). Career and life development. In D. Brown, & L. Brooks (Eds.), *Career choice and development* (p. 197-261). San Francisco, USA: Jossey-Bass.

Swift, M., Balkin, D.B., & Matusik, S.F. (2010). Goal orientations and the motivation to share knowledge. *Journal of Knowledge Management*, 14, 378-393.

Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic Management Journal*, 17, 27-43.

Tansky, J.W., & Cohen, D.J. (2001). The relationship between organizational support, employee development, and organizational commitment: An empirical study. *Human Resource Development Quarterly*, 12, 285-300.

Terborg, J.R. (1981). Interactional psychology and research on human behavior in organizations. *The Academy of Management Review*, 6, 569-576.

Tett, R.P., & Burnett, D.D. (2003). A personality trait-based interactionist model of job performance. *Journal of Applied Psychology*, 88, 500-517.

Triandis, H.C. (1995). *Individualism and Collectivism*. Boulder, CO, US: Westview Press.

Triandis, H.C., Bontempo, R., & Villareal, M.J. (1988). Individualism and collectivism: Cross-cultural perspectives on self-ingroup relationships. *Journal of Personality and Social Psychology*, 54, 323-338.

Vancouver, J.B., & Morrison, E.W. (1995). Feedback inquiry: The effect of source attributes and individual differences. *Organizational Behavior and Human Decision Processes*, 62, 276-285.

Van Dam, K., van der Heijden, B.I.J.M., & Schyns, B. (2006). Employability en individuele ontwikkeling op het werk. *Gedrag & Organisatie,* 19, 53-68.

Vandewalle, D. (1997). Development and validation of a work domain goal orientation.

VandeWalle, D., Brown, S.P., Cron, W.L., & Slocum Jr., J.W. (1999). The influence of goal orientation and self-regulation tactics on sales performance: A longitudinal field test. *Journal of Applied Psychology*, 84, 249-259.

VandeWalle, D., Ganesan, S., Challagalla, G.N., & Brown, S.P. (2000). An integrated model of feedback-seeking behavior: Disposition, context, and cognition. *Journal of Applied Psychology,* 85*,* 996-1003.

Van de Voorde, K., Paauwe, J., & Van Veldhoven, M. (2010). Predicting business unit performance using employee surveys: monitoring HRM-related changes. *Human Resource Management Journal*, 20, 44-63.

Van der Krogt, F.J. (1998). Learning network theory: The tension between learning systems and work systems in organizations. *Human Resource Development Quarterly*, 9, 157-177.

Van der Rijt, J., van den Bossche, P., van de Wiel, J. W. F., Seger, M. S. R., & Gijselaers, W. H. (2012). The role of individual and organizational characteristics in feedback seeking behavior in the initial career stage. *Human Resource Development International,* 15, 283-301.

Van der Sluis, L.E.C., & Poell, R.F. (2003). The impact on career development of learning opportunities and learning behavior at work. *Human Resource Development Quarterly*, 14, 159-179.

Van Der Vliert, E., Yang, H., Wang, Y., & Ren, X-P. (2013). Climato-economic imprints on Chinese collectivism. *Journal of Cross-Cultural Psychology*, 44, 589-605.

Van Emmerik, H., Jawahar, I.M., Schreurs, B., & de Cuyper, N. (2011). Social capital, team efficacy and team potency: The mediating role of team learning behaviors. *Career Development International*, 16, 82-99.

Van Emmerik, I.J.H, Schreurs, B., de Cuyper, N., Jawahar, I.M., & Peeters, M.C.W. (2012). The route to employability: Examining resources and the mediating role of motivation. *Career Development International*, 17, 104-119.

Van Maanen, J. (1977). Experiencing organization: Notes on the meaning of careers and socialization. In J. Van Maanen (Ed.), *Organziational careers: Some new perspectives*. New York, USA: Wiley.

Van Rijn, M.B., Yang, H., & Sanders, K. (2013). Understanding employees' informal workplace learning: The joint influence of career motivation and self-construal. *Career Development International*, 18, 610-628.

Van Woerkom, M. (2003). *Critical reflections at work. Bridging individual and organizational learning* (Unpublished doctoral thesis). University of Twente, The Netherlands.

