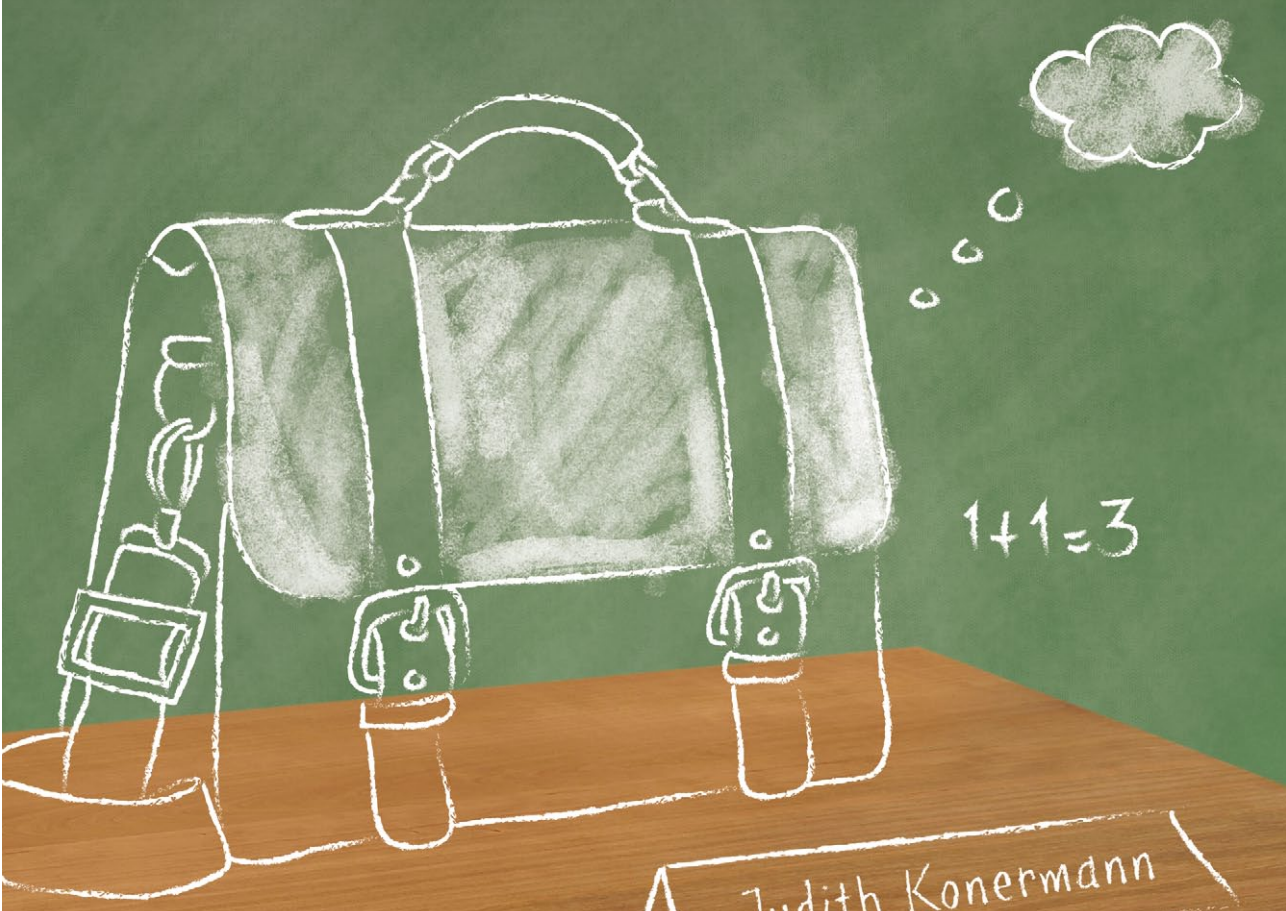
Teachers' work engagement

A DEEPER UNDERSTANDING OF THE ROLE OF JOB AND PERSONAL RESOURCES IN RELATIONSHIP TO WORK ENGAGEMENT, ITS ANTECEDENTS, AND ITS OUTCOMES



Judith Konermann

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CHAPTER 1

Introduction

1.1 Introduction

Current society is based mainly on knowledge work in which employees are the key for organizations to sustain and gain competitive advantage, and perform well (Nonaka & Takeuchi, 1995; Amabile, 1988; Van de Ven, 1986; West & Farr, 1990). A way for organizations to stimulate their employees to work to their full capacity is through their engagement (Leiter & Bakker, 2010). Engaged employees have many advantages for organizations: They are enthusiastic and involved in their work, they bring positive energy into the workplace, and they connect easily with people (Bakker & Demerouti, 2009). In addition, engaged employees perform well, are committed, and strive to reach challenging goals (Leiter & Bakker, 2010). However, research has shown that not every employee is engaged: e.g., only 21% of employees in the United States are engaged with their work (Gebauer & Lowman, 2009). In other words, to have engaged employees is a challenge. The goal of this dissertation was to find out more about which factors are related to work engagement and its outcomes.

1.2 Work engagement

In organizational and occupational psychology, research on work engagement is based on the research on burnout. Kahn (1990) was one of the first researchers to conceptualize work engagement, and the concept gained the attention of researchers who wanted to examine 'positive psychology' (Seligman, 1999). The aim of positive psychology was to 'begin to catalyze a change in the focus of psychology from preoccupation only with repairing the worst things in life to also build positive qualities' (Seligman & Csikszentmihalyi, 2000, p.5). The change from negative to positive is reflected in the definition of work engagement proposed by Maslach and Leiter (1997), who argued that work engagement was the

opposite of burnout. Researchers later found that vigour (part of work engagement) and exhaustion (part of burnout) were different constructs, although dedication (part of work engagement) and depersonalization (part of burnout) were opposite ends of the identification dimension (Demerouti, Mostert, & Bakker, 2010).

Researchers nowadays regard work engagement as a concept in its own right (e.g., Schaufeli & Bakker, 2004), which is reflected in the development of the work engagement scale by Schaufeli and Bakker (2003) and the Job Demands-Resources model of work engagement (Bakker & Demerouti, 2007). Besides the relation with burnout, work engagement is also compared with workaholism, because both engaged employees and workaholics are seen as hard workers who are passionate about their work (Gorgievski, Bakker, & Schaufeli, 2010). However, research has shown that engaged employees are not workaholics: i.e., they prefer to do other things in the evening than only work, and do not jeopardize their health, happiness, or social contacts (Gorgievski et al., 2010). In line with Schaufeli and Bakker (2003, 2004), and Bakker and Demerouti (2007), in this dissertation work engagement is considered to be a concept by itself and independent from burnout and workaholism.

Work engagement is defined as the positive, fulfilling work-related state of mind characterized by vigour, dedication, and absorption (Schaufeli, Salanova, González-Roma, & Bakker, 2002, p.74). *Vigour* is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence in the face of difficulties. *Dedication* is characterized by a sense of significance, enthusiasm, pride, inspiration, and challenge. And *absorption* is characterized by being fully concentrated and happily engrossed in one's work, whereby times passes quickly and one has difficulties with detaching oneself from work (Schaufeli & Bakker, 2004, p.295).

1.3 What is known about work engagement

Work engagement is generally regarded as a function of job resources, personal resources, and job demands (e.g., Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Schaufeli & Bakker, 2004; Bakker & Demerouti, 2007). *Job resources* refer to those physical, psychological, social, or organizational aspects of the job that may reduce job demands and the associated physiological and psychological costs (Bakker & Demerouti, 2007). Job resources are functional in achieving work goals and stimulate personal growth, learning, and development (Bakker & Demerouti, 2007). Job resources may be located at the following levels: the organization (e.g., salary, career opportunities), interpersonal and social relations (e.g., supervisor and co-worker support), the organization of work (e.g., role clarity, participation in decision making), and the task (e.g., performance feedback, skill variety) (Bakker & Demerouti, 2007). *Personal resources* are defined as 'aspects of the self that are generally linked to resiliency' (Hobfoll, Johnson, Ennis, & Jackson, 2003, p.632). Especially in challenging situations, personal resources positively support individuals in evaluating their ability to control and influence their environment successfully (Bandura, 1997; Kobasa & Puccetti, 1983; Schwarzer, 1992). Personal resources include optimism and self-efficacy (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007).

Challenging situations may arise because of people's perceptions of job demands in their work. *Job demands* refer to those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills; they are, therefore, associated with certain physiological and/or psychological costs (Bakker & Demerouti, 2007). Examples of job demands are time and work pressure, the emotional demands of client work, a poor physical work environment, role conflicts, and role overload (Hakanen & Roodt, 2010). Job demands are not harmful in themselves, but

when there are not enough job resources to balance the job demands, they become job stressors which may lead to burnout (Hakanen & Roodt, 2010).

1.4 The role of job and personal resources in this dissertation

The job demands resources model specifically focused on the interaction between job and personal resources, on the one hand, and job demands, on the other hand (Bakker & Demerouti, 2007), but limited attention has been paid to the role of resources in relation to each other.

Although many researchers have shown the relationship of job resources, personal resources, and job demands with work engagement (e.g., Bakker & Demerouti, 2007, Xanthopoulou et al., 2007), other researchers have shown in a longitudinal study that job resources predict work engagement better than job demands (Mauno, Kinnunen, & Ruokalainen, 2007). These findings align with the motivational process of job resources in relation to work engagement (Demerouti et al., 2001; Schaufeli & Bakker, 2004) and the positive psychology point of view, which focuses on human strengths at work instead of weaknesses (Cooper, 2005; Gable & Haidt, 2005).

This dissertation contributes to this line of research in that the role of job resources as a moderator in the relationship between job resources and work engagement was examined.

Future research on work engagement should incorporate the impact of self-regulatory mechanisms on work engagement (Bakker, Schaufeli, Leiter, & Taris, 2008). For example, resources are known to buffer the relationship between stress and burnout (e.g., Karasek, 1998; Cohen & Wills, 1985). The question that follows from this is whether resources can also buffer – and thus regulate - the relationship between burnout and work engagement. This dissertation contributes to and builds upon existing research on work engagement in that the role of job and personal resources as a buffer in the relationship between burnout and work engagement was examined.

Besides the influence of resources as moderators of the relationship between burnout and work engagement, and resources and work engagement, it is expected that resources can influence the relationship between work engagement and its outcomes, too. Work engagement is related to behavioural, health, and financial outcomes: There is a negative relationship between work engagement and turnover intentions (Bakker, Demerouti, de Boer, & Schaufeli, 2003), and a positive relationship between work engagement and organizational commitment (Halbesleben, 2010), personal initiative and pursuit of learning (two aspects of self-reported initiative) (Sonnentag, 2003), job performance (Xanthopoulou, Bakker, Heuven, Demerouti, & Schaufeli, 2008), health (Demerouti, Bakker, De Jonge, Janssen, & Schaufeli, 2001, Halbesleben, 2010), and financial returns (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009a). In addition, regarding the role of resources in relation to work engagement and its outcomes, engaged employees not only have higher levels of well-being and show better performance, but they are also able to gain more resources over the course of time (Bakker, 2009).

Our overview of the research that has been done on work engagement and its outcomes revealed that little attention has been paid to the role of job and personal resources as a mediating or moderating effect on the relationship between work engagement and its outcomes. Resources like personal initiative (Hakanen, Perhoniemi, & Toppinen, 2008) can, for example, mediate in the relationship between work engagement and behaviour. As Bakker, Albrecht, and Leiter (2011, p.83) state, 'future research on engagement should look for moderators' to improve understanding of the relationship between work engagement and its outcomes. Other researchers agree, and have indicated that work engagement research should examine what facilitators or obstacles affect or influence the relationship between work engagement and its outcomes (Sonnentag, 2011; Parker & Griffin, 2011; Bakker et al., 2011b). Therefore,

in addition to examining the role of resources in the relationship between burnout and work engagement, and in the relationship between resources and work engagement, the role of resources was examined as a mediator or moderator in the relationship between work engagement and its outcomes.

1.5 Research context

The context of this dissertation is the educational sector in the Netherlands, specifically teaching in secondary education. Teaching is considered one of the most stressful occupations (Johnson, 2005), due to a high workload, inadequate salary, large class sizes, emotional demands, student misbehaviour, and the perceived low status of the profession (Burke & Greenglass, 1994; Carlson & Thompson, 1995; Kyriacou & Sutcliffe, 1978; Hakanen, Bakker, & Schaufeli, 2006). Research results show that teachers in secondary education score relatively high on burnout compared with employees in other industries, e.g., 20% of teachers indicate that they are emotionally exhausted or feel empty after a day's work, compared with 13% of the total workforce in the Netherlands (TNO, 2010). Teachers perceive a high workload and work pressure, because of high peak moments during the school year, the number of new tasks they have to perform, the relatively low level of autonomy in their work, and the little support they perceive from their school organization (OECD, 2003).

The work satisfaction of teachers in secondary education is the lowest in the total educational sector in the Netherlands: Teachers report the lowest satisfaction percentages for communication (29%), the role of the leader (46%), and the school organization (50%) (Ministry of Education, Culture, and Science, 2010). Research among teachers showed a relationship between work satisfaction, the role of the leader, and Human Resource Management (HRM) (Vrielink & Hogeling, 2008). Regarding the role of the leader, teachers perceive higher work stress when they have a leader who does not support them and is very formal in his or her

role (Karasek & Theorell, 1990). The implementation of HRM in the educational sector is not fully integrated (Teurlings & Vermeulen, 2004; Runhaar, 2008). Research has shown that making a HRM policy with HR practices is easy on paper, but it is expected to be difficult to make teachers use it in practice, because - according to policy makers and executives - teachers do not perceive HRM as useful for them, and the organizational culture is seen as impeding the implementation of HRM. The same research showed that HRM can also be perceived as extra work that does not contribute to the primary role as a teacher, since teachers are mainly focused on the content of their profession (Runhaar & Sanders, 2007). This may suggest that HRM results in lower work satisfaction, which may lead to a lower level of work engagement.

Just like any other industry, the educational sector is innovating continuously (Fullan, 2007). In secondary education there have been and still are many *innovations* that have an impact on teaching, such as open-concept schools and the use of technology in the curriculum (Fullan, 2003). For the successful implementation of an innovation, the role of the teacher is seen as crucial (Darling-Hammond & Bransford, 2005; Hargreaves & Fink, 2000). The workforce is *ageing,* and the average age in the educational sector is the highest compared with other industries (Ministry of Education, Culture, and Science, 2010). In secondary education, 43 percent of employees are older than 50 years. Because of the ageing workforce, teacher attrition, and the relatively small number of students in teacher education, there is shortage of teachers in secondary education (Ministry of Education, Culture, and Science, 2011). Recent research showed that almost 47% of school leaders reported that they were not able to fill up vacancies (Vrielink, Hogeling, & Brukx, 2008). The expectations are that there will be a shortage of 3000 full time equivalents (fte) in secondary education in 2016 – when the full execution of the Actionplan 'Leerkracht', a stable pension system and a stable development of wages

compared with the development of wages in the labour market, takes place. However, the last two prerequisites will be unstable in the coming years (Ministry of Education, Culture, and Science, 2011).

Despite these challenges, teachers in secondary education report one of the highest engagement levels compared with other industries (Smulders, 2006). Clearly, teachers perceive themselves as engaged, but there are several factors that may influence their engagement levels since their satisfaction with the organization, leader, and communication is low. All in all, this raises the question of how teachers perceive themselves and their work environment, how engaged teachers can best deal with the circumstances they work in, how they perform, for example, in showing innovative behaviour, and how resources influence these relationships.

1.6 Contribution

As mentioned in sections 1.3 and 1.4, the contribution of this dissertation is the examination of the role of job and personal resources as a buffer in the relationship between burnout and work engagement, how they interact in their effects on work engagement, and act as mediators and moderators in the relationship between work engagement and its outcomes. In research on work engagement in the educational sector, the following job resources have been identified: Social support, supervisory coaching, and appreciation (Bakker, Demerouti, & Euwema, 2005; Van Horn, Schaufeli, & Taris, 2001), autonomy, feedback (Bakker et al., 2005), job control (Taris, Schreurs, & van Iersel-van Silfhout, 2001), organizational climate (e.g., Friedman, 1991; Kremer-Hayon & Kurtz, 1985; Travers & Cooper, 1993), access to information (Leithwood, Menzies, Jantzi, & Leithwood, 1999), and innovativeness of the school (Rosenholtz, 1989; Smylie, 1999). As for personal resources, self-efficacy has been examined in the educational sector (Salanova, Bakker, & Llorens, 2006).