Van Woerkom, M. (2004). The concept of critical reflection and its implications for human resource development. *Advances in Developing Human Resources*, 6, 178-192.

Vos, W. M. (2009). *Identity patterns in diverse work groups* (Unpublished doctoral thesis). University of Groningen, The Netherlands.

Vuuren, L.J., & Fourie, C. (2000). Career anchors and career resilience: Supplementary constructs? *Journal of Industrial Psychology*, 26, 15-20.

Wall, T.D., & Wood, S.J. (2005). The romance of human resource management and business performance, and the case for big science. *Human Relations*, 58, 429-462.

Walton, R.E. (1985). From control to commitment in the workplace. *Harvard Business Review*, 63, 77-84.

Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review*, 20, 115-131.

Wang, S., Noe, R.A., & Wang, Z-M. (2014). Motivating knowledge sharing in knowledge management systems: A quasi-field experiment. *Journal of Management*, 40, 978-1009.

Wayne, S.J., Liden, R.C., Kraimer, M.L., & Graf, I.K. (1999). The role of human capital, motivation and supervisor sponsorship in predicting career success. *Journal of Organizational Behavior*, 20, 577-595.

Whitaker, B. G., Dahling, J. J., & Levy, P. (2007). The development of a feedback environment and role clarity model of job performance. *Journal of Management,* 33, 570-591.

Whitener, E.M. (2001). Do "high commitment" human resource practices affect employee commitment? A cross-level analysis using hierarchical linear modeling. *Journal of Management*, 27, 515-535.

Williams, J. R., Miller, C. E., Steelman, L. A., & Levy, P. E. (1999). Increasing feedback seeking in public contexts: It takes two (or more) to tango. *Journal of Applied Psychology,* 84, 969-976.

Wilson, S.M., & Berne, J. (1999). Teacher learning and the acquisition of professional knowledge: An examination of research on contemporary professional development. *Review of Research in Education*, 24, 173-209.

Wolf, G., London, M., Casey, J., & Pufahl, J. (1995). Career experience and motivation as predictors of training behaviours and outcomes for displaced engineers. *Journal of Vocational Behaviour,* 47, 316-331.

Wood, S., & De Menezes, L. (1998). High commitment management in the U.K.: Evidence from the workplace industrial relations survey, and employers' manpower and skills practices survey. *Human Relations*, 51, 485-515.

Wright, P.M., Gardner, T.M., Moynihan, L.M., & Allen, M.R. (2005). The relationship between HR practices and firm performance: Examining causal order. *Personnel Psychology*, 58, 409-446.

Wright, P.M. Gardner, T.M., Moynihan, L.M., Park, H.J., Gerhart, B., & Delery, J.E. (2001). Measurement error in research on human resources and firm performance: Additional data and suggestions for future research. *Personnel Psychology*, 54, 875-901.

Wright, P.M., & Haggerty, J.J. (2005). Missing variables in theories of strategic human resource management: Time, cause, and individuals. *Management Revue*, 16, 164-173.

Wright, P.M., & McMahan, G.C. (1992). Theoretical perspectives for Strategic Human Resource Management. *Journal of Management*, 18, 293-320.

Wright, P.M., McMahan, G.C., & McWilliams, A. (1994). Human resources and sustained competitive advantage: A resource-based perspective. *International Journal of Human Resource Management*, 5, 301-326.

Yang, L-Q., Johnson, R.E., Zhang, X., Spector, P.E., & Xu, S. (2013). Relations of interpersonal unfairness with counterproductive work behavior: The moderating role of employee self-identity. *Journal of Business and Psychology*, 28, 189-202.

Yang, H., Sanders, K., & Bumatay, C. P. (2012). Linking perceptions of training with organizational commitment: The moderating role of employees' self-construal. *European Journal of Work and Organizational Psychology*, 21, 125-149.

Yuan, Y., & MacKinnon, D.P. (2009). Bayesian mediation analysis. *Psychological Methods*, 14, 301-322.

Zárraga, C., & Bonache, J. (2003). Assessing the team environment for knowledge sharing: An empirical analysis. *International Journal of Human Resource Management*, 14, 1227-1245.

Zettler, I., Friedrich, N., & Hilbig, B.E. (2011). Dissecting work commitment: the role of Machiavellianism. *Career Development International*, 16, 20-35.