Goal orientations, leader membership exchange (LMX), human resources management (HRM), and the interaction with pupils as antecedents of work engagement. Bakker, Schaufeli, Leiter, and Taris (2008) have suggested that future research on work engagement could incorporate the impact of self-regulatory mechanisms on work engagement, to examine how people can manage their own work engagement. By examining *goal orientation* in this perspective, the current dissertation contributes to this line of research. Goal orientation is often researched with regard to students' learning strategies and can be divided into learning goal orientation and performance goal orientation (Dweck & Legget, 1998). It is defined as an orientation toward developing or demonstrating one's ability (VandeWalle, 2003). In this dissertation, two forms of goal orientation were used: Learning Goal Orientation (LGO) refers to the motivation to develop competence by acquiring new skills and mastering new situations, and Performance Goal Orientation (PGO) refers to the motivation to demonstrate and validate the adequacy of one's competence (VandeWalle, 2003). Goal orientation can be viewed as a form of self-regulatory mechanism. Self-regulatory mechanisms include individuals' strategies that enable them to guide their goal-directed activities over time and across changing circumstances (Higgins, 2000). Goal orientation influences the way people look at their work situation and their behaviour. Therefore, it is expected that goal orientation may act as a buffer in the relationship between burnout and work engagement.

Bakker et al. (2011a) state that the role of the leader has received limited research attention with regard to fostering work engagement. *Leader-member exchange* (LMX) acts as an important buffer to work strain (Lee & Ashforth, 1996), and is predictive of performance-related and attitudinal job outcomes (Gerstner & Day, 1997; Graen & Uhl-Bien, 1995). Because LMX was examined as a moderator in the relationship between burnout and work engagement, the dissertation contributes to this line of

research. LMX is defined as the quality of the relationship between the leader and subordinate (Graen & Scandura, 1987).

Research on work engagement in relation to the educational sector has been focused on the negative side of pupil interaction with teachers, namely, pupil misbehaviour (e.g., Hakanen et al., 2006). Since research has shown that teaching pupils and the interaction with pupils are the main reasons and intrinsic motivators for people to become teachers (Alexander, Chant, & Cox, 1994; Woods, 1999), in this dissertation, consistent with the purpose of positive psychology, pupil interaction was examined as a job resource. *Interaction with pupils* is defined as the positive aspect of daily teaching and interaction with pupils (Hakanen et al., 2006). Research has shown that *Human Resource Management* (HRM) in the form of the bundle of HR practices has an impact on employee behaviour at work (Appelbaum, Bailey, Berg, & Kallenberg, 2000; Paauwe, 2009; Guest, 1999). The bundle of HR practices can be a job resource, because some HR practices relate positively to work engagement, such as performance feedback, training facilities, and opportunities for professional development (Schaufeli & Bakker, 2004; Salanova, Grau, Llorens, & Schaufeli, 2001, Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009b). The expectation is that the bundle of HR practices has an influence on the interaction with pupils – work engagement relationship, because it gives teachers the opportunity to do their work.

Autonomy and LMX as moderators in the relationship between work engagement and organizational citizenship behaviour. Since employees in organizations work under changing circumstances, organizations are dependent on employees who are willing to contribute to successful change regardless of formal job requirements: in other words, employees who are willing to show *organizational citizenship behaviour* (OCB: Somech & Drach-Zanavy, 2004). OCB is defined as individual behaviour that is beneficial to the organization, is discretionary, is not

directly or explicitly recognized by the formal reward system, and supports the social and psychological environment in which task performance takes place (Organ (1988, 1997). This is especially important in schools because there are many changes and innovations, and to keep employees willing to contribute to these changes is a challenge (Fullan, 2001; Hargreaves & Fink, 2000), especially considering the large workload and high level of stress, as stated above. Research has shown the importance of OCBs for the effectiveness and efficiency of work teams and organizations (e.g., Organ, 1997; Podsakoff, Whiting, Podsakoff, & Blume, 2009; Felfe & Heinitz, 2009)., The classification of OCBs used in this dissertation is based on the target or direction of the behaviour – the fact that (or the person who) benefits from OCBs: the individual or the organization (Williams & Anderson, 1991). Since the relationship between work engagement and OCBs was confirmed in previous research (Babcock-Roberson & Strickland, 2010), the focus of the dissertation was on moderators in this relationship. Two job resources were examined as moderators: autonomy and LMX. *Autonomy* has been identified as a resource in relation to work engagement (e.g., Halbesleben, 2010), also for teachers (e.g., Hakanen et al., 2006). However, research has shown that teachers perceive that their autonomy is relatively low (OECD, 2003). To gain more insight into the relationship between work engagement and OCB, autonomy was examined as a moderator in the relationship between work engagement and OCBs. Autonomy is defined as self-determination, discretion, and freedom with respect to work goals, priorities, and task elements, and concerns the extent to which employees have power in organizing their job activities (De Jonge, 1995).

As stated above, little research attention has been given to the role of the leader and work engagement (Bakker et al. (2011a). Therefore, LMX was also examined as a moderator in the relationship between work engagement and OCBs. *LMX* theory is based on the assumption that

leaders use a different style for each of their subordinates, and is predictive of performance-related and attitudinal job outcomes (Gerstner & Day, 1997; Graen & Uhl-Bien, 1995). As previous findings have shown, LMX acts as a moderator in the relationship between personality and behaviour (e.g., Kamdar & Van Dyne, 2007). In line with this, we expected LMX to moderate the relationship between work engagement and employees' decisions about whether to show OCBs.

Occupational self-efficacy and high commitment HRM (HC-HRM) as mediator and moderator in the relationship between work engagement and innovative behaviour. There are, and have been, many innovations in the educational sector, and the attitude and responses of employees to innovations are seen as crucial for the innovations' success (e.g., Fullan, 2007). The expectation is that there is a relationship between work engagement and *innovative behaviour*, because engaged employees experience positive emotions (Salanova, Schaufeli, Xanthopoulou, & Bakker, 2010), enabling them to broaden their momentary thought-action repertoires and conceive new ideas (Hakanen & Roodt, 2010). Innovative behaviour is defined as the process in which new ideas within a work role, work group, or organization are conceived, developed, promoted, realized, and modified by employees in order to benefit role performance (e.g., Van de Ven, 1986; Kanter, 1988; Scott & Bruce, 1994; West & Far, 1990; De Jong & Den Hartog, 2005). To examine the relationship between work engagement, occupational self-efficacy, and high commitment, HRM (HC-HRM) as resources were taken into account, because teachers can experience feelings of uncertainty about showing innovative behaviour (Janssen, 2004), or may not have the opportunity to engage in innovative behaviour (Fullan, 2001). *Occupational self-efficacy*, defined as an individual's conviction that s/he can cope with difficulties s/he encounters in her/his work (Schyns & Von Collani, 2005), is a form of self-evaluation that influences decisions

about what behaviours to undertake, the amount of effort and persistence to put forth when faced with obstacles, and finally, the mastery of the behaviour (Bandura, 1982; 1986). Recent research has shown causal and reciprocal relationships between self-efficacy and work engagement (e.g., Xanthopoulou et al., 2009b). In this dissertation, occupational self-efficacy was examined as a resource, because it is more closely related to the occupational domain than general self-efficacy (Schyns & Von Collani, 2002). Because occupational self-efficacy was examined as a mediator in relation to work engagement and its outcomes, this dissertation contributes to a deeper understanding of the relationship between work engagement and innovative behaviour.

HC-HRM was also examined in relation to work engagement and innovative behaviour, because, as stated above, HRM is expected to influence employee behaviour (Appelbaum et al., 2000). When teachers perceive HC-HRM in the workplace, it gives them the opportunity to show innovative behaviour. HC-HRM is defined as the 'bundle' of human resources practices used by the organization to enhance employees' levels of skill, motivation, information, and empowerment (Whitener, 2001). HC-HRM directs individual behaviour so that organizational goals can be realized (Gould-Williams, 2004), for example, by setting up participation mechanisms or providing training (Dorenbosch, Engen, & Verhagen, 2005).

In sum, burnout, the interaction with pupils, and HR practices were examined in relation to work engagement, as antecedents and job resources. Goal orientation and LMX were examined as buffering variables in the relationship between burnout and work engagement. Autonomy and LMX were examined as moderators in the relationship between work engagement and organizational citizenship behaviours (OCBs); and occupational self-efficacy and high commitment HRM (HC-HRM) were

examined as mediator and moderator, respectively, in the relationship between work engagement and innovative behaviour. Definitions of all these variables are presented in Appendix I.

An additional contribution of this dissertation concerns the context of the research, the educational sector. This is often ignored in organizational research, while schools are an excellent research subject because of their controlled settings, e.g., a relatively homogeneous set of organizational activities, limited opportunities for deviation in work organization, and a quite consistent organizational structure (Pil & Leana, 2009).

Finally, this dissertation provides useful insights for academics, teachers, school management, HRM staff, the Dutch Ministry of Education, Culture, and Science, and consultancy firms working for the educational sector on teachers' work engagement. It is expected that all of these can benefit from the outcomes of this dissertation.

1.7 Research questions

Against this background, this dissertation was aimed at examining the relationships between resources, work engagement, and its outcomes. The overall research question can be formulated as follows:
To what extent do job and personal resources influence the relationship between work engagement and its antecedents, and the relationship between work engagement and its outcomes?

The main question is divided into four subquestions that are answered in each chapter of this dissertation; they are as follows:

1. *To what extent do goal orientation and LMX influence the negative relationship between burnout and work engagement?*
2. *To what extent are the interaction with pupils and HRM related to work engagement?*

3. *To what extent do autonomy and LMX moderate the relationship between work engagement and OCBs?*
4. *To what extent can occupational self-efficacy and high commitment HRM explain the relationship between work engagement and innovative behaviour?*

An overview of the definitions of the variables used in this dissertation is given in Appendix I.

1.8 Research methods

Research population

The research population consisted of teachers in schools for secondary education in the Netherlands.

Data collection

Qualitative and quantitative data were collected at schools for secondary education in the Netherlands. The schools were regionally spread. In Table 1 an overview is presented per chapter of the number of schools and respondents that participated in this research.

Table 1: Overview of data used in the dissertation

	Six schools (n=211)	Five schools (n=30)	13 schools (n=342)	Four schools (n=24)	One school (n=126)
Type of research	Quantitative	Qualitative	Quantitative	Qualitative	Quantitative
Chapter 2	X	X			
Chapter 3			X	X	
Chapter 4	X				
Chapter 5					X

The data were collected in different ways. The quantitative data were collected using an on-line questionnaire; and for one school a written questionnaire was given to the respondents to fill out. The qualitative data were collected using a semi-structured interview.

Analysis

Various analysis methods were used in the dissertation to test different models. For the quantitative data, hierarchical regression analysis, tests for skewness, and correlation analysis were used. Also in some studies, CFA analyses were used to examine the structure of the items and scales. Since the data were collected from different schools, intraclass correlations were computed to verify if there were differences between school levels that would affect the outcomes of the analysis. In one study, multi-level modeling was used to test the hypotheses. For mediation analysis, we used the three-step equation method from Baron and Kenny (1986) followed by the Sobel test (Sobel, 1982). For moderation analysis, we used Aiken and West's (1991) method for testing two-way interaction effects. For the qualitative data, we examined Cohen's Kappa - the proportion of agreement between raters after accounting for chance (Cohen, 1960).

1.9 Overview of the chapters

This dissertation contains six chapters. In Chapter 1, a general overview is given of the context, the goal of the research, and definitions of the variables used. The significance of the research, an outline of the research, and an overview of the chapters are also presented.

Chapter 2 discusses the extent to which job and personal resources can influence the negative relationship between burnout and work engagement. Quantitative data were used to examine whether goal orientation (learning goal orientation and performance goal orientation) and LMX influence the relationship between burnout and

work engagement. To obtain a deeper understanding of the findings, an additional qualitative study was done to examine what other resources support teachers in influencing the relationship between burnout and work engagement. The study provides implications for the management of organizations and practitioners, enabling an increased understanding of the factors that that might be helpful in influencing the negative impact of burnout on work engagement.

Chapter 3 discusses the interaction with pupils and HR practices as possible job resources. In the first study reported in this chapter, a qualitative research was done to get a clearer understanding of the bundle of HR practices that are unique to the educational sector, and to develop the scale construction for the second study of this chapter. In the second study, quantitative data were used to examine the relationship between the interaction with pupils, HR practices, and work engagement, and HR practices were examined as a moderator in the interaction with pupils – engagement relationship. The findings provide implications for management of organizations and practitioners that are useful in enhancing the work engagement of employees.

Chapter 4 focuses on the relationship between work engagement and organizational citizenship behaviour (OCB). OCB was divided into two aspects: namely, OCBI – OCB directed at the individual - and OCBO – OCB directed at the organization. In particular, the interaction between autonomy and LMX was examined in this relationship. More specifically, it was expected that autonomy would function as a moderator for the work engagement - OCBI relationship, and LMX for the work engagement - OCBO relationship. The findings provide useful insights into theory and implications for practice, for the management of organizations in stimulating employees to show OCBI and OCBO, and show under which conditions the relationship between work engagement and OCBs is the strongest.

In the study presented in Chapter 5, the relationship between work engagement and innovative behaviour was examined. It was expected that occupational self-efficacy would mediate the relationship between work engagement and innovative behaviour. In addition, HC-HRM was examined as a moderator to improve understanding of the role of moderators in the engagement – performance relationship. The findings provide useful theoretical insights; implications for practice are discussed.

Chapter 6 presents a general discussion of the results of the individual studies with reference to the research question. Strengths and weaknesses of the research are discussed; implications and suggestions for future research and practical implications are presented.

Appendix I. Definition of the variables

Variable	Definition
Work engagement	Work engagement is defined as the positive, fulfilling work-related state of mind characterized by vigour, dedication, and absorption (Schaufeli, Salanova, González-Roma, & Bakker, 2002, p.74).
Burnout	Burnout is characterized by exhaustion, depersonalization, and reduced professional efficacy (Maslach, 2003). *Exhaustion* is defined as feelings of strain, particularly chronic fatigue resulting from overtaxing work. *Depersonalization* is defined as an indifferent or a distant attitude towards work in general and the people with whom one works, losing interest in work, and feeling that work has lost its meaning. A lack of *Professional efficacy* is defined as reduced feelings of competence, successful achievement, and accomplishment both in one's job and in the organization.
Interaction with pupils	The interaction with pupils is defined as the positive aspects of daily teaching and interaction with pupils (Hakanen, Bakker, & Schaufeli, 2006)
Goal orientation	Goal orientation is defined as an orientation toward developing or demonstrating one's ability (VandeWalle, 2003). In this dissertation, two forms of goal orientation were used: Learning Goal Orientation (LGO) and Performance Goal Orientation (PGO). A LGO is to develop competence by acquiring new skills and mastering new situations. A PGO is to demonstrate and validate the adequacy of one's competence (VandeWalle, 2003).
Occupational self-efficacy	Occupational self-efficacy is defined as an individual's conviction that s/he can cope with difficulties s/he encounters in her/his work (Schyns & Von Collani, 2005). It is a form of self-evaluation that influences decisions about what behaviours to undertake, the amount of effort and persistence to put forth when faced with obstacles, and, finally, the mastery of the behaviour (Bandura, 1982; 1986).
Autonomy	Autonomy is defined as self-determination, discretion, and freedom with respect to work goals, priorities, and task elements, and concerns the extent to which employees have power in organizing their job activities (De Jonge, 1995).

Variable	Definition
Leader-member exchange (LMX)	LMX is defined as the quality of the relationship between the leader and subordinate (Graen & Scandura, 1987)
Human Resource Management (HRM)	HRM is defined as 'all those activities that are associated with the management of work and people in firms and in other formal organizations' (Boxall & Purcell, 2008, p.1).
High commitment HRM (HC-HRM)	HC-HRM is defined as the 'bundle' of human resources practices used by the organization to enhance employees' levels of skill, motivation, information, and empowerment (Whitener, 2001).
Organizational citizenship behaviour (OCB)	OCB is defined as individual behaviour that is beneficial to the organization, is discretionary, is not directly or explicitly recognized by the formal reward system, and supports the social and psychological environment in which task performance takes place (Organ (1988; 1997).
Innovative behaviour	Innovative behaviour is defined as the process in which new ideas within a work role, work group, or organization are conceived, developed, promoted, realized, and modified by employees in order to benefit role performance (e.g., Van de Ven, 1986; Kanter, 1988; Scott & Bruce, 1994; West & Far, 1990; De Jong & Den Hartog, 2005).

CHAPTER 2

Burnout and work engagement: Considering goal orientation and LMX [1]

[1] This chapter is a modified version of the article submitted as: Konermann, J., Sanders, K., & Runhaar, P., Burnout and work engagement: Considering goal orientation and LMX. The chapter was presented at the ORD symposium in 2010: 'Professional development of teachers: The influence of organizational factors and Human Resource Management', Enschede, The Netherlands.

Abstract

In this research we examined whether the negative relationship between burnout (exhaustion, depersonalization, and a lack of professional efficacy) and work engagement is influenced by goal orientation and leader-member exchange (LMX). Survey data analyses from 211 teachers in six Dutch schools for secondary education showed that exhaustion was negatively related, and professional efficacy positively related to work engagement. Depersonalization was not related to work engagement. Learning goal orientation and performance goal orientation both weakened the relationship between professional efficacy and work engagement. LMX weakened the relationship between depersonalization and work engagement. Both learning goal orientation and performance goal orientation did not moderate the relationship between exhaustion and depersonalization on the one hand, and work engagement on the other hand. Contrary to our hypotheses, LMX strengthened the relationship between professional efficacy and work engagement. To clarify the unexpected results, we interviewed 30 teachers from five schools to get a deeper understanding of which factors influenced the negative relationship between burnout and work engagement. The interviews revealed that the social interaction, especially the social interaction with pupils, seems to be an important factor in the relationship between burnout and work engagement.

2.1 Introduction

Employees have to deal with stressful circumstances such as a high workload and emotional demands (Schaufeli & Enzmann, 1998). If stressful circumstances are not dealt with correctly and employees experience this for a longer period of time, it even may lead to burnout (Maslach, Schaufeli, & Leiter, 2001). In line with Schaufeli and Bakker (2004, p.294), we regard burnout as a 'state of mental weariness'. Burnout is characterized by exhaustion, depersonalization, and a lack of professional efficacy; it often occurs among employees who work with people in emotionally demanding situations (Maslach et al., 2001). *Exhaustion* is defined as feelings of strain, particularly chronic fatigue resulting from overtaxing work. *Depersonalization* is defined as an indifferent or a distant attitude towards work in general and the people with whom one works, losing interest in work, and the feeling that work has lost its meaning. *Professional efficacy* is defined as feelings of competence, successful achievement, and accomplishment both in one's job and in the organization (Maslach et al., 2001).

Burnout is usually associated with negative outcomes, such as reduced employee commitment (Leiter & Maslach, 1998), lower productivity and performance (Maslach et al., 2001), and increased turnover intentions (Schaufeli & Bakker, 2004). Burnout can however be seen as a temporary state that can be overcome rather than an end-product (Chang, 2009). For example, research has shown that employees who experienced burnout felt enthusiastic if they engaged in revitalizing professional development (Fessler & Christensen, 1992). Researchers assume that work engagement is the positive 'antipode' of burnout (Schaufeli & Bakker, 2004, p.294). Work engagement is defined as the positive, fulfilling work-related state of mind characterized by vigour, dedication, and absorption (Schaufeli, Salanova, González-Roma, & Bakker, 2002, p.74). Since work engagement leads to better performance

and productivity and to less turnover (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009; Bakker & Leiter, 2010), organizations benefit from engaged employees. Moreover engaged employees are better able to deal with stress in their work (Hakanen, Bakker, & Schaufeli, 2006).

Previous research showed that burnout and work engagement are negatively related to each other (Schaufeli & Bakker, 2004; Schaufeli, Martínez, Marques-Pinto, Salanova, & Bakker, 2002). There are different points of view regarding the relationship between *burnout* and *work engagement*. Some researchers consider burnout and work engagement as opposite dimensions (e.g. Maslach & Leiter, 1997). This implies that burnout and work engagement could be measured with the same instrument. Recently, it has been argued that burnout and work engagement are two constructs that should be treated independently (Demerouti, Mostert, & Bakker, 2010). To confirm this, research has shown that exhaustion (as part of burnout) and vigour (as part of work engagement) are two constructs instead of opposite ends of one underlying energy dimension. Depersonalization (as part of burnout) and dedication (as part of work engagement) are however found to be opposite ends of the identification dimension (Demerouti et al., 2010). In addition, research by Bakker, van Emmerik, and Euwema (2006) examined the crossover effects of burnout and work engagement between teams and individuals. Their findings showed that there is a negative relationship between the burnout level of a team, and the work engagement level of the individual (after controlling for the impact of team-level work engagement, and individual job demands, and job resources). In line with this literature, we examine burnout and work engagement as two different constructs.

Work engagement is regarded as a function of job resources and job demands (Schaufeli & Bakker, 2004). *Job resources* refer to those physical, psychological, social, or organizational aspects of the job that may reduce job demands and the associated physiological and psychological costs,

are functional in achieving work goals, and stimulate personal growth, learning and development (Schaufeli & Bakker, 2004). *Job demands* refer to those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills; they are, therefore, associated with certain physiological and/or psychological costs (Schaufeli & Bakker, 2004). Previous research on burnout and work engagement examined the role of job resources and job demands. For example, Schaufeli and Bakker (2004) found that burnout mediates the relationship between job demands and health problems, and work engagement mediates the relationship between job resources and turnover intention. Moreover, they found that work engagement is only predicted by job resources. To build further on this research, the aim of this study was to examine whether job and personal resources influence the relationship between burnout and work engagement.

More specifically, since goal orientation is useful to understand employees' motivation for their work (Retelsdorf, Butler, Streblow, & Schiefele, 2010), and is considered to be a personal resource – a positive self-evaluation that is linked to resiliency and that can be used to control challenging situations (Hobfoll, Johnson, Ennis, & Jackson, 2003), we examined goal orientation as an individual factor that could influence the relationship between burnout and work engagement. Goal orientation is consistently related to the way people explain their success (Van Yperen & Diderich, 1998), and is defined as the individual's goal preferences in achievement situations (Dweck & Legget, 1988). In addition, interpersonal interactions are key to understanding the persistence of burnout (Buunk & Schaufeli, 1993). Therefore, we examined leader-member exchange (LMX) as a possible factor. LMX is defined as the quality of the relationship between the leader and subordinate (Graen & Scandura, 1987), and is based on the assumption that leaders use a different style for each of their

subordinates. LMX is predictive of performance-related and attitudinal job outcomes (Gerstner & Day, 1997; Graen & Uhl-Bien, 1995). Previous findings have shown that LMX acts as an important buffer to work strain (Lee & Ashforth, 1996).

Hence, our research question was: '*To what extent do goal orientation and LMX influence the negative relationship between burnout and work engagement?'*

Research context

The context of this study is the educational sector. Jalongo and Heider (2006) found that increasing teacher attrition rates are a worldwide issue. They estimate that 46% of teachers leave their job within the first five years of teaching in the United States. International surveys showed that 25-33 percent of the teachers suffered from stress (OECD, 2005). Teachers in secondary education perceive an increasing work load (Ingvarson et al., 2005; OECD, 2005). In addition, teachers in secondary education in the Netherlands score relatively high on burnout compared to employees in other industries (TNO, 2010), and find their work unattractive due to a high workload, disengagement, and stress (OECD, 2005; Ministry of Education, Culture, and Science, 2010). As we know from practice, it can happen that teachers who get up tired in the morning, feel exhausted and have to find courage and strength to go to their schools and even wonder why they chose for this work, somehow regain their energy and dedication during the day and hence remain engaged. How come? It is thus necessary to examine which factors support teachers in dealing with burnout, and to keep them in the teaching profession (Ministry of Education, Culture, and Science, 2007).

Contribution

A review of research on burnout suggested that further research should

be done to examine which resources can be provided to influence the demands that employees perceive in their work (Halbesleben & Buckley, 2004). In addition, building further upon the research of Schaufeli and Bakker (2004), possible factors in the relationship between burnout and work engagement are examined to get a deeper understanding of this relationship. With regard to *goal orientation*, researchers argue that it is necessary to examine achievement strategies in the context of work, to improve understanding of possible psychological factors that contribute to burnout and work engagement (Salmelo-Aro, Tolvanen, & Nurmi, 2009). We contribute to this by examining goal orientation as a factor that may influence the relationship between burnout and work engagement. As for *LMX*, research into burnout and leadership is limited (Halbesleben & Bowler, 2007), although-work related social support has been examined as a job resource that can reduce burnout (Thomas & Lankau, 2009). Because we examined social support in the form of LMX that can influence the burnout – work engagement relationship, this study contributes to this line of research.

2.2 Theoretical framework and hypotheses

Goal orientation as a factor in the burnout – work engagement relationship

The self-regulation theory is used to understand more of the mechanism of why goal orientation can influence the relationship between burnout and work engagement. According to the self-regulation theory, goals can be used to enable an individual to guide his/her behaviour over time and across changing circumstances (Karoly, 1993). These goals represent an 'integrated pattern of beliefs that leads to different ways of approaching, engaging in, and responding to achievement situations' (Ames, 1992, p.261). Hockey (1997) argued that when employees are under stress, they are sensitive to variations in resource deployment. They are in a process of protecting their primary goals while simultaneously dealing with the costs

(mental effort) that have to be invested in keeping up their performance. In this process, regulatory mechanisms are set in motion to mobilize compensatory effort (Hockey, 1997). There are two response mechanisms that people use to regulate themselves: A promotion focus and a prevention focus (Higgins, 1997). A promotion focus is described as a form of self-regulation in which people strive to develop themselves and go for maximal positive outcomes; a prevention focus is a form of self-regulation in which people strive for security and safety and want to minimize negative outcomes (Higgins, 1997). From a goal orientation perspective, two goal orientations can be identified (Dweck & Legget, 1998), namely learning goal orientation (LGO), and performance goal orientation (PGO), that have a strong resemblance with respectively a promotion focus (LGO) and a prevention focus (PGO).

In a LGO, individuals aim to develop competence by acquiring new skills and mastering new situations (Dweck & Leggett, 1988), and are better able to regulate stressful circumstances in the job (Parker & Martin, 2009). We expected that LGO would influence the relationship between burnout and work engagement, because when employees with a LGO face a demand in their work, they tend to put more effort into their work and identify learning strategies for dealing successfully with the demand (Dweck, 1999). For example, teachers who are exhausted may find strength in the way they learn from their work situation and this may influence their state of mind in order to deal with the burnout – work engagement relationship. Individuals with a PGO wish to demonstrate and validate the adequacy of their competence by seeking favorable judgments about their competence and avoiding negative judgments (Dweck & Legget, 1998). When they experience difficulties in their work, they regard it as a test of their worth, competence, and likeability (Dykman, 1998). Employees with a PGO want to avoid negative outcomes and this can influence the relationship between burnout and work engagement because they could go

for less challenging tasks and surface processing (i.e., rehearsal and rote memorization of information) (Bell & Kozlowski, 2002; Steele-Johnson, Beauregard, Hoover, & Schmidt, 2000). For example, teachers only want to use the same teaching method because they know it is successful and will avoid negative feedback in order to deal with the burnout – work engagement relationship. Previous research has shown that a low promotion focus strengthens the relationship between job resources and work engagement, and a high prevention focus strengthens the relationship between job demands and exhaustion (Brenninkmeijer, Demerouti, Le Blanc, & Van Emmerik, 2010). Hence, our first and second hypotheses were the following:

Hypothesis 1 (H1): LGO weakens the negative relationship between burnout and work engagement

Hypothesis 2 (H2): PGO weakens the negative relationship between burnout and work engagement

LMX as a factor in the burnout – work engagement relationship

In LMX, there can be a high-quality exchange (characterized by mutual trust, mutual influence, and respect) or a low-quality exchange relationship (characterized by formal, role-defined interactions and institutionalized exchanges where there is distance between the parties) between the employee and the leader (Janssen & Van Yperen, 2004). Janssen and Van Yperen (2004) argued that the leader is the most immediate and salient person for an employee in the context of work, and the leader-employee social interaction is an important condition for coping with stress, because of the social support employees receive from their leader (Cherniss, 1980; Cohen & Wills, 1985). Social support is defined as a complex transactional process in which an active interplay between a person and his or her support network is involved (Vaux, 1988), and includes emotional support (trust), instrumental support (aid in time, money), and informational

support (advice and suggestions) (House, 1981). Social support provides opportunities for reappraisal and adaptive responses to work stress and facilitates well-being (House, 1981; Cohen & Wills, 1985; Chang, 2009). When the social support from the leader is perceived as high (a high quality exchange relationship, e.g. the leader supports the employee by giving trust and emotional support), this influences the relationship between burnout and work engagement. Based on the above arguments, the third hypothesis was:
Hypothesis 3 (H3): LMX weakens the negative relationship between burnout and work engagement

2.3 Method

Respondents. We sampled 211 respondents in six Dutch schools for secondary education[2]. 47 percent of the respondents were male. Ages ranged from under 30 years (21%), 31 to 40 years (21%), 41-50 years (20%), 51-60 years (33%), to 61 years and older (5%).

Procedure. Teachers received an e-mail in which the aims of the research were explained, and they were asked to fill out a questionnaire. This e-mail contained a link to the on-line questionnaire. In the introduction to the on-line questionnaire the aims of this research were mentioned again, as well as supplementary information about the subjects included in the questionnaire and assurance that the respondents' answers would be treated with the utmost confidentiality. Respondents had two weeks' access time to fill out the questionnaire.

Instruments. Seven scales were used: work engagement, burnout (consisting of exhaustion, depersonalization, and professional efficacy), learning goal orientation, performance goal orientation, and LMX. For six

[2] We asked 30-50 teachers per school to cooperate in the research. From one school, one department cooperated (response rate 100%). The response rate from the other five schools varied between 17% and 47%.

of these, respondents indicated their responses on a 5-point Likert-type scale with anchors (1) do not agree at all to (5) totally agree. Burnout was measured using a 6-point scale with anchors (1) never to (6) always / daily.

Work engagement. Work engagement was measured using nine items from the short version of the Utrecht Work Engagement Scale (UWES) (Schaufeli & Bakker, 2003). An example of an item is: "In my work, I feel I have plenty of energy". The reliability was sufficient (Cronbach's $\alpha = .79$)[3].

Burnout was measured using the Utrecht Burnout Scale for Teachers (UBOS-L) (Schaufeli & Van Dierendonck, 2000), which consists of three subscales. *Exhaustion* was measured using eight items. A sample item is: 'I feel emotionally drained by my work'. The reliability was good (Cronbach's $\alpha = .90$). *Depersonalization* was measured using seven items. A sample item is: 'I feel I treat some students as if they were impersonal objects'. To improve the reliability two items ('I am worried that my job makes me hard-hearted', and 'I don't really care what happens to some pupils') were removed from the scale. The reliability was good (Cronbach's $\alpha = .87$). *Professional efficacy* was measured using seven items. A sample item is: 'I feel I am positively influencing other people's lives through my work'. The reliability was good (Cronbach's $\alpha = .87$). High scores on the exhaustion and depersonalization subscales and low scores on the professional efficacy subscale are characteristics of burnout (Schaufeli & Van Dierendonck, 2000).

Goal orientation was measured using the nine-item scale developed by VandeWalle (1997). *Learning goal orientation* was measured using five items. A sample item is: 'I prefer challenging and difficult tasks so that I learn a great deal'. The reliability was sufficient (Cronbach's $\alpha =$

[3] The reliability for vigour, dedication, and absorption separately was also sufficient, but because the correlations between vigour, dedication, and absorption were larger than .60, we analyzed work engagement as one scale.

.78). *Performance goal orientation* was measured using four items. A sample item is: 'To be honest, I really like to prove my ability to others'. Reliability was sufficient (Cronbach's α = .78).

LMX. LMX was measured using the Janssen and Van Yperen (2004) scale, which consists of seven items. A sample item from this scale is: 'My supervisor is willing to help me personally if there are challenges in my work'. The reliability was high (Cronbach's α =.94).

Control variables were gender and age, because they are generally considered important controls in burnout and work engagement research (e.g., Bakker & Leiter, 2010; Chang, 2009).

Data analysis. Since the data were collected from six schools, we calculated the intraclass coefficient (ICCs, see Bliese, 2000) to examine if the amount of variance was related to the school. The results showed that the ICC(1) for work engagement was .03, meaning that three percent of the variance in individual scores depended on the school. This is considered to be small (LeBreton & Senter, 2008). Based on this result, we further analyzed the hypotheses on an individual level using a hierarchical regression analysis.

All variables in this study were based on self-reports and collected at a single point in time. Therefore, we used the Harman's one-factor test (Podsakoff & Organ, 1986; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) to investigate the potential influence of common-method variance. Analysis of unrotated principal axis factoring generally resulted in the seven expected factors that explained 61 percent of the total variance. The first factor, burnout, explained 17 percent of the variance. The first (largest) factor did not account for the majority of the variance, nor was there a general factor that accounted for the majority of the covariance in these variables. The results suggested that common method variance for the sample had a minor influence.

The results for all the hypotheses are presented in Table 2. All hypotheses were tested using hierarchical regression analysis. In Model 1, the control variables gender and age were added. The interaction effects were tested using the Aiken and West method (1991). The results of H1 and H2, the interaction of goal orientation in the relationship between burnout and work engagement, are presented in Models 2a and 2b. The results of our third hypothesis, the interaction of LMX in the relationship between burnout and work engagement, are presented in Model 2c.

2.4 Results

Table 1 presents the means, standard deviations, and correlations for the variables investigated in this study. The results showed that the means for exhaustion (M = 2.42) and depersonalization (M = 1.55) were low, and the mean for professional efficacy was very high (M = 4.29), meaning that the respondents did not perceive a high level of exhaustion, depersonalization, or a lack of professional efficacy. Exhaustion and depersonalization are negatively related to work engagement (r = -.27, p <.01; r = -.23, p <.01), and professional efficacy is positively related to work engagement (r =.24, p <.01). Depersonalization is positively related to exhaustion (r =.39, p <.01), and professional efficacy is negatively related to exhaustion (r = -.15, p <.05) and depersonalization (r = -.30, p <.01). LGO is positively related to work engagement (r =.42, p <.01) and professional efficacy (r =.31, p <.01), and negatively related to depersonalization (r = -.25, p <.01). PGO is positively related to LGO (r =.29, p <.01). LMX is positively related to work engagement (r = .26, p <.01), and negatively related to exhaustion (r = -.34, p <.01) and depersonalization (r = -.22, p <.01).