Zhang, Y., Fang, Y., Wei, K-K., & Chen, H. (2010). Exploring the role of psychological safety in promoting the intention to continue sharing knowledge in virtual communities. *International Journal of Information Management,* 30, 425-436.

Nederlandse Samenvatting

(Dutch Summary)

Inleiding

In het eerste hoofdstuk van de dissertatie wordt ingegaan op de professionele ontwikkeling van medewerkers. Om bij te blijven met een voortdurend veranderende maatschappij, snelle technologische ontwikkelingen en grootschalige globalisering is het van cruciaal belang voor organisaties dat hun medewerkers blijven leren en zichzelf professioneel blijven ontwikkelen (Denisi, Hitt, & Jackson, 2003; Hurtz & Williams, 2009). De nieuwe kennis en vaardigheden die op deze wijze worden ontwikkeld binnen een organisatie, zijn een belangrijke bron van een blijvend competitief voordeel voor de organisatie (Aguinis & Kraiger, 2009; Kyndt & Baert, 2013).

Medewerkers, daarentegen, worden vandaag de dag geconfronteerd met een afnemende baanzekerheid en zijn verantwoordelijk geworden voor hun eigen loopbaanontwikkeling en kansen op de arbeidsmarkt (Arthur, 1994; Hall, 1996; 2004). De kennis en vaardigheden die medewerkers ontwikkelen door de investeringen in hun eigen professionele ontwikkeling kunnen hen helpen om, om te gaan met deze veranderingen en een belangrijke bijdrage leveren aan hun inzetbaarheid binnen de arbeidsmarkt (Bednall, Sanders, & Runhaar, 2014; van Dam, van der Heijden, & Schyns, 2006).

Gebaseerd op het feit dat de professionele ontwikkeling van medewerkers zowel wordt beïnvloed door de medewerkers zelf als door de situatie op het werk (Billet, 2001; Ellström, 2001), hebben onderzoekers de invloed van individuele factoren (bv. zelfvertrouwen en leermotivatie) en de invloed van situationele factoren (bv. collegiale en organisatie steun) op de professionele ontwikkeling van medewerkers onderzocht (Levy, Cober, & Miller, 2002; Noe & Wilk, 1993; Maurer, Weiss, & Barbeite, 2003; Maurer, Lippstreu, & Judge, 2008). De meeste onderzoekers hebben zich geconcentreerd op de directe invloed van individuele en situationele factoren op de professionele ontwikkeling van medewerkers, en onderzoek naar de gezamenlijke invloed van individuele en situationele factoren is schaars (Orvis & Leffler, 2011).

Het doel van deze dissertatie is om een beter begrip te creëren van de factoren die de professionele ontwikkeling van medewerkers beïnvloeden door een interactie benadering toe te passen. Volgens de persoon-situatie interactie benadering beïnvloeden de persoon en de situatie gezamenlijk het gedrag van de persoon (Terborg, 1981; Tett & Burnett, 2003; Wang, Noe, & Wang, 2014). Onderzoeken hebben bijvoorbeeld de gezamenlijke invloed van de leerdoeloriëntatie van medewerkers en de steun die zij ontvangen vanuit de organisatie aangetoond op de deelname van medewerkers aan professionele ontwikkelingsactiviteiten (Orvis & Leffler, 2011) en op de mate van reflectie en feedback vragen door medewerkers

(Runhaar, Sanders, & Yang, 2010). Als een uitbreiding op deze traditionele persoon-situatie interactie benadering die zich voornamelijk richt op de gezamenlijke invloed van individuele motivatie factoren en situationele factoren, is in deze dissertatie de gezamenlijke invloed van verschillende individuele factoren, van verschillende situationele factoren en van individuele en situationele factoren onderzocht. De algemene onderzoeksvraag binnen deze dissertatie kan dan ook geformuleerd worden als:

> *In welke mate beïnvloeden individuele en situationele factoren gezamenlijk de professionele ontwikkeling van medewerkers?*

Twee vormen van professionele ontwikkeling van medewerkers

Met betrekking tot de professionele ontwikkeling van medewerkers hebben onderzoekers beargumenteerd dat de werk- en leer context waarin medewerkers leren in grote mate bepalen hoe zij leren (Poell, van Dam, & van den Berg, 2004; van der Krogt, 1998). De werkcontext in deze dissertatie refereert naar de Nederlandse onderwijs sector en specifiek naar Nederlandse Regionale Opleidingscentra (ROC's). ROC's in Nederland hebben vandaag te dag te maken met een aantal belangrijke uitdagingen. De Nederlandse overheid benadrukt sterk het belang van onderwijskundige innovaties binnen ROC's, in termen van een veranderd curriculum en veranderende pedagogiek, waarbij zowel scholen als docenten verantwoordelijk worden gehouden voor de prestaties van studenten (Runhaar & Runhaar, 2012; Runhaar & Sanders, 2013). In het licht van deze uitdagingen heeft het belang van de professionele ontwikkeling van docenten een belangrijke rol gespeeld (Seezink & Poell, 2011) en moeten docenten zich blijven ontwikkelen en deelnemen aan leeractiviteiten op de werkplek.

In deze dissertatie worden twee vormen van professionele ontwikkeling van medewerkers onderscheiden: informeel werkplekleren en carrière ontwikkeling. Leeractiviteiten op de werkplek waar docenten aan deelnemen hebben vaak een informeel in plaats van een formeel karakter (Kwakman, 2003). In deze dissertatie worden dan ook drie typen informele leeractiviteiten onderscheiden. *Bijblijven* is een individuele leeractiviteit waarbij medewerkers bijblijven met de ontwikkelingen binnen hun vakgebied door bijvoorbeeld het lezen van kranten en professionele tijdschriften (Geijsel, Sleegers, Stoel, & Krüger, 2009). *Feedback vragen aan leidinggevenden* is een interpersoonlijke leeractiviteit waarbij medewerkers zich concentreren op het één-op-één informatiedelen met hun leidinggevende, waarbij ze hun leidinggevende specifiek vragen om feedback over hun werk (Lohman, 2005). *Kennisdelen* is een groep leeractiviteit waarin medewerkers productieve

bijeenkomsten of informele gesprekken hebben met elkaar waarin ze hun kennis, successen en fouten delen met elkaar (Kwakman, 2003).

Professionele ontwikkeling in termen van carrière ontwikkeling is in deze dissertatie onderzocht in de vorm van carrière succes. Carrière succes kan gedefinieerd worden als de "positieve psychologische en werk gerelateerde uitkomsten die men in verloop van tijd verzameld vanuit opgedane werkervaringen" (Seibert & Kraimer, 2001, p. 2). Hierbij kan er een onderscheid gemaakt worden tussen objectief en subjectief carrière succes. *Objectief carrière succes* verwijst naar zulke verifieerbare verworvenheden als loon, promoties en beroepsstatus, die direct te observeren, meetbaar en verifieerbaar zijn voor buitenstaanders. *Subjectief carrière succes* wordt daarentegen over het algemeen aangeduid aan de hand van de tevredenheid van medewerkers met hun baan en carrière en refereert naar de reactie van medewerkers op hun carrière ervaringen, waarbij de nadruk ligt op de interne tevredenheid van medewerkers met hun carrière (Arthur, Khapova, & Wilderom, 2005; Heslin, 2005; Judge, Cable, Boudreau, & Bretz, 1995).

Professionele ontwikkeling vanuit een individueel perspectief

Vanuit het standpunt dat medewerkers hun eigen carrière ontwikkeling moeten vormgeven (Super, 1990; van der Sluis & Poell, 2003) en de invloed van medewerkers' motivatie op hun professionele ontwikkeling (Birdi, Allen, & Warr, 1997; Noe & Wilk, 1993; Runhaar, Sanders, & Yang, 2010), is in deze dissertatie de invloed van twee verschillende motivatie variabelen op medewerkers' professionele ontwikkeling onderzocht: medewerkers' carrière motivatie en leerdoeloriëntatie. De *carrière motivatie* van medewerkers representeert hun motivatie om zichzelf te ontwikkelen binnen hun baan en carrière (London, 1983; 1993). De *leerdoeloriëntatie* van medewerkers is hun motivatie om door middel van leren en trainen hun vaardigheden te ontwikkelen, hun kennis te vergroten en nieuwe situaties het hoofd te bieden (Dweck & Leggett, 1998; Vandewalle, 1997).