Table 1. Means, Standard Deviations, and Pearson Correlations Study 1

	M	SD	1	2	3	4	5	6	7	8
1. Gender	1.53	.50								
2. Age	2.80	1.23	-.24**							
3. Work engagement	3.80	.45	.00	.02						
4. Exhaustion	2.42	.83	.01	.05	-.27**					
5. Depersonalization	1.55	.51	-.08	.15*	-.23**	.39**				
6. Professional Efficacy	4.29	.75	.17*	-.33**	.24**	-.15*	-.30**			
7. LGO	3.72	.54	.05	-.20**	.42**	-.10	-.25**	.31**		
8. PGO	3.08	.72	.00	-.24**	.02	.01	.05	.00	.29**	
9. LMX	3.62	.82	-.05	.04	.26**	-.34**	-.22**	.05	.11	.08

** $p < .01$; * $p < .05$

The results of the hierarchical regression analysis are shown in Table 2. For H1, concerning the interaction of LGO in the relationship between burnout and work engagement, the results show that for exhaustion and depersonalization the interaction of LGO is non-significant (β =.06, *ns*; β =.12, *ns*). The results for professional efficacy show that the interaction of LGO is negatively significant (β = -.15, p <.05). The interaction effect is shown in Figure 1. LGO weakens the relationship between professional efficacy and work engagement. This means that H1 is only confirmed for professional efficacy, and was not confirmed for exhaustion and depersonalization.

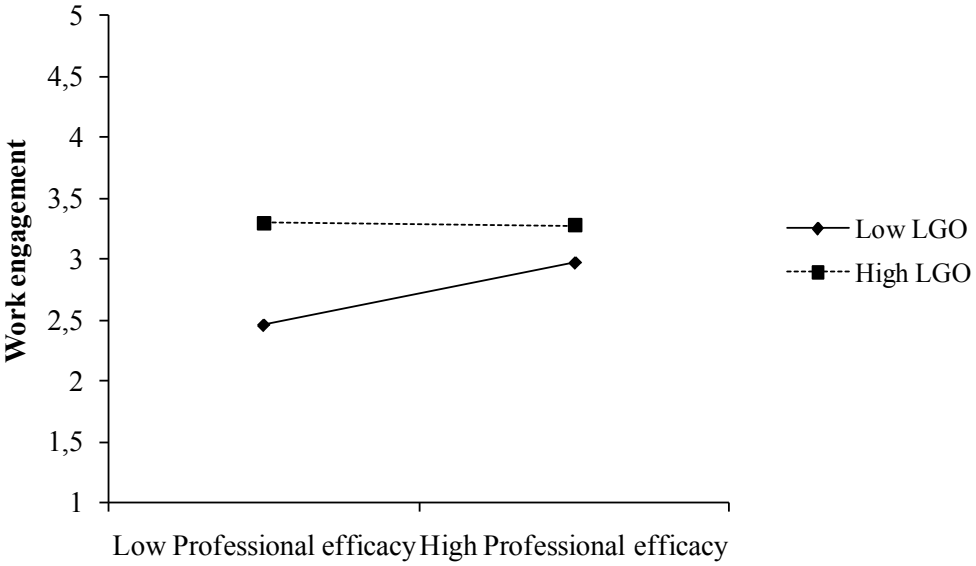

Figure 1. The two-way interaction of professional efficacy and LGO on work engagement

Table 2. The role of goal orientation and LMX in the relationship between burnout and work engagement

	Work engagement			
	Model 1	*Model 2a*	*Model 2b*	*Model 2c*
Gender	.01	.02	.00	-.01
Age	-.02	.12†	.08	.08
Exhaustion (EXH)		-.21**	-.23**	-.18*
Depersonalization (DEP)		-.03	-.05	-.08
Professional Efficacy (PRE)		.20*	.27**	.26**
LGO		.34***		
PGO			.03	
LMX				.21**
EXH x LGO		.06		
DEP x LGO		.12		
PRE x LGO		-.15*		
EXH x PGO			.00	
DEP x PGO			-.05	
PRE x PGO			-.23**	
EXH x LMX				-.05
DEP x LMX				-.23**
PRE x LMX				.19*
R^2	.00	.29	.17	.21
Change in R^2		.17	.05	.09

*** $p < .001$, ** $p < .01$, * $p < .05$, † $p < .10$

The results of the tests of H2, concerning the interaction of PGO in the relationship between burnout and work engagement, show that for exhaustion and depersonalization the interaction is non-significant (β =.00, *ns*; β = -.05, *ns*). The results for professional efficacy show that the interaction of PGO is negatively significant (β = -.23, p <.01). The interaction effect is shown in Figure 2. PGO weakens the relationship between professional efficacy and work engagement. This means that H2 is confirmed for professional efficacy, but was not confirmed for exhaustion and depersonalization.

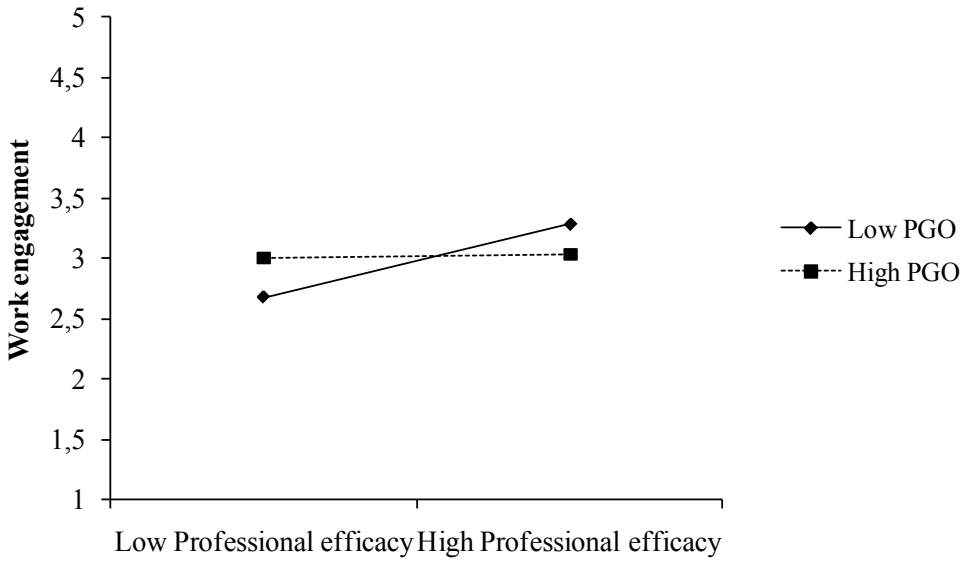

Figure 2. The two-way interaction of professional efficacy and PGO on work engagement

The results of the tests of H3, regarding the interaction of LMX in the relationship between burnout and work engagement, show that the interaction of LMX and exhaustion is non-significant (β =-.05, *ns*). The results for depersonalization show that the interaction of LMX is

significant (β = -.23, p <.05). The interaction effect is shown in Figure 3: LMX strengthens the relationship between depersonalization and work engagement. The results for professional efficacy show that the interaction of LMX is significant (β = .19, p <.05). The interaction effect is shown in Figure 4. LMX enhances the positive effects of professional efficacy on work engagement. This means that H3 was not confirmed for exhaustion, and was rejected for depersonalization and professional efficacy.

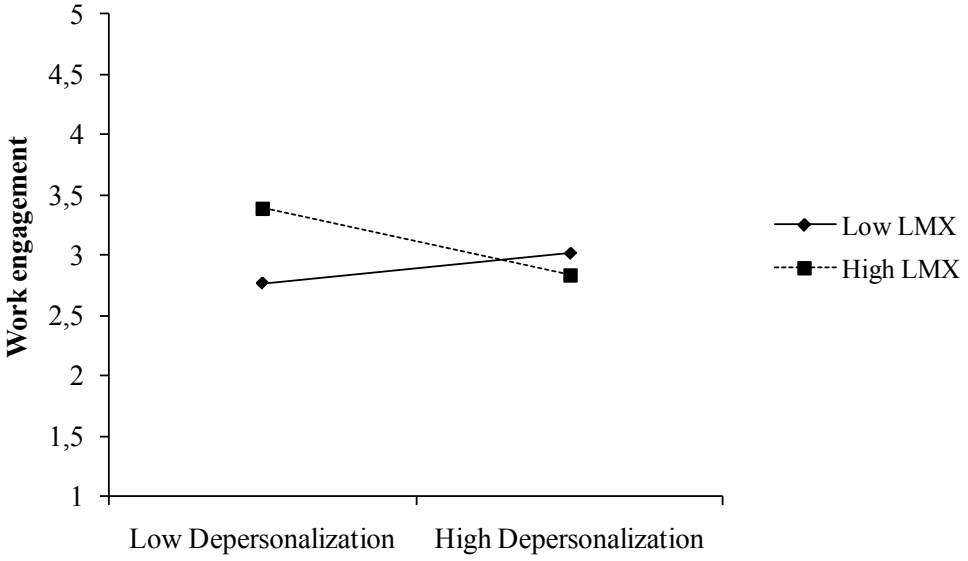

Figure 3. The two-way interaction between depersonalization and LMX on work engagement

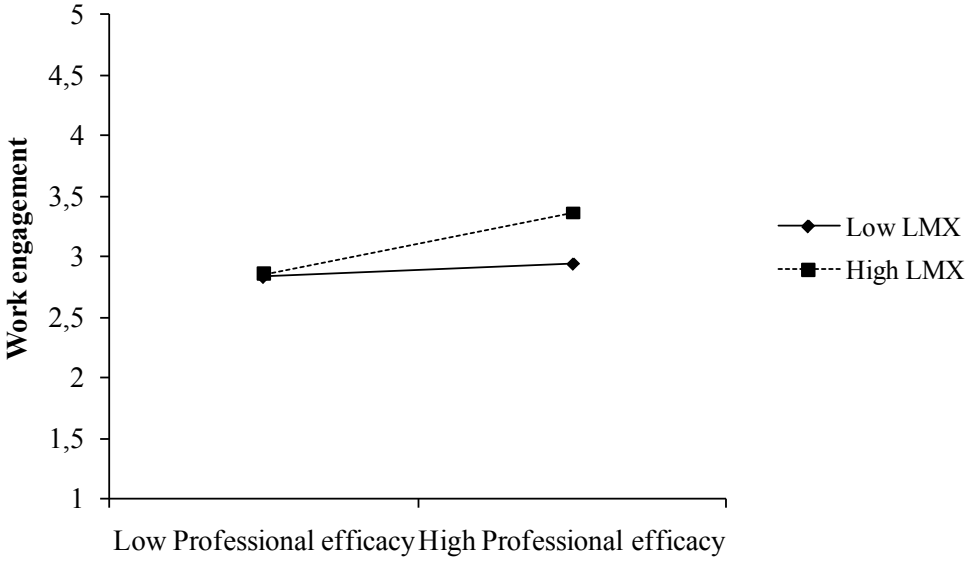

Figure 4. The two-way interaction of professional efficacy and LMX on work engagement

Conclusion and Discussion

All in all, we expected that goal orientation and LMX could influence the relationship between burnout and work engagement, but the hypotheses were only confirmed for goal orientation as a moderator in the relationship between professional efficacy and work engagement. It is possible that there are other aspects that influence the relationship between burnout and work engagement. Research has shown, for example, that people who have social support from colleagues, spouses, and family feel better than people who lack social support (Cohen & Wills, 1985; Van Daalen, Willemsen, & Sanders, 2006). To gain a better understanding of the factors that could influence the relationship between burnout and work engagement, we conducted an additional study.

2.5 Additional study

In this additional study we performed a qualitative research. According to Merriam (1998), qualitative research can be used to gain more insight into employees' perceptions of their real-life contexts. The respondents were questioned using a semi-structured interview. The questions we asked were: *'To what extent do you experience work engagement, burnout, goal orientation, and LMX in your work? What supports you in preventing your possibly temporary state of burnout from resulting in a lower engagement level?'*.

2.6 Method

Respondents. Five schools for secondary education in the Netherlands participated in this additional study, in which 30 teachers were interviewed. Ten respondents were male. The mean age of the respondents was 44.2 (SD=13.1). The mean length of time that the respondents worked in the educational sector was 16.3 years (SD=12.4).

Procedure. Before the interviews were held, three test interviews were conducted by one researcher to improve the reliability of the questions. All teachers were asked by email to participate in the research, in which the aim of the research was explained. The format of the interviews was semi-structured to enable follow-up on issues the respondents brought up and to make the interviews more conversational (Patton, 2002). Before the interview started, the aim of the research and the procedure were explained and the respondents were assured that their answers would be treated with the utmost confidentiality. The interview began with an informal conversation to make the respondent feel at ease (Rapley, 2004). During the interview, the respondents filled out a short questionnaire in which work engagement and burnout were measured. After the interview, each of the respondents gave permission for the data to be used for this research. Each interview was recorded and transcribed.

After all the transcriptions were read, the data were clustered. To improve the reliability, this was all done by two researchers.

Instruments. We measured the same variables as in the quantitative study: work engagement, burnout (consisting of exhaustion, depersonalization, and professional efficacy), learning goal orientation, performance goal orientation, and LMX, and based our questions on the items in the scales. All variables were measured on a tree-point scale with anchors (1) low, (2) middle, and (3) high.

Data analysis. All answers to the first question were clustered in three categories: low (1), middle (2), and high (3). For example, for exhaustion: low (respondent indicates no exhaustion), middle (respondent indicates an average level of exhaustion; sometimes exhausted, sometimes not), high (a high level of exhaustion). To measure the intercoder reliability between the two researchers, we used Cohen's Kappa - the proportion of agreement between raters after accounting for chance (Cohen, 1960). The mean Cohen's Kappa was $\kappa = .82$, $p < .001$.[4] This result shows that Cohen's Kappa was greater than .61 and thus represents a reasonably good overall agreement (Kvalseth, 1989). The answers to the second question revealed categories in which the answers could be clustered.

2.7 Results

The results with regard to the first question: *'To what extent do you experience work engagement, burnout (exhaustion, depersonalization, and professional efficacy), goal orientation, and LMX in your work?* are presented in Table 3. The results show that LGO has the highest mean (M = 2.50, SD = .68), followed by LMX (M = 2.37, SD = .81), and work

[4] Cohen's Kappa was also calculated for all seven variables: Work engagement (κ=.66, p <.001), exhaustion (κ =.84, p <.001), depersonalization (κ =.81, p <.001), professional efficacy (κ =.82, p <.001), LGO (κ =.82, p <.001), PGO (κ =.89, p <.001), and LMX (κ =.88, p <.001).

engagement (M = 2.23, SD = .63). The mean for depersonalization is the lowest (M = 1.50, SD = .68). Compared with the findings in Study 1, work engagement, LGO, and LMX have the highest means, and depersonalization has the lowest mean.

Table 3. Means and Standard Deviations Study 2

	M	SD
Work engagement	2.23	.63
Exhaustion	1.67	.76
Depersonalization	1.50	.68
Professional Efficacy	1.57	.68
LGO	2.50	.68
PGO	2.07	.74
LMX	2.37	.81

With regard to the second question: *What supports you in preventing your possibly temporary state of burnout from resulting in a lower engagement level?* the results show that several factors may influence the negative relationship between burnout and work engagement.

Supervisor (LMX). Nine of the 30 respondents said that the social interaction with their supervisor helped to influence the negative relationship between burnout and work engagement. A respondent said*: 'My supervisor listens to me when I come to him when I feel exhausted. He understands me and regulates me sometimes; he treats me with respect and supports me. I am very happy with that.'*

Another respondent stated:

'I once experienced burnout when I was working as a care officer at school. I worked so hard, too hard, too much. Everyone tried to protect me, but the work had to be done. But then I was hospitalized and that made

me think. I talked about it with my supervisor, he warned me that I was crossing the line…the conversations I had with him were very supportive.'

Colleagues. The results show that 13 of the 30 respondents said that the social interaction with colleagues helped to influence the negative relationship between burnout and work engagement. A respondent said:
'I get a lot of support from my colleagues when I feel a lot of stress because of a high work load. I share everything with one colleague who is very supportive.'

Another respondent stated:
'I go to a colleague when I feel exhausted. I need to tell my story to others; it is like a kind of therapy that supports me.'

Partner. Five of the 30 respondents said that the social interaction with their partner helped to influence the negative relationship between burnout and work engagement. A respondent said:
'At home, I tell my husband what happened at school. For example, I had a meeting with parents recently. The parents shouted and were very upset, which made me feel exhausted after the conversation. When I came home, I told my husband what happened and after that it was OK.'