Recentelijk hebben studies laten zien dat niet alleen medewerkers' motivatie een invloed heeft op hun beslissingen en gedragingen op het werk, maar dat ook de manier waarop medewerkers zichzelf waarnemen en zichzelf identificeren met anderen een rol speelt in het beïnvloeden van hun gedrag op het werk, zoals hun toewijding aan de organisatie (Johnson & Chang, 2006), hun perceptie van eerlijkheid en rechtvaardigheid binnen de organisatie (Johnson, Selenta, & Lord, 2006), en hun deelname aan trainingsactiviteiten (Yang, Sanders, & Bumatay, 2012). Gebaseerd op dit zelfidentiteit perspectief is in deze dissertatie de invloed van zowel een domein-algemene als een domein-specifieke zelfidentiteit variabele op

medewerkers' professionele ontwikkeling onderzocht: medewerkers' zelfconcept en carrière identiteit. Het *zelfconcept* van individuen bepaalt hoe individuen zichzelf definiëren met betrekking tot hun sociale rollen, groepen en relaties (Markus & Kitayama, 1991) en speelt een belangrijke rol in het reguleren van de cognitie, de emotie en het gedrag van individuen (Johnson & Chang, 2006). De *carrière identiteit* van medewerkers representeert hoe belangrijk de carrière is voor hun identiteit en bepaalt de richting van hun carrière motivatie. De carrière identiteit van medewerkers bepaalt in grote mate het gedrag en de carrière beslissingen van medewerkers, zoals het zoeken naar en accepteren van een nieuwe baan, het veranderen van carrière plannen, en het zoeken van training en nieuwe werkervaringen (London, 1983; 1993; Noe, Noe, & Bachhuber, 1990).

Professionele ontwikkeling vanuit een situationeel perspectief

Naast de invloed van individuele variabelen op medewerkers' professionele ontwikkeling hebben onderzoeken ook de invloed van situationele variabelen laten zien (Chen & Huang, 2007; Collins & Smith, 2005; Levy, Cober, & Miller, 2002). Vooral steun op het werk blijkt een belangrijke factor in het stimuleren van medewerkers' professionele ontwikkeling (Maurer, Lippstreu, & Judge, 2008; Maurer, Weiss, & Barbeite, 2003; Noe & Wilk, 1993). Op grond van deze uitkomsten is in deze dissertatie de invloed van vier situationele variabelen onderzocht die een rol kunnen spelen bij het creëren van een ondersteunende werkomgeving voor medewerkers' professionele ontwikkeling: steun vanuit de leidinggevende, steun vanuit de organisatie, high-commitment HRM (HC-HRM) en de sterkte van het HRM systeem.

Steun vanuit de leidinggevende kan worden gedefinieerd als de perceptie van medewerkers dat leidinggevenden hun bijdragen waarderen, geven om hun algemene welzijn en inspelen op de zorgen en behoeften van individuele medewerkers (Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002; Geijsel, Sleegers, Stoel, & Krüger, 2009). *Steun vanuit de organisatie* kan daarentegen worden gedefinieerd als de perceptie van medewerkers dat de organisatie hun bijdragen waardeert en geeft om hun algemene welzijn (Eisenberger, Cummings, Armeli, &Lynch, 1997; Eisenberger, Huntington, Hutchison, & Sowa, 1986).

HC-HRM heeft betrekking op een bundel van HR praktijken zoals selectie processen, training en ontwikkeling, carrière mogelijkheden, prestatiebeoordeling, baanzekerheid, en deelname aan het beslissingsproces (Arthur, 1992; Combs, Liu, Hall, & Ketchen, 2006; Boselie, Dietz, & Boon, 2005). Deze HR praktijken versterken elkaar en dragen bij aan de kennis en vaardigheden van medewerkers en motiveren en stellen medewerkers in staat om te