Another respondent said:
'When a day at school has exhausted me because of a lot of problem situations, I talk about it with my husband. And then he offers me another point of view: Have you thought about it like this or that? And then I can see the situation from another perspective and I can let it go.'

Interaction with pupils. The results show that 24 of the 30 respondents indicated that the interaction with pupils supported them in influencing the negative relationship between burnout and work engagement. To mention a few examples, a respondent said:

'When I get up in the morning I feel exhausted and think: 'It is too early to go to work.' But even if I don't have the energy, when the pupils enter the classroom and start to say: 'Teacher, teacher!' .....my energy increases and I feel OK.'

Another respondent stated:

'There are days that I go to school and feel exhausted, but when I have taught all day, I am bursting with energy. There are classes that make teaching a great profession. That is why I chose to become a teacher. What makes the difference is that these classes go well. We examine things together and if the interaction with pupils is good, it gives me a great boost! When the bell rings, I think: 'Oh, is it already time?' That is what makes me happy. When I have such a day once every three weeks, that is good enough for me and helps me to get through it.'

Sports. Three of the 30 respondents mentioned that sports helped to influence the negative relationship between burnout and work engagement. A respondent said*:*

'Sports, skating, cycling in the summer: I feel a need to do sport every day, but unfortunately I cannot find time for that every day, but certainly every other day. It gives me a great release from stress; body and mind come together again.'

2.8 Conclusion and Discussion

The purpose of this study was to examine factors that could influence the negative relationship between burnout and work engagement. More specifically, we examined whether goal orientation and LMX could influence this relationship. This research is important because it is a challenge to keep employees engaged who have to deal with stressful circumstances. To answer the research question, '*To what extent do goal orientation and LMX influence the negative relationship between burnout*

and work engagement?' we used a sample of 211 teachers in six Dutch schools for secondary education.

The results show that the learning goal orientation (LGO) and performance goal orientation (PGO) influenced the relationship between professional efficacy and work engagement.

We found no interaction effect for LGO and PGO in the relationships between exhaustion and work engagement and depersonalization and work engagement. A possible explanation might be that exhaustion and depersonalization are a result of work overload and social conflict (Maslach et al., 2001), and that it is harder for teachers in such a state to be open to growth, self-improvement or demonstrating their competence.

The results showed that LMX did not weaken the relationship between exhaustion and work engagement. A possible explanation might be that exhausted employees tend to withdraw from their social interactions (Cordes & Dougherty, 1993), which suggests that social interaction in the form of LMX cannot act as a buffer for exhaustion. Further research could be done to examine what buffers the relationship between exhaustion and work engagement. Not in line with our hypothesis, LMX strengthened the relationship between depersonalization and work engagement. It is possible that although employees consider the exchange relationship with the leader to be good, the social support from the leader might not buffer the relationship between burnout and work engagement. A possible explanation is that a teacher is depersonalized by teaching pupils and perceives that the leader has no influence on the teaching itself; it is out of the leader's scope, which in turn enhances the decline of work engagement.

In addition, not in line with our hypothesis, LMX strengthened the relationship between professional efficacy and work engagement. A possible explanation may be that it is a characteristic of LMX that supervisors delegate difficult and important tasks to some employees,

where other employees are given simpler and less important tasks (Yukl & Fu, 1999). When the supervisor gives difficult and important tasks to employees whose professional efficacy is high, this might strengthen the relationship between professional efficacy and work engagement. And when the professional efficacy of employees is low, and the supervisor gives difficult and important tasks, the relationship between professional efficacy and work engagement could be weakened because employees feel that they cannot fulfil the supervisors' expectations.

In the additional study, we aimed to get a deeper understanding of which factors in teachers' work might influence the negative relationship between burnout and work engagement. The results suggest that the social interaction helps to influence this relationship; especially the interaction with pupils was mentioned by most respondents, followed by the social interaction with colleagues, supervisor, partner, and, finally, sports. A suggestion for further research may be to examine the positive role of the interaction with pupils in relation to burnout and work engagement. A review by Cordes and Dougherty (1993) in which social interaction and burnout were examined, showed that research has been done on the social interaction with colleagues and the supervisor, but not on the interaction with pupils. The respondents did not mention goal orientation as a factor that could influence the negative relationship between burnout and work engagement.

Limitations and suggestions for further research. The studies had some limitations. In Study 1, the data were collected at a single point in time, which may cause common method bias. Although Harman's one-factor test did not suggest that common method bias was present, it cannot be completely ruled out. Further research could be done to collect data from multiple sources. Possible influencing factors are examined in the relationship between burnout and work engagement. This implies that there

is causal relationship between burnout and work engagement. However, because there was a negative relationship between burnout and work engagement based on previous research and cross sectional data were used, it was not possible to examine if there was a causal relationship. Further research could be done using a longitudinal research design in order to confirm the causality of the relationships found in this study and examine whether the influencing factors could buffer the relationship between burnout and work engagement.

In addition, burnout is considered as an independent variable and work engagement as a dependent variable, while it also could be possible that work engagement is a independent variable and burnout a dependent variable (e.g. Bakker et al., 2006). It would be interesting to examine in further research whether the relationship between burnout and work engagement is a reciprocal relationship and which mechanisms (e.g. social support) weaken or strengthen this relationship.

In Study 2, a limitation was that we used a three-point scale to measure the variables instead of the five-point scale that was used in Study 1. Therefore, it was not possible to compare the outcomes of the two studies. Further research could be done to replicate the study and use a five-point scale for both studies so the findings can be compared. Another limitation was that we examined the three factors of burnout in the questionnaire during the interviews, but the question about what supported teachers in preventing the temporary state of burnout from resulting in a lower engagement level was answered on a more general burnout level. There are two suggestions for further research with regard to factors that might influence the relationship between burnout and work engagement. First, research findings show that the influencing effects of goal orientation and LMX are different for exhaustion, depersonalization, and professional efficacy. As we have stated, it has been found that depersonalization influences exhaustion; maybe a high level of professional efficacy can also

act as a factor in the relationship between burnout and work engagement. Further research could be done to examine how the three variables of burnout interact in relationship to work engagement.

Goal orientation and LMX were taken into account as influencing factors, but the results from the additional study show that social interactions are mentioned mostly as a way to influence the relationship between burnout and work engagement. It would be interesting to investigate which form of social interaction influences the relationship between burnout and work engagement the most. In addition, further research could be done to examine other factors in this relationship, such as coping mechanisms (Aspinwall & Taylor, 1997).

Practical implications. The research findings suggest that employees' goal orientation towards learning and growth, or performance (confirmation of their worth, competency, and likeability) does not influence the negative relationship between exhaustion and depersonalization, on the one hand, and work engagement, on the other hand. These goal orientations only influence the relationship between professional efficacy and work engagement. In other words, in a situation where employees are oriented towards learning and growth, or performance, the level of work engagement stays more or less the same when employees perceive a low or high level of professional efficacy. A practical implication might be to stimulate employees' goal orientation, for example, by discussing the quality of goal setting.

Furthermore, we found that the leader-member exchange weakened the relationship between depersonalization and work engagement, and strengthened the relationship between professional efficacy and work engagement. However, leader-member exchange has no influence when employees feel exhausted. A practical implication for supervisors may be to be aware of the quality of the social exchange relationship they have

with their employees. When employees are feeling exhausted, personal coaching (as part of a stress-reduction or wellness program) might help employees to understand what causes the exhaustion (what takes energy, what gives energy) and find strategies to influence the negative relationship between burnout and work engagement.

Finally, the findings of the additional study suggest that social interaction influences the relationship between burnout and work engagement. The interaction with pupils was mentioned most, in addition to the social interaction with colleagues, the supervisor, and the partner. A practical implication may be to focus more on the positive side of what the interaction with pupils means for teachers, and to help to improve the social interaction between teachers and pupils by coaching or by giving teachers time to improve their social interaction skills.

CHAPTER 3

The interaction with pupils and HR practices as resources for work engagement [5]

[5] This chapter is a modified version of the article submitted as: Konermann, J., Sanders, K., & Runhaar, P., Explaining teachers' work engagement: Interaction with pupils and HR practices. This chapter was presented at the ORD conference in 2009, Leuven, Belgium.

Abstract

The goal of this research was to investigate how teachers' work engagement (vigour, dedication, and absorption) can be explained through the interaction with their pupils and their perceptions of Human Resource (HR) practices. Two studies were undertaken. Study 1 was a qualitative study, in which we interviewed 23 respondents in four schools to gain more insight into HR practices within schools. Study 2 was a quantitative study, in which we surveyed 342 teachers in 13 schools. As expected, the interaction with pupils was positively related to all sub-scales of work engagement, and teachers' perceptions of HR practices were positively related to vigour and dedication. However, not in line with our expectations, the perceptions of HR practices weakened the relationship between the interaction with pupils and dedication.

3.1. Introduction

Since engaged employees are enthusiastic, intensely involved in their work, able to bring their full capacity to bear in their work to solve problems, and easily connect with people (Bakker & Leiter, 2010), there is a need to understand what engages employees in their work. This is especially true for teachers. Engaged teachers are important for at least two reasons. *First*, research findings have shown that the more engaged teachers are in their work, the better the pupils perform and the better their basis for the future is (Bakker, 2005; Kahn, 1990). *Second*, if teachers are engaged, they are less willing to quit their jobs (Bakker, Demerouti, de Boer, & Schaufeli, 2003). Because of a high workload, stress, a low salary, and poor work-related engagement, teacher attrition is quite high (OECD, 2005). Work engagement can help teachers to deal with this high workload and stress (Bakker et al., 2003; Schaufeli & Bakker, 2004).

Work engagement is defined as the positive, fulfilling work-related state of mind characterized by vigour, dedication, and absorption (Schaufeli, Salanova, González-Roma, & Bakker, 2002, p.74). *Vigour* is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in work, and persistence in the face of difficulties. *Dedication* is characterized by a sense of significance, enthusiasm, pride, inspiration, and challenge. A*bsorption* is characterized by being fully concentrated and happily engrossed in one's work, whereby times passes quickly and one has difficulties with detaching oneself from work (Schaufeli & Bakker, 2004, p.295).

Work engagement can generally be regarded as a function of both job resources and job demands (e.g., Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Schaufeli & Bakker, 2004). *Job demands* refer to those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills; they are, therefore, associated with certain physiological

and/or psychological costs (Bakker & Demerouti, 2007). *Job resources* refer to those physical, psychological, social, or organizational aspects of the job that may reduce job demands and the associated physiological and psychological costs (Bakker & Demerouti, 2007). Job resources are functional in achieving work goals and stimulate personal growth, learning, and development (Bakker & Demerouti, 2007).

In research in the education sector, job resources are defined in different terms: As part of interpersonal and social relations such as social support, supervisory coaching, and appreciation (Bakker, Demerouti, & Euwema, 2005; Van Horn, Schaufeli, & Taris, 2001); as a part of the task, like autonomy, feedback (Bakker et al., 2005), and job control (Taris, Schreurs, & van Iersel-van Silfhout, 2001); and as a characteristic of the school organization, such as organizational climate (e.g., Friedman, 1991; Kremer-Hayon & Kurtz, 1985; Travers & Cooper, 1993), access to information (Leithwood, Menzies, Jantzi, & Leithwood, 1999), and innovativeness of the school (Rosenholtz, 1989; Smylie, 1999). Also different kinds of job demands are investigated: Demands as part of the teaching itself, such as pupil misbehaviour (e.g., Hastings & Bham, 2003; Evers, Tomic, & Brouwers, 2004; Kinnunen & Salo, 1994; Hakanen, Bakker, & Schaufeli, 2006); as characteristics of the task like role stress, quantitative overload, mental and emotional demands (Salanova, Llorens, & García-Renedo, 2003; Salanova, Martínez, & Lorente, 2005; Taris et al., 2001; Taris, Van Horn, Schaufeli, & Schreurs, 2004); and as a characteristic of the school organization, such as a poor physical work environment (Bakker et al., 2005).

Focus of our study

Although research has shown that the main attractions of teaching are the intrinsic rewards that come from the interaction with pupils and enjoying pupils' achievements (Woods, 1999), the interaction with pupils is mostly

examined as a job demand. In this study we investigated whether the interaction with pupils can serve as a job resource as well.

Human Resource Management (HRM), defined as 'all those activities that are associated with the management of work and people in firms and in other formal organizations' (Boxall & Purcell, 2008, p.1), helps to maximize employees' positive reactions at work (Boxall & Purcell, 2008; Nishii & Wright, 2008) and organizational performance (Boselie, Dietz, & Boon, 2005). Because HR practices can motivate employees in their work and improve their performance (Huselid, 1995), for example, through the use of performance appraisals, we expected that HR practices could be viewed as a job resource and have a positive relationship with work engagement. However, research has shown that HR practices in the educational sector are not well implemented and not aligned to each other (Teurlings & Vermeulen, 2004), because these practices are not much used by employees and more interaction is needed between the management of schools and teachers to improve their use (Runhaar & Sanders, 2007). The study by Runhaar and Sanders (2007) on the implementation of HRM in Dutch schools for Vocational Education and Training revealed that an effective implementation of HRM is especially dependent on soft factors – referring to social and psychological factors within schools. 'Hard factors' – like time and money – appear not to play an important role.

The findings of the current study contribute to the research related to work engagement in three ways. *First*, we examined the effects of two new job resources - interaction with pupils and HR practices – on work engagement, and the interaction between the two. *Second*, we used a qualitative research method (Study 1) to obtain more insight into which HR practices are used in schools, owing to the above-mentioned problems with the implementation of HR practices and the fact that the bundle of HR practices is unique for each sector (Boxall & Purcell, 2008); we used

quantitative research methods (Study 2) to test our hypotheses. *Third*, we examined the relationships within the educational context. This context is often ignored in organizational research, while schools are an excellent research subject regarding human and social capital because of their controlled settings, e.g., a relatively homogeneous set of organizational activities, limited opportunities for deviation in work organization, and a quite consistent organizational structure (Pil & Leana, 2009). Using data from 23 teachers, leaders, and principals (Study 1) and 342 teachers (Study 2) in 13 schools, we answered the following question: *To what extent are the interaction with pupils and HR practices related to work engagement?*

3.2 Theoretical framework and hypotheses

Work engagement is a central construct in research on employee performance (Bates, 2004, Baumruk, 2004, Harter, Schmidt, & Hayes, 2002). Related to the educational sector, engaged teachers appear to influence others in a positive way (e.g., teachers, pupils, parents). For example, research findings have shown that music teachers influence their pupils in a positive way if they are engaged (Bakker, 2005). When a teacher is engaged and shows enthusiasm in the classroom, the pupils will be more enthusiastic and motivated.

The interaction with pupils and work engagement

It is widely known that teachers are intrinsically motivated for their job because of the interaction with pupils and enjoying pupils' achievements (Woods, 1999). Teachers have an intrinsic need to help their pupils develop (Choi & Tang, 2009), and the desire to work with children and adolescents is highly influential in attracting people into a teaching career, next to making a social contribution and intellectual fulfillment (e.g., Alexander, Chant, & Cox, 1994; Joseph & Green, 1986; OECD, 2005). Also, the motivation to care for others (for pupils) is an important aspect of

teachers' intrinsic motivation (O' Connor, 2008). The mechanism behind the relationship between the interaction with pupils and work engagement is the *conservation of resources* (COR) theory (Hobfoll, 2002), according to which human motivation is to obtain, retain, and protect that which they value. In addition, people strive to accumulate resources, which leads to the aggregation of resources that can be used as buffers for demanding work situations. Resources are, for example, personal energies and characteristics, material, and conditions (Hobfoll, 2002). Especially when circumstances are demanding, for example, when teachers have to deal with pupil misbehaviour (Hakanen et al., 2006), the allocation of job resources helps in dealing with these circumstances (Hobfoll, 2002). This may result in positive outcomes like work engagement (Hakanen & Roodt, 2010). Research has already shown that difficult interaction with pupils is related to stress and burnout (Hakanen et al., 2006; Van Horn et al., 2001; Taris et al., 2004). Thus, it was expected that the interaction with pupils would have a positive relationship with work engagement. Hence, our hypothesis was as follows:
Hypothesis 1 (H1): The interaction with pupils is positively related to work engagement

HR practices and work engagement
Researchers have converged on the belief that HR practices are associated with organizational performance (Boselie et al., 2005). A key element in explaining the relationship between HRM, behaviour, and performance is a focus on employees' perceptions of HRM (Boxall & Purcell, 2008; Kinnie, Hutchinson, Purcell, Rayton, & Swart, 2005; Nishii & Wright, 2008; Nishii, Lepak, & Schneider, 2008). Employees' perceptions function as a linking mechanism between (intended) HRM and organizational performance (Kinnie et al., 2005; Nishii & Wright, 2008; Boxall & Purcell, 2008; Sanders, Dorenbosch, & De Reuver, 2008; Li, Frenkel, & Sanders,

2011). That is, HR practices are perceived by employees in a certain way, which in turn influences their attitude towards the organisation and their job, and consequently influences their behaviour. In this view, HR practices can be regarded as messages to employees - in a symbolic or signaling function – about what behaviour is expected and rewarded (e.g., Rousseau, 1995; Bowen & Ostroff, 2004).