handelen (Becker, Huselid, Pickus, & Spratt, 1997; Delery & Shaw, 2001; Boxall & Macky, 2009). Op deze manier ondersteunt HC-HRM ook medewerkers' professionele ontwikkeling doordat het medewerkers laat zien dat een werkgever bereid is om te investeren in de medewerkers en hun ontwikkeling en geeft om hun algemene welzijn (Collins & Smith, 2006; Gilbert, de Winne, & Sels, 2001; Sanders & Yang, *in press*). Waar er bij HC-HRM gekeken wordt naar de inhoud van een HRM systeem, wordt er bij de *sterkte van een HRM systeem* gekeken naar het proces van HRM en de percepties en het begrip van medewerkers over de HRM inhoud. Vanuit deze proces aanpak wordt HRM gezien als een vorm van communicatie van de werkgever naar de medewerker over welke gedragingen verwacht, ondersteund en beloond worden. De HR berichten zullen alleen door alle medewerkers begrepen worden zoals ze bedoeld zijn vanuit de werkgever, wanneer er sprake is van een sterk HRM systeem (Bowen & Ostroff, 2004).

Methode en data

Medewerkers' carrière succes

Hoofdstuk 2 van deze dissertatie rapporteert twee studies – een experimentele studie en een vragenlijst studie – om de invloed van de carrière identiteit en het zelfconcept van medewerkers op de twee typen van carrière succes – objectief en subjectief – te testen. In de experimentele studie bestaat de steekproef uit 106 werknemers werkzaam in de onderwijs, overheid, medische en dienstverlening sector. In de vragenlijst studie bestaat de steekproef uit 72 docenten van drie basisscholen en zeven scholen voor voortgezet onderwijs.

Medewerkers' informele werkplekleren

Met betrekking tot het onderzoek naar het informele werkplekleren van medewerkers is er een longitudinale studie uitgevoerd waarbij er data verzameld is in 2010, 2011 en 2012 onder docenten binnen zes ROC's in Nederland. Over het verloop van deze drie jaar is er uiteindelijk data verzameld van 689 docenten binnen deze zes ROC's in Nederland.

De analyses voor de studies gepresenteerd in de hoofdstukken van deze dissertatie die ingaan op het informele werkplekleren van medewerkers (Hoofdstukken 3, 4 en 5) zijn gebaseerd op de verschillende ronden van dataverzameling binnen de longitudinale dataverzameling. De analyses in Hoofdstuk 3 zijn gebaseerd op de eerste ronde van dataverzameling met data van 323 docenten binnen vier ROC's. De analyses in Hoofdstuk 4 zijn gebaseerd op de eerste en tweede ronden van dataverzameling met data van 145 docenten

binnen vier ROC's. De analyses in Hoofdstuk 5 zijn gebaseerd op alle drie de ronden van dataverzameling met data van 689 docenten binnen alle zes de ROC's.

Door de longitudinale aard van de data zijn de data in de verschillende hoofdstukken gerelateerd aan elkaar. Elk hoofdstuk heeft echter zijn eigen focus: zowel Hoofdstuk 3 als Hoofdstuk 4 onderzoeken de invloed van het zelfconcept van medewerkers op hun informele werkplekleren, maar in interactie met verschillende variabelen – in interactie met carrière motivatie in Hoofdstuk 3 en in interactie met steun vanuit de leidinggevende en organisatie in Hoofdstuk 4. Hoofdstuk 5 richt zich op de mediërende rol van de leerdoel oriëntatie van medewerkers op de relatie tussen HRM en medewerkers' informele werkplekleren.

Resultaten

In Hoofdstuk 2 van deze dissertatie wordt de volgende onderzoeksvraag beantwoord: *In welke mate beïnvloeden medewerkers' carrière identiteit en zelfconcept gezamenlijk medewerkers' perceptie van carrière succes?* In de eerste studie binnen dit hoofdstuk is een experimentele studie uitgevoerd om het effect van twee typen van carrière identiteit van medewerkers – desire for upward mobility en work centrality – op medewerkers' objectieve of subjectieve perceptie van carrière succes te onderzoeken. Data voor deze studie is verzameld van 106 medewerkers binnen verschillende werksectoren in Nederland. De resultaten laten zien dat desire for upward mobility lijkt te leiden tot een objectief carrière perspectief, vooral in termen van het aantal verkregen promoties, terwijl work centrality lijkt te leiden tot een subjectief carrière perspectief, waarbij vooral plezier binnen de baan een belangrijke rol speelt. In de tweede studie binnen dit hoofdstuk is er een online vragenlijst uitgezet onder 72 docenten binnen het basisonderwijs en voorgezet onderwijs in Nederland en hun tien leidinggevenden, om de resultaten van de eerste studie te repliceren en de invloed van het zelfconcept op de relatie tussen carrière identiteit en carrière succes te onderzoeken. De resultaten van deze studie bevestigen de resultaten van de eerste studie en laten daarnaast zien dat de relatie tussen een desire for upward mobility en een objectief carrière succes perspectief versterkt wordt door een sterk afhankelijk zelfconcept. De relatie tussen work centrality en een subjectief carrière perspectief blijkt echter niet versterkt te worden door een onafhankelijk zelfconcept.