About a decade ago, Dutch schools started with the implementation of so-called 'Integrated Personnel Policy' (Ministry of Education, Culture, and Science, 2007). The main purpose of this policy is to match the commitment, knowledge, and competencies of employees with the organizational goals of the school on a regular and systematic base. The purpose is to use a coherent set of HR practices that are aimed at stimulating the professional development of teachers (Sectorbestuur Onderwijs Arbeidsmarkt (SBO), 2005). This is in alignment with an emergent international trend in the educational sector to implement HR practices aimed at stimulating teachers' professional development (OECD, 2009; UK Department for Education, 2010; U.S. Department of Education, 2007). For example, in different countries, teachers' wages depend partly on their teaching quality, which is expected to stimulate them to improve their quality (OECD, 2009). Also, the more specific aspects of appraisal and feedback are stressed as parts of HR practices that stimulate teachers' professional development, the more teachers improve their teaching (OECD, 2009). We mentioned above the intrinsic motivation of teachers for their jobs. Related to this, teachers are intrinsically motivated to develop their skills in order to improve their teaching practice (Choi & Tang, 2009). It was expected that HR practices perceived as helping them to become better teachers would positively influence teachers' work engagement. Hence, our second hypothesis was the following:
Hypothesis 2 (H2): HR practices are positively related to work engagement.

HR practices as a moderator in the relationship between the interaction with pupils and work engagement

HR practices, as a means by which the organization communicates what behaviours are expected and rewarded, can be regarded as an important part of the context in which individuals function (Bowen & Ostroff, 2004; Sanders et al., 2008; Sanders, Moorkamp, Torka, Groeneveld, & Groeneveld, 2010). Following on the first two hypotheses, it was expected that when HR practices were perceived as being directed, for example, towards teachers' professional development – and as such appeal to teachers' intrinsic motivation to improve their teaching - this would enhance the impact of the interaction with pupils on work engagement. We formulated Hypothesis 3 as follows:

Hypothesis 3 (H3): HR practices strengthen the relationship between teacher interaction with pupils and work engagement.

Because HRM is relatively new in schools, research on the effects of HRM in schools is scarce. To gain more insight into how HR practices are shaped and perceived, in Study 1, semi-structured interviews were conducted with 23 respondents in four schools. In Study 2, the results of a survey among 342 teachers in 13 schools were presented. The hypotheses were tested using these data.

3.3 Study 1: HR Practices in schools

The purpose of this study was to explore which HR practices are present in schools for secondary education in the Netherlands and how these HR practices are perceived. Since HR practices are unique for each type of organization and support the organizational system in making 'sensible adaptations in their unique context' (Boxall & Purcell, 2008, p. 283), a qualitative study was done to examine which a bundle of HR practices is used in secondary education. Furthermore, the results of this study were

used to formulate HR practice items for the second study.

Respondents. We sampled 23 respondents in four schools: ten teachers, four team leaders, five division directors, and four principals. Sixty-one percent of the respondents were male. The four schools also participated in the total sample of 13 schools in Study 2.

Procedure. The principals of the schools were asked to participate in the research. We explained the aims of the research in an interview and asked the principals to search for respondents in the schools who reflected the school population. During the interviews with the respondents the aims of the research were explained and assurance was given that their answers would be treated with the utmost confidentiality. After the interviews the information gathered was sent to the respondents, and they were asked to confirm that the information was interpreted correctly. After confirming this, the respondents gave permission for the data to be used for this research. Each interview was transcribed. After all the transcriptions were read, the data were clustered. This was all done by two researchers to improve the reliability.

The interviews were based on three questions: *'Which HR practices are used in the school?', 'How are those HR practices perceived?'* and *'What are the reasons behind positive or negative perceptions of HR practices in the school?'*

3.3.1 Results Study 1

In this section, the results of the three questions of the qualitative study are discussed to provide more insight into how HR practices are perceived in Dutch schools for secondary education. The first question was: *'Which HR practices are used in the school?'* All respondents reported one or more HR practices used in their school, and there was no relationship between the type of HR practice that was mentioned and the function of the respondent. The following practices were mentioned: An introduction

program (13 of the 23 respondents); a personal development plan (19 of the 23 respondents); performance appraisal (18 of the 23 respondents); reward system (12 of the 23 respondents); training and employee development (17 of the 23 respondents).

The purposes of the HR practices are described in HR policy documents. We gathered them as background information about the HR practices the respondents were interviewed about. The purpose of each HR practice is described as follows. The *introduction program* is used specifically for newcomers so that they become familiar with the school organization quickly (SBO, 2005). The goal of a *personal development plan* is to support the professional development of a teacher; it consists of reflections on the teacher's work and competences, and the teacher's current and future career path. Once or twice a year the teacher and his leader discuss the personal development plan together, followed by a performance appraisal (SBO, 2005). The purpose of the *performance appraisal* is to analyze the progress that has been made with regard to the personal development plan, and make proper agreements for the future (SBO, 2005). The *reward system* is specified in the collective agreement for the secondary education sector and is not connected with the performance appraisal. Every year a teacher automatically moves one step up in the salary scale until the final step is reached. Only when teachers are promoted to another function level are they promoted to the corresponding salary scale (SBO, 2005). For each school there are different promotion criteria. Concerning *training and employee development*, the course has to contribute to teachers' professional development (SBO, 2005).

Regarding the second question, *'How are the HR practices perceived?',* 12 of the 23 respondents had positive perceptions of HR practices. Most of these were leaders (11 respondents). A division director answered:

'...we talk with everyone about where they stand now and how they want

to develop. That can be engaging. People appreciate it when you talk with them about their development…'.

Five of the 23 respondents (four teachers and one team leader) reported that they perceived HR practices as neither positive nor negative. A teacher stated:

'*…the reward system functions, it is the way it is….*'.

And six of the 23 respondents stated that they had negative perceptions of HR practices (four teachers and two team leaders). As a teacher stated*:*

'...I perceive HR practices as negative. I know that I have a performance appraisal every two years, but in the meantime nothing happens, not even a discussion about the agreements that we have made or a discussion about my professional development …'.

And one leader*:*

'...the digital instrument (for making a personal development plan) does not cover all the aspects that we discussed before in an individual meeting. It looks like the procedure has become a goal in itself…'.

As for the third question: '*What are the reasons behind positive or negative perceptions of HR practices in the school?',* the results show that 18 of the 23 respondents reported one or more reasons why HR practices are perceived positively or negatively in their school. The positive or negative perceptions seemed to depend on:

Communication. Two respondents, both principals, reported that communication contributed to a positive perception of HR practices. As one of the principals stated:

'...our school has made its own language regarding HRM. An example is that we want pupils to love to come to school, but we can realize this only when each member of our team loves to come to school…'.

Five respondents from different schools reported that if communication is lacking, it contributes to a negative perception of HR practices. A teacher stated:

'…when you discuss issues with HR practices with your leader, they are not amused…they use it against you in your performance appraisal…'.

Institutionalizing HR practices. Eighteen respondents answered that the institutionalizing or the embedding of HR practices in the form of a cyclic design contributes to a positive experience of HR practices. A leader stated:

'….There is a HR cycle that is followed; we are more conscious about the 'Wet BIO' in relation to the competencies of our employees. ..Employees see that the social aspect of work is well taken care of..,".

Ten respondents from different schools reported that when HR practices are not linked to other aspects of the school system, this leads to negative perceptions. Factors mentioned are the alignment of HR practices between teams (five leaders), transparency of the HR policy (three teachers), and that HR practices are not an active part of the agenda (two leaders). A teacher stated:

'…teams deal differently with HR practices…, everyone does it in their own way, there is no alignment…'.

A teacher reported:

'…when someone gets a promotion to a higher function scale, a team leader advises on this. But it is not clear what the reasons behind this decision are. Why is one person promoted and the other not?'.

An explicit connection between the educational process and HR practices. Four respondents from different schools (one teacher and three leaders) reported that an explicit connection between the educational process and HR practices contributed to positive perceptions of HR practices. A team leader stated:

'… our main interest is that our pupils learn and develop. How do we ensure that as a team? And what can a teacher do to make sure that the

CSE number (graduation number) increases by a half point? We want to give a recommendation about the teachers' development…I want to make the professional the professional…'.

Organizational culture. Seven respondents (five teachers and two leaders) from different schools reported that the organizational culture had a negative impact on the perceptions of HR practices. As a teacher stated: *'…we do not talk to each other about things that go wrong. It is not the culture of the school to discuss that. The purpose of a professional culture is clear, but not in practice…'.*

Opposite interests of management and teachers. Two respondents, both division directors from different schools, reported that HR practices are perceived negatively because of the opposite interests of the management and teachers. They stated:
'…there is a dilemma between being a good employer and being a good teacher. Interests sometimes bite…' and
'…we want to involve people (teachers) in the development of our school plan. That is difficult, because people are not busy with that. They (teachers) are primarily focused on their own occupation and pupils…'.

Leaders and the way they deal with HR practices. Fifteen respondents from different schools reported that HR practices are perceived negatively because there are incompetent leaders (four teachers), the span of control is too large and the respondents lack time to handle HR practices properly (six respondents, all division directors or team leaders), and leaders have not enough insight into the competencies of personnel (four teachers and one leader). The consequence is that the qualities of people are not recognized. Some people are asked to do things that others can perform better. As a teacher said:

'... we talk about the HR practices in our teams, but we do not feel actively involved in them, because they (management) are filling in..'.
A team leader stated:
'...on paper it is clear, but not in practice…. I see the potential of people, but that is not from the perspective of HR practices…'.
Finally, a division director reported:
' ...the number of conversations that a team leader has to conduct leads to an excessive workload…'.

3.3.2 Discussion Study 1

In sum, the results of Study 1 show that the following HR practices are used in schools: An introduction program, a personal development plan, performance appraisal, rewards, training and employee development. The identified HR practices were used to construct a scale regarding HR practices in Study 2. Furthermore, HR practices are perceived as positive by most leaders and neutral (neither positive nor negative) or negative by most teachers. Finally, respondents reported reasons why HR practices are perceived as positive or negative in schools, for example, communication, the embedding of HR practices in the school system, and the way a leader is putting HR practices into practice. These results correspond with the findings of Runhaar and Sanders (2007).

Because most teachers reported a neutral or negative perception of HR practices, this raised the question whether HR practices would contribute to work engagement. We examined this relationship in Study 2.

3.4 Study 2: Work engagement explained through the interaction with pupils and HR practices

The purpose of Study 2, a quantitative study, was to examine whether the interaction with pupils and HR practices were related to work engagement and thus could be considered a job resource. Furthermore, HR practices

were examined as a moderator in the relationship between the interaction with pupils and work engagement.

Respondents. We sampled 342 teachers from 13 schools for secondary education in the Netherlands.[6] 49 percent of the sample was male. Ages ranged from under 30 years (21 percent), 31 to 40 years (20 percent), 41-50 years (25 percent), 51-60 years (28 percent), to 61 years and older (6%). The respondents' teaching experience varied from less than 5 years (24 percent), 6-10 years (21 percent), 11-15 years (8 percent), 16-20 years (9 percent), to more than 20 years (38 percent). 29 percent of the respondents worked mainly in 'pre-vocational secondary education', 32 percent mainly in 'senior general secondary education', and 39 percent mainly in 'pre-university education'.

Procedure. Teachers received an e-mail in which the aims of the research were explained, and they were asked to fill out a questionnaire. The e-mail contained a link to the on-line questionnaire. In the introduction to the on-line questionnaire the aims of this research were mentioned again; in addition, supplementary information was provided about the subjects included in the questionnaire and the respondents were assured that their answers would be treated with the utmost confidentiality. Respondents had two weeks' access time to fill out the questionnaire.

Instruments.[7] Three scales were used to examine the relationship between the interaction with pupils, HR practices, and work engagement.

Interaction with pupils. The scale used to measure the interaction with pupils consisted of six items, like *"How motivating is the contact with pupils for you?*" Respondents indicated their responses on a 5-point Likert-type scale with anchors (1) '*not at all motivating*' to (5) '*very motivating'*.

[6] The response rate cannot be calculated, because some schools asked a department to cooperate in the research while other schools asked a random group of teachers (15-20 teachers per school). With some schools we made an agreement that 30-50 teachers would cooperate in the research.

[7] In Appendix II, lists of the items of the interaction with pupils and HR practices are presented.

To test the variable we used Principal Components Analysis. The six items used all loaded on one factor. The reliability of this scale was good (Cronbach's α = .78).

HR practices. Perceptions of HR practices were measured using a scale which we designed based on the results of the semi-structured interviews in Study 1 and the framework used by all Dutch schools to implement HRM (SBO, 2005). We derived items such as salary, career development, and training. A sample item is, "*How motivating is it for you to make a personal development plan?*". Respondents in this study indicated their responses on a 5-point Likert-type scale with anchors (1) not at all motivating to (5) very motivating. The factor analysis showed that all but one item loaded on one factor. The item *"How motivating is the HRM policy in general*?" was removed. Wright and Boswell (2002) already mentioned that it is vital to distinguish between policies and practices in measuring HRM. The former is the organisation's stated intentions regarding its various 'employee management activities'. The latter are the actual, functioning, observable activities, as perceived by employees. The nine items that formed the variable HR practices had a high reliability (Cronbach's α = .89).

Work engagement. Work engagement was measured using the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2002). Vigour was measured using six items (for example, "In my work, I feel I have plenty of energy"), dedication was measured using five items (for example, "My work is challenging"), and absorption was measured using six items (for example, "Time flies when I am working"). Respondents indicated their responses on a 5-point Likert-type scale with anchors (1) do not agree at all to (5) totally agree. Cronbach's α for vigour was .77, for dedication .85, and for absorption .72.

Control variables were gender, age, number of years teaching in general, number of years teaching at current school, and type of education.

Type of education refers to the different levels of secondary education in the Netherlands (pre-vocational secondary education (1), senior general secondary education (2), and pre-university education (3).

Data analysis. To make sure that the differences between schools would not influence the results, we first conducted an ANOVA test for vigour ($F(12, 311)=1.65$, $p<.01$), dedication ($F(12, 311)=1.88$, $p<.05$), and absorption ($F(12, 309)=1.03$, p=ns). We then calculated the intraclass correlations (ICCs, see Bliese, 2000) to examine whether the amount of variance was related to the school level.

Table 1. Intraclass correlations for work engagement

	ICC(1)	ICC(2)
Vigour	.05	.39
Dedication	.06	.47
Absorption	.00	.03

The results presented in Table 1 show that ICC(1) values range from .00 to .06, implying that 0-6 percent of the variance in individual scores depends on the school. The ICC(2) values are below .50 and are considered poor (Klein et al., 2000). Based on these results, we decided not to use multilevel analysis; we analyzed the hypotheses on the individual level using hierarchical regression analysis.

Because all variables in this study were based on self-reports and collected at a single point in time, we used a Harman's one-factor test (Podsakoff & Organ, 1986) to investigate the potential influence of common method variance. Therefore, all items of the variables were entered together in one factor analysis and the results of the unrotated factor solution were examined. If substantial common method variance

were present, either a single factor would emerge, or one general factor would account for most of the covariance in the independent and criterion variables (Podsakoff & Organ, 1986). This analysis produced five factors, with the first factor explaining 25 percent of the variance. The 'eigenvalue' was greater than 1, accounting for 63 percent of the variance.

Not all items loaded on the appropriate factor. Therefore, a confirmatory factor analysis (CFA) was performed with structural equation modelling (SEM) using AMOS 17. The different models were compared using an χ^2 difference test. Maximum likelihood was used to estimate the CFA and SEM models; several fit indices were used to evaluate the model. These indices were the root mean square error of approximation (RMSEA) and the comparative fit index (CFI). For RMSEA, values at or under 0.08 were taken to reflect a reasonable fit and values under 0.05 were considered to be an excellent fit (Holmes-Smith, 2000). The CFI varies along a continuum of 0–1 in which values at or greater than 0.90 are considered to be a satisfactory fit and values at 0.95 or over reflect an excellent fit (Holmes-Smith, 2000). We included all 32 items, the five latent constructs, and a sixth construct that was linked to all 32 items. The results are shown in Table 2; see Appendix I.

The best model fit was the five-factor proposed model (χ^2 (459)=1832,66, CFI=.70, RMSEA=.09). This strongly suggests that the measures of the predictors were independent of the dependent variable, and it is likely that common method bias had a very limited effect.

H1 and H2 were tested by conducting a hierarchical regression analysis. First, the control variables were added in step 1. For H1, interaction with pupils was added in step 2a. For H2, HR practices were added in step 2b. This was tested for each outcome variable (vigour, dedication, and absorption). In order to test H3, the interaction of HR practices in the relationship between the interaction with pupils and work

engagement, the interaction effect was calculated using Aiken and West's (1991) method. The interaction effect between the interaction with pupils and HR practices was added in step 3.

3.4.1 Results

Table 3 presents means, standard deviations, and correlations for the variables investigated in this study. The interaction with pupils has the highest mean (M = 4.49, SD = .47); the mean of HR practices is 3.06 (SD = .79). All aspects of work engagement are positively related to each other. The interaction with pupils is positively related to the three aspects of work engagement: vigour (r =.40, p <.01), dedication (r =.41, p <.01), and absorption (r =.30, p <.01), and to HR practices (r =.30, p <.01). HR practices are also positively related to the aspects of work engagement: vigour (r =.29, p <.01), dedication (r =.39, p <.01), and absorption (r =.16, p <.01). Because of the close relationships between age, working in education (this school), and working in education (general) (r >.60, p <.01), we only used gender, age, and type of education as control variables in our further analysis.

To test the first hypothesis, we analysed the relationships between the interaction with pupils and vigour, dedication, and absorption. The results of the regression analysis are shown in Table 4. After the controls were added in step 1, the variable interaction with pupils was added in step 2a. Hypothesis 1 was confirmed for vigour (β =.38, p <.01), dedication (β =.41, p <.01), and absorption (β =.32, p <.01). This means that there is a positive relationship between the interaction with pupils and work engagement.

The results of the regression analysis of the second hypothesis, the positive relationship between HR practices and work engagement, are shown in Table 4. HR practices was added in step 2b. Hypothesis 2 was confirmed for vigour (β =.28, p <.01) and dedication (β =.38, p <.01),

but not for absorption (β =.11, ns).

Regarding the third hypothesis, the interaction of HR practices in the relationship between the interaction with pupils and work engagement, the results of the regression analysis are shown in Table 4, step 3. There is no significant interaction effect on vigour (β =-.02, ns) and absorption (β =.07, ns). The relationship with dedication (β =-.13, p <.05) is significant. The interaction effect of the interaction with pupils and HR practices on dedication is shown in Figure 1. The relationship between the interaction with pupils and dedication is weaker when HR practices are perceived as motivating. Hence, Hypothesis 3 was not confirmed for vigour and absorption, and it was rejected for dedication.

Table 3. Means, Standard Deviations, and Pearson Correlations

	M	SD	1	2	3	4	5	6	7	8	9
1. Gender	1.51	.50									
2. Age	2.78	1.23	-.28**								
3. Working in education (this school)	2.58	1.60	-.13*	.60**							
4. Working in education (general)	3.16	1.66	-.22**	.73**	.78**						
5. Type of education	2.09	.82	-.02	.09	.15*	.07					
6. Vigour	3.87	.50	-.10	.00	-.05	-.06	.08				
7. Dedication	4.02	.57	.01	-.14*	-.20**	-.22**	.11	.62**			
8. Absorption	3.61	.60	.05	.03	-.01	.02	.00	.44**	.40**		
9. The interaction with pupils	4.49	.47	-.00	-.06	-.11	-.07	.09	.40**	.41**	.30**	
10.HR practices	3.06	.79	-.02	-.07	-.09	-.10	-.10	.29**	.39**	.16**	.30**

**= p<.01; *=p<.05

Table 4. Results of the analyses of the relationship between the interaction with pupils, HR practices, and work engagement.

Variables	Work engagement											
	Vigour				Dedication				Absorption			
Model	*1*	*2a*	*2b*	*3*	*1*	*2a*	*2b*	*3*	*1*	*2a*	*2b*	*3*
Gender	-.07	-.08	-.05	-.06	-.01	-.02	.02	-.01	.03	.02	.07	.04
Age	.02	.04	.03	.05	-.14†	-.11†	-.10	-.07	.12†	.14*	.16*	.15*
Type of education	.07	.03	.10	.06	.12†	.09	.14*	.12†	-.02	-.05	-.01	-.08
Interaction with pupils (IP)		.38**		.33**		.41**		.30**		.32**		.35**
HR practices (HR)			.28**	.18*			.38**	.30**			.11	.00
IP x HR				-.02				-.13*				.07
R^2	.01	.16	.09	.19	.02	.20	.17	.29	.02	.11	.03	.13
Change in R^2		.15	.08	.01		.18	.15	.02		.09	.01	.01

†=p<.10; * = p<.05; **=p<.01

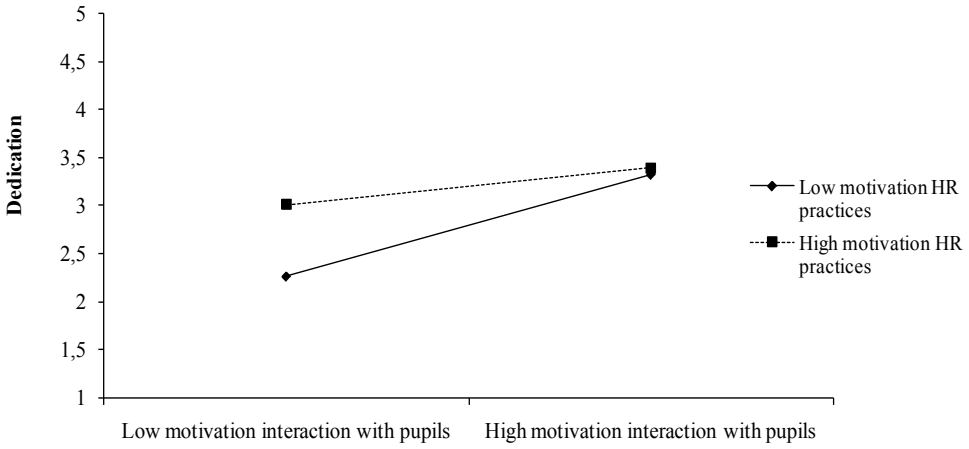

Figure 1. The two-way interaction of the interaction with pupils and HR practices on dedication

3.5 Conclusion and Discussion

The goal of the studies was to examine the relationship between the interaction with pupils, HR practices, and work engagement of teachers. Work engagement is important because it is a positive employee reaction in which employees show proactive behaviour, are dedicated to their work, and are able to bring their full capacity to bear in their work to solve problems. Work engagement is especially important for teachers because the more teachers are engaged in their work, the better their pupils perform, and the less willing teachers are to quit their jobs. To answer our research question '*To what extent are the interaction with pupils and HR practices related to work engagement?',* two studies with a total sample of 13 schools were conducted. The qualitative study was aimed at gaining a deeper insight into the use of HR practices in Dutch schools for secondary education and how they are perceived, while the quantitative study was aimed at testing the relationships that were hypothesized in this research.

The results of *Study 1* show that the HR practices used in Dutch

schools are an introduction program, a personal development plan, performance appraisal, rewards, and training and employee development. Furthermore, most leaders perceive HR practices as positive, while most teachers perceive HR practices as neutral or negative. Reasons for the positive or negative perceptions of HR practices were also reported: Communication, embedding of HR practices in the school system, organizational culture, opposite interests, and the impact of the leader on HR practices. The reasons mentioned show similarities with the research findings of Runhaar and Sanders (2007). They identified in their study factors that had a positive or negative influence on the implementation of HRM in schools. The similarities are 'making the connection with the educational process explicit (embedding in the school system)', 'communication', 'organizational culture', 'incompetent leaders', and 'lack of resources'.

The results of *Study 2* show that the interaction with pupils is positively related to work engagement and can, therefore, be viewed as a job resource. Former research has already shown that its counterpart, pupil misbehaviour, could be regarded as an important job demand for teachers (Hakanen et al., 2006). We complement this research with the finding that the more the interaction with pupils is perceived as motivating, the more engaged teachers are. HR practices can be viewed as a job resource as well, albeit that HR practices are only related to vigour and dedication, and do not have an impact on absorption. This means that the more teachers perceive the HR practices within the school as motivating, the more energetic they feel (vigour) and the more dedicated they are to their work. We found no support for the moderation effect of HR practices on the relationship between the interaction with pupils, on the one hand, and vigour and absorption, on the other hand. However, we found that HR practices moderated the relationship between the interaction with pupils and dedication: instead of strengthening it as we expected, HR practices

weakened this relationship.

Some possible explanations can be given for the fact that we did not find support for the interaction of HR practices in the relationship between the interaction with pupils and vigour and absorption. *First*, concerning vigour, a possible explanation might be that when the interaction with pupils is good, teachers do not need motivational support from HR practices in order to feel more energetic in their work. *Second*, concerning absorption, teachers can have negative feelings towards absorption, in that they associate it with excessive workload and work stress, and with not being able to distance themselves from their work. Therefore they might not see it as a contribution to their work engagement.

HR practices weakened the relationship between the interaction with pupils and dedication. This might be explained by negative feelings teachers may have toward HR practices. As the findings of Study 1 show, HR practices can be perceived as negative, for example, when the span of control of the managers is so large that they cannot execute the HR practices properly, or when the HR practices are not aligned to the educational practices and policies of the school. These negative experiences may have influenced the scores on the HR items.

Limitations and suggestions for further research. We measured the perceptions of the interaction with pupils and HR practices, and asked the respondents how motivating these were for them. Perception and motivation can influence each other; for example, how respondents perceive themselves in their interaction with pupils and the way they use HR practices will impact their motivation for these. In further research perceptions and motivation may be separated by examining the perceptions of the positive pupil interaction and the extent to which respondents use HR practices. In this study, we regarded the interaction with pupils as a job resource and did not include other already identified job resources or job

demands. We did not pay attention to the job demands that may influence the relationship between the interaction with pupils and work engagement. Further research on the interaction with pupils as a job resource could focus on job demands like quantitative overload, mental and emotional demands, and role stress, which are the main job demands in the teaching occupations (Salanova et al., 2003; Llorens et al., 2005; Salanova et al., 2005) that can influence this relationship. In addition, researchers have explored personal resources, such as optimism, self-efficacy, and hope (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007; Lorente Prieto et al., 2008), that are related to work engagement. Xanthopoulou et al. (2007) indicated that personal resources explain varianc e in exhaustion and work engagement, together with job demands and job resources. Further research could also incorporate personal resources to explain the relationship between HR practices and work engagement.

We aimed also to explain the HR practices as a moderator in the relationship between the interaction with pupils and work engagement. HR practices can contribute positively to employee well-being (mutual gains perspective, e.g., Appelbaum et al., 2000; Guest, 1997); or they may make no contribution or contribute negatively to employee well-being (conflicting outcomes perspective, e.g., Legge, 1995). The relation between HR practices and different outcome views could be investigated in further research. Research findings (e.g., van Veldhoven, 2005; Wright, Gardner, Moynihan, & Allen, 2005; Guest, Michie, Conway, & Sheenan, 2003) have indicated a causal relationship between HR practices and past and subsequent future performance. In this study we asked teachers about the relationship between the interaction with pupils, HR practices, and work engagement in their present situation. Further research could be done using other research designs, for example, a longitudinal study.

Finally, the findings of this study show that the relationship between interaction with pupils and dedication is weaker if employees perceive the

HR practices as motivating. This raises the question whether HR practices are beneficial for everyone, or only for those employees who are less intrinsically motivated in their work. Should HR practices simply be there to be used less by employees who are intrinsically motivated and more by employees who are less intrinsically motivated? Further research could be done to investigate these relationships.

Practical implications. Evidence was found in this study for the impact of the interaction with pupils and HR practices on work engagement. In practice, teachers discuss the workload and work stress with their leader and make arrangements for dealing with it. Because of the importance of the interaction with pupils for teachers' work engagement, a practical implication may be to have a dialogue with teachers about what engages them in their work, and a dialogue about how to deal with workload and work stress. In this dialogue, a possible question is how the interaction between teachers and pupils can be improved, for example, as part of their professional development. The findings of this study show the importance of good interaction with pupils: when this is good, teachers are intrinsically motivated and engaged in their work.

The present findings also show the importance of HR practices for the work engagement of teachers. Executives and HR policymakers should be aware of the impact of HR practices on teachers' engagement at work, especially for those employees who are less intrinsically motivated. The findings of Runhaar (2008) on the implementation of HR practices show a gap between HR policy and practices as perceived by HR policymakers and executives. A possible explanation for this is the 'separate zones' in which teachers and managers operate, like in professional bureaucracies (Mintzberg, 1983). Teachers resist HR practices because they cannot see their potential contribution to their work and professional development. Making clear the possible benefits to teachers of good HR practices, a

positive contribution to their work and work engagement, might decrease the perceived differences between HR practices in policy and practice.

In sum, the findings of our study contribute to the theoretical knowledge of work engagement and its antecedents in showing that the interaction with pupils and HR practices are a job resource for work engagement.

Appendix I. Table 2. Model comparisons

	χ^2	Df	RMSEA	CFI	Comparison	$\Delta\chi^2$	Δdf
5 factor model							
M1 5 factor proposed	1832.66	459	.09	.70			
M2 4 factor (VI, DE, AB, HR+IP)	2224.53	460	.11	.61	M1-M2	391.87	1
M3 4 factor (HR, DE, AB, VI+IP)	2050.65	460	.10	.65	M1-M3	217.99	1
M4 4 factor (HR, AB, VI, DE+IP)	2088.47	460	.10	.65	M1-M4	255.81	1
M5 4 factor (HR, VI, DE, AB+IP)	2044.04	460	.10	.66	M1-M5	211.38	1
M6 3 factor (HR, VI, IP+DE+AB)	2072.72	461	.10	.65	M1-M6	240.06	2
M7 3 factor (HR, DE, VI+IP+AB)	2035.75	461	.10	.66	M1-M7	203.09	2
M8 3 factor (VI, DE, HR+IP+AB)	2238.40	461	.11	.61	M1-M8	405.74	2
M9 2 factor (HR, VI+IP+DE+AB)	2148.66	463	.10	.63	M1-M9	316.00	4
M10 2 factor VI, HR+IP+DE+AB)	2915.23	463	.13	.47	M1-M10	1082.57***	4
M11 1 factor	3081.06	464	.13	.43	M1-M11	1248.40***	5

***p<.001; **p<.01

Appendix II. Scale construction

The interaction with pupils

1. How motivating is it to feel connected with your pupils?
2. How motivating is teaching for you?
3. How motivating is coaching pupils for you?
4. How motivating is the contact with pupils for you?
5. How motivating are the learning performances of your pupils?
6. How motivating is the learning progression of your pupils for you?

HR practices

1. How motivating is salary for you?
2. How motivating is the HRM policy in general?*
3. How motivating are the opportunities for professional development for you?
4. How motivating is the growth potential of your job (vertical or horizontal) for you?
5. Does it motivate you to make a personal development plan?
6. How motivating is it to discuss your personal development plan with your leader?
7. How motivating is an introduction program for you?
8. How motivating is it to have a conversation about your performance?
9. How motivating is it to have a performance appraisal?
10. How motivating is it to be able to go to a training course or receive education?

* This item was removed from the scale.

CHAPTER 4

Considering the work engagement – OCB relationship: The role of autonomy and LMX[8]

[8] This chapter is a modified version of the article submitted as: Konermann, J., Sanders, K., & Runhaar, P., Considering the work engagement – OCB relationship: The role of autonomy and LMX. This chapter was presented at the WAOP conference in 2010 and the pre-HRM network conference in 2010, Amsterdam, The Netherlands.

Abstract

In this research, the relationship between work engagement and organizational citizenship behaviours (OCBs) was examined for OCBI, which is mainly targeted at benefits for the individual, and for OCBO, which is mainly targeted at benefits for the organization in general. To get a deeper insight into the relationships between work engagement and OCBs, we examined the influence of autonomy and leader-member exchange (LMX). Using data from six schools for secondary education in the Netherlands (n=211), the results showed that work engagement was positively related to OCBI and OCBO. This relationship was stronger for OCBO than for OCBI. Autonomy acted as a moderator in the relationship between work engagement and OCBI. LMX acted as moderator in the relationship between work engagement and OCBO. As expected, autonomy and LMX weakened these relationships.

4.1 Introduction

Research findings in public and private organizations have shown the importance of organizational citizenship behaviours (OCBs) for the effectiveness and efficiency of work teams and organizations (e.g., Organ, 1997; Podsakoff, Whiting, Podsakoff, & Blume, 2009; Felfe & Heinitz, 2009). Employees who show OCBs are less often absent, have fewer turnover intentions, are more productive, are more efficient, and are able to increase customer satisfaction (Podsakoff et al., 2009). Organ (1988, 1997) defined OCB as individual behaviour that is beneficial to the organization, is discretionary, is not directly or explicitly recognized by the formal reward system, and supports the social and psychological environment in which tasks are performed. In this study, we used the classification of OCBs that is based on the target or direction of the behaviour – the fact that (or the person who) benefits from OCBs: the individual or the organization (Williams & Anderson, 1991). With *OCBI*, an individual employee benefits directly and the organization indirectly from these behaviours; for example, an employee helps others who have been absent, or helps colleagues who have a high workload. *OCBO* leads to benefits for the organization in general, for example, when an employee volunteers to do extra tasks that support the organization (Williams & Anderson, 1991). This categorization covers most other OCB-related constructs (Podsakoff et al., 2009).