In Hoofdstuk 3 staat de volgende onderzoeksvraag centraal: *In welke mate beïnvloeden medewerkers' carrière motivatie en zelfconcept gezamenlijk de deelname van medewerkers aan informele leeractiviteiten op het werk?* Voor deze studie werd vragenlijst data verzameld onder 323 docenten binnen vier ROC's in Nederland. De resultaten laten zien dat de carrière motivatie van medewerkers een positief effect heeft op de deelname van medewerkers aan drie

informele leeractiviteiten op het werk: bijblijven, feedback vragen aan leidinggevenden en kennisdelen. Daarnaast blijkt dat de relatie tussen medewerkers' carrière motivatie en bijblijven sterker is wanneer medewerkers een sterk individueel zelfconcept hebben, terwijl de relatie tussen medewerkers' carrière motivatie en kennisdelen sterker is wanneer medewerkers een sterk collectief zelfconcept hebben. Een sterk relationeel zelfconcept versterkt echter niet de relatie tussen medewerkers' carrière motivatie en feedback vragen aan leidinggevenden.

In Hoofdstuk 4 wordt ingegaan op de invloed van individuele en situationele factoren op het informeel werkplekleren van medewerkers en wordt de volgende onderzoeksvraag beantwoordt: *In welke mate modereert het zelfconcept van medewerkers de relatie tussen steun vanuit de leidinggevende en organisatie en de deelname van medewerkers aan gezamenlijke informele leeractiviteiten op het werk?* Voor deze studie werd er in 2010 en 2011 vragenlijst data verzameld van 145 docenten binnen vier ROC's in Nederland. Uit de resultaten kwam naar voren dat steun vanuit de leidinggevende positief gerelateerd is aan medewerkers' feedback vragen aan leidinggevenden. Deze relatie werd echter niet versterkt door een sterk relationeel zelfconcept. Steun vanuit de organisatie was daarentegen positief gerelateerd aan kennisdelen en deze relatie werd versterkt door een sterk collectief zelfconcept.

In Hoofdstuk 5 wordt een longitudinale vragenlijst studie gerapporteerd die uitgevoerd is om de volgende onderzoeksvraag te beantwoorden: *In welke mate verklaart de leerdoeloriëntatie van medewerkers de relatie tussen de gezamenlijke invloed van HC-HRM en een sterk HRM systeem op medewerkers' kennisdelen?* Data werd verzameld in 2010, 2011 en 2012 van 689 docenten binnen zes ROC's in Nederland. De resultaten laten zien dat HC-HRM een positief effect heeft op het kennisdelen van medewerkers en dat deze relatie versterkt wordt door een sterk HRM systeem. Daarnaast blijkt dat de gezamenlijke invloed van HC-HRM en een sterk HRM systeem op medewerkers' kennisdelen verklaard kon worden door medewerkers' leerdoeloriëntatie.

In het laatste hoofdstuk van deze dissertatie worden de belangrijkste bevindingen van de verschillende onderzoeken samengevat. Hierbij wordt de invloed van medewerkers' zelfconcept op de professionele ontwikkeling van medewerkers benadrukt. Om het maximale effect te behalen uit de professionele ontwikkeling van medewerkers – zowel in termen van het ontwikkelen van kennis en vaardigheden als het bereiken van carrière succes – is het van belang om een werkomgeving te creëren waarin rekening wordt gehouden met zowel de motivatie als het zelfconcept van de medewerker. Hierbij wordt benadrukt hoe verschillende actoren binnen een organisatie – medewerkers zelf, lijnmanagers, Human Resource (HR) professionals – een

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