In this study we examined the relationship between work engagement and OCBs, because engaged employees not only perform better, but they also seem to show behaviour that is beneficial for the organization (Bakker, Schaufeli, Leiter, & Taris, 2008). Work engagement is defined as the positive, fulfilling work-related state of mind in its own right that is characterized by vigour, dedication, and absorption (Bakker & Schaufeli, 2008). Work engagement and OCBs are viewed as different concepts, but are related to each other (Schaufeli & Bakker, 2010). The difference between work engagement and OCBs is that work engagement

is an *affective-cognitive state,* which involves the use of cognitions, emotions, and behaviours (Schaufeli, Salanova, González-Romá, Bakker, 2002), and is regarded as a motivational aspect of the work situation (Hakanen, Bakker, & Schaufeli, 2006; Parker, Wall, & Cordery, 2001; Leiter & Bakker, 2010). Engaged employees bring their personal energy to their work, are enthusiastic and dedicated, are committed to the goals of the organization, are intensely involved in their work, and have a positive attitude which leads to appreciation and success (Leiter & Bakker, 2010; Bakker, Albrecht, Leiter, 2011). Work engagement is not directed to any individual, behaviour, object, or event (Schaufeli & Bakker, 2004), in contrast to OCBs, which are described as *behaviours* and are directed towards an individual or the organization (Williams & Anderson, 1991). Engaged employees do not hold back; they take initiative and are proactive (e.g., Sonnentag, 2003).

The purpose of this research was to examine what influences the relationship between work engagement and OCBs. We expected that task characteristics and leadership behaviours that are consistently related to OCBs (Podsakoff et al., 2000) could moderate the relationship between work engagement and OCBs. Autonomy, as a part of *task characteristics*, may influence the relationship between work engagement and OCBs: research has shown that autonomy influences employee attitudes and perceptions such as well-being and productivity, which are known to be related to OCBs (Parker et al., 2001). Autonomy is defined as self-determination, discretion, and freedom with respect to work goals, priorities, and task elements (De Jonge, 1995). It concerns the extent to which employees have power in organizing their job activities. As previous research has shown, autonomy functions as a moderator in the relationship between personality and behaviour (Barrick & Mount, 1993), and between satisfaction and behaviour (Peng, Hwang, & Wong, 2010). We expected that the decision of engaged employees to show OCBs would partly

depend on the level of perceived autonomy.
As for *leadership behaviours*, we considered the role of leader-member exchange (LMX), which may influence the relationship between work engagement and OCBs. LMX theory is based on the assumption that leaders use a different style for each of their subordinates, and is predictive of performance-related and attitudinal job outcomes (Gerstner & Day, 1997; Graen & Uhl-Bien, 1995). Exchange relationships can have a high-quality exchange, in which relationships are characterized by mutual trust, mutual influence, and respect. Low-quality exchange is characterized by formal, role-defined interactions and institutionalized exchanges where there is distance between the parties (Janssen & Van Yperen, 2004; Illies, Nahrgang, & Morgeson, 2007). As previous findings have shown, LMX acts as a moderator in the relationship between personality and behaviour (e.g., Kamdar & Van Dyne, 2007). In line with this, we expected that engaged employees' decisions about whether to show OCBs would to a certain extent be dependent on LMX.

Our findings contribute in two ways to research in the area of work engagement and OCBs. *First*, Podsakoff et al. (2000) mention the need to include a more complete set of variables to investigate the role of task variables (autonomy) and leader behaviours (LMX) in the work engagement - OCBs relationship: this may show that there are multiple mechanisms through which the relationship between work engagement and OCBs can be influenced. Moreover, it may be possible that the underlying relationships between the mentioned variables influence OCBI and OCBO in another way. *Second*, the context of our research was the educational sector, a sector that is often ignored in organizational research, while schools are an excellent research subject regarding human and social capital because of their controlled settings: a relatively homogeneous set of organizational activities, limited opportunities for deviation in

work organization, and a quite consistent organizational structure (Pil & Leana, 2009). The work engagement – OCBs relationship for teachers is important to understand, because teachers must be willing to engage in extra-role behaviours for the successful functioning of schools (Christ, Van Dick, Wagner, & Stellmacher, 2003). As Somech and Ron (2007, p.39) described, 'the success of schools fundamentally depends on teachers' willingness to go above and beyond the call of duty to attain their school's objectives and goals. But today more than ever, schools encounter forces restricting their ability to motivate teachers externally to engage in such extra-role behaviours'. Using data from 211 teachers in six schools for secondary education in the Netherlands, we answered the following question: *'To what extent do autonomy and LMX moderate the relationship between work engagement and OCBs?'*

4.2 Theoretical framework and hypotheses

Work engagement and OCBs

OCBs are a form of extra-role performance, which means behaviour that goes beyond the formal contract between employee and employer (Williams & Anderson, 1991). OCBs have two important features. *First*, the behaviour is voluntary; that is, it is not part of a formal job description or role-prescribed (Organ, 1988). *Second,* the organization benefits from this type of behaviour (Van Dyne, Cummings, & McLean Parks, 1995). Engaged employees are likely to show OCBs, because they are creative and innovative, and bring their personal energy to their work (Schaufeli & Bakker, 2010). Engaged employees 'bring something different to the job and do not just do something more' (Schaufeli & Bakker, 2010, p.14). Building further on this, it seems that engaged employees make up their own minds about the extent to which they wish to do something more.

The underlying mechanism for the relationship between work engagement and OCBs can be explained using *social exchange theory*

(SET), according to which reciprocal interactions between an employee and employer exist. (Cropanzano & Mitchell, 2005). An organization considers engaged employees to be very beneficial, because of the connections they make with co-workers, and their ability to bring their full capacity to bear in their work (Leiter & Bakker, 2010); thus, it may reward engaged employees accordingly. On the other hand, when engaged employees perceive that they receive benefits such as trust and feel that they are valued, they – in exchange – repay through their level of OCB (Saks, 2006). They choose to bring more of themselves into the work situation and show positive work behaviour that is directed towards their co-workers, or the organization, i.e., OCB. As a result of this, employees become even more engaged (Saks, 2006). Previous research findings support the reciprocity of this mechanism (Wat & Shaffer, 2003; Cabrey, 2005), and the relationship between work engagement and OCB (e.g., Babcock-Roberson & Strickland, 2010). We therefore assume that there is a relationship between work engagement and OCBs.

Autonomy and LMX as moderators in the relationship between work engagement and OCBs

To explain the respective effects of autonomy and LMX in the relationship between work engagement and OCBs, we used the trait activation theory of Tett and Burnett (2003). Although work engagement is not a trait, personal resources as antecedents of work engagement can be viewed as traits (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007) through which we expect that this mechanism can be applied to work engagement. From this perspective, we take a closer look at trait activation theory. The theory finds its origin in the belief that both personal and contextual characteristics influence behaviour (e.g., Lewin, 1951, Schneider, 1983). According to trait activation theory, a person's trait level is expressed in trait-relevant work behaviour. Employees' responses depend on the

characteristics of the work situation. Task, social, or organizational sources of trait-relevant cues moderate the relationship between the personality trait (in this case work engagement) and work behaviour (in this case OCBs) in the sense that powerful reward contingencies in specific contexts can clear the effects of personality (Tett & Burnett, 2003). Mischel (1977) already described that the degree to which behaviour is explained by personality depends on the strength of the situation. The strength of the situation can be described as strong or weak: *Strong* situations are present when employees perceive events in the same way and where expectations about appropriate behaviour are consistent and clear; *Weak* situations are present when employees do not perceive events in the same way and expectations about appropriate behaviour are inconsistent (Mischel, 1976). Employees' behaviour will, therefore, be uniform in strong situations, and ambiguous in weak situations, because 'people will expect that virtually any response is likely to be equally appropriate' (Schneider, Salvaggio, & Subirats, 2002, p. 221). For example, extraversion only predicted behaviour when the situation was weak. When the situation was strong, there was no difference in behaviour between extravert and introvert people (Mischel, 1977).

Building on this theory, we now look at the interaction between work engagement and contextual characteristics in the form of the effect of autonomy and LMX on OCBs. We expect that *autonomy* influences the relationship between work engagement and OCBI, because autonomy is individually targeted. When employees perceive autonomy in the work situation, it is more likely that they will show behaviour that is directly beneficial to colleagues (OCBI), and will not show behaviour that is directly beneficial to the organization (OCBO): Employees perceive autonomy as being more closely related to their individual job, and they associate autonomy less with the organization. As for *LMX*, employees may perceive LMX in the work situation as organizationally targeted

because a leader represents the organization. Therefore, they are more likely to show OCBO, and their behaviour is less likely to be individually targeted (OCBI). Research findings have shown that employees' responses depend on the properties of the work situation, such as the interaction effect of conscientiousness and LMX on helping behaviour (Kamdar & Van Dyne, 2007). This implies that in a strong situation where autonomy or LMX is perceived as high, employees show OCBI or OCBO, respectively, because they know what the appropriate behaviour is that is expected of them. Previous research findings support the view that the relationship between personality variables and behaviour is strongest in weak (psychological) contexts (e.g., Mischel, 1977; Barrick & Mount, 1993; Lee, Ashford, & Bobko, 1990). For example, for *autonomy*, Mischel (1977) found that jobs that are characterized by high autonomy create fewer constraints on employee behaviour, and that jobs that are characterized by low autonomy allow employees' personality to drive behaviour. As for *LMX*, Hochwater, Witt, Treadway, and Ferris (2005) found that when employees reported a low degree of perceived organizational support, individual differences in social skills predicted work behaviour. Hence, our hypotheses were as follows:

Hypothesis 1 (H1): Autonomy weakens the relationship between work engagement and OCBI

Hypothesis 2 (H2): LMX weakens the relationship between work engagement and OCBO

4.3 Method

Respondents. We sampled 211 teachers from six schools for secondary education in the Netherlands.[9] 47 percent of the sample was male. Ages

[9] We asked 30-50 teachers per school to cooperate in the research. From one school, one department cooperated (response rate 100%). The response rate from the other five schools varied between 17% and 47%.

ranged from under 30 years (21 percent), 31-40 years (21 percent), 41-50 years (20 percent), 51-60 years (33 percent), to 61 years and older (5%). The respondents' teaching experience varied from less than five years (23 percent), 6-10 years (24 percent), 11-15 years (9 percent), 16-20 years (6 percent), to more than 20 years (38 percent). 34 percent of the respondents worked mainly in 'pre-vocational secondary education', 32 percent mainly in 'senior general secondary education', and 34 percent mainly in 'pre-university education'.

Procedure. Teachers received an e-mail in which the aims of the research were explained, and they were asked to fill out a questionnaire. The e-mail contained a link to the on-line questionnaire. In the introduction to the on-line questionnaire the aims of this research were mentioned again, supplementary information was given about the subjects included in the questionnaire, and respondents were assured that their answers would be treated with the utmost confidentiality. Respondents had two weeks to fill out the questionnaire.

Instruments. We used five scales: OCBI, OCBO, work engagement, autonomy, and LMX. Respondents indicated their responses to the questionnaire on a 5-point Likert-type scale with anchors (1) 'do not agree at all' to (5) 'totally agree'.

OCBs. We measured OCBs using an abbreviated 11-item scale based on the OCB scale of Williams and Anderson (1991). Five items were used to measure OCBI. An example is: 'I help colleagues who have heavy work loads'. The reliability of this scale was sufficient (Cronbach's α =.76). Six items were used to measure OCBO. An example is: 'I voluntarily perform tasks that are in the interest of the organization'. To improve the reliability, one item was removed from the scale ('I make sure that I am early at my work, so I am able to start to teach when the classes begin'). The reliability was sufficient (Cronbach's α = .71).

Work engagement. Work engagement was measured using the

short version of the Utrecht Work Engagement Scale (UWES) (Schaufeli & Bakker, 2003), containing three vigour items, like "In my work, I feel I have plenty of energy"; three dedication items, such as "My work is challenging"; and three absorption items, like "Time flies when I am working". We measured work engagement as one variable, similar to what was done in previous research on work engagement (e.g., Schaufeli et al., 2006; Bakker & Bal, 2010). The reliability for work engagement was good (Cronbach's $\alpha = .82$).

Autonomy. Autonomy was measured using a six-item scale, based on the NOVA-WEBA questionnaire (Houtman, Bloemhoff, Dhondt, & Terwee, 1994). A sample item from this scale is: 'I can decide myself when I perform a task'. Cronbach's α was .81.

LMX. LMX was measured using the Janssen and Van Yperen (2004) scale, which consists of seven items. An example is: 'My supervisor sees my talent'. The reliability was high (Cronbach's $\alpha = .94$).

Control variables. Age was used as a control variable, because previous research has shown that age as a demographic characteristic has an impact on employees' attitudes toward an organization (Tsui, Egan, & O'Reilly, 1992). More specifically, research findings have shown that OCBs vary in direction for older and younger employees (Chattopadhyay, 1999). We also controlled for working in education (this school), and working in education in general.

Data analysis. We first conducted an ANOVA test for OCBI ($F(5,183)=3.03$, $p < .05$), OCBO ($F(5,179)=4.03$, $p < .01$), work engagement ($F(5,185)=1.78$, *ns*), autonomy ($F(5,181)=1.86$, *ns*), and LMX ($F(5,177)=4.55$, $p < .001$), to make sure that the differences between schools would not influence the results. We then calculated the intraclass correlations (ICCs, see Bliese, 2000), to examine whether the amount of variance was related to the school level.

Table 1. Intraclass Correlation Coefficients

	F-test (df)	ICC(1)	ICC(2)
OCBI	3.033 (5,183) *	.05	.67
OCBO	4.026 (5, 179) **	.08	.75
Work engagement	1.775 (5,185)	.02	.44
Autonomy	1.860 (5,181)	.02	.46
LMX	4.549 (5,177)***	.09	.78

* p <.05; ** p <.01; *** p <.001

The results presented in Table 1 show that ICC(1) values range from .02 to .09, implying that 2-9 percent of the variance in individual scores depends on the school. An ICC(1) of .01 is considered a small effect, a value of .10 is considered a medium effect, and a value of .25 or more is considered a large effect (LeBreton & Senter, 2008). The results showed that the ICC(1) values are considered to have a small to medium effect. The ICC(2) is used to estimate the reliability of the group means. ICC(2) values below .50 are considered poor, ICC(2) values between .50 and .70 are considered marginal, and ICC(2) values above .70 are acceptable (Klein et al., 2000). The results show that the ICC(2) values are acceptable for LMX (ICC(2)= .78) and OCBO (ICC(2)= .75), and are marginal for OCBI (ICC(2)=.67). The focus of our research was on examining the individual perceptions of the respondents. Because the variance between schools was small to medium and could have an impact on the results, we used multilevel modelling. Multilevel modelling is described as a statistical method that is appropriate to use in data analysis when data sets comprise several levels of analysis, for example, individual or school. It enables both individual-level and contextual effects to be measured in the same analysis (Bickel, 2007). Since the school level consisted of six schools, a relatively small number for multilevel analysis (Maas & Hox, 2005), we also used

hierarchical regression analysis to analyze the results; this showed no differences from the multilevel analysis.

We used Harman's one-factor test (Podsakoff & Organ, 1986; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) to examine the potential influence of common- method variance: All variables in this study were based on self-reports and collected at a single point in time. Analysis of unrotated principal axis factoring generally resulted in five expected factors that explained 53 percent of the total variance. The first factor, LMX, explained 15 percent of all the variance.

To test whether work engagement, OCBI, and OCBO were different constructs, we examined the variables using a confirmative factor analysis, using structural equation modelling (SEM) with Amos Graphics. As fit indices we used the χ^2, χ^2/df, the root mean square error of approximation (RMSEA), and the comparative fit index (CFI). χ^2 is used to measure the discrepancy between the sample and fitted covariance matrices. In this the null hypothesis (H0) states that the fitted covariances are valid. A non-significant χ^2 value indicates a good fit (Byrne, 2010; De Vos, 2002). The χ^2/df ratio should have a value smaller or equal to around 2-5 (De Vos, 2002). For RMSEA, values at or under .08 were taken to reflect a reasonable fit and values under .05 were considered to be an excellent fit (Holmes-Smith, 2000). The CFI varies along a continuum of 0–1 in which values at or greater than .90 are considered to be a satisfactory fit and values at .95 or over reflect an excellent fit (Holmes-Smith, 2000). The results in Table 2 (see appendix) show that the three-factor proposed model (M1) has the best fit ($\chi^2(149)= 316.808$, df/χ^2=2.13, RMSEA= .07, CFI=.85), although the CFI is lower than .90; the two-factor models M2: WE, OCBI+OCBO ($\chi^2(150)= 316.821$, df/χ^2=2.11, RMSEA= .07, CFI=.84), and M3: OCBI, WE+OCBO ($\chi^2(150)= 316.821$, df/χ^2=2.11, RMSEA= .07, CFI=.84) were not significantly different from M1. Empirical research has shown that OCBI and OCBO are two different

factors (e.g., Williams & Anderson, 1991; Somech & Drach-Zahavy, 2004) and give different outcomes with engagement as independent variable (Saks, 2006); we therefore decided to use the three-factor model in our further analysis.

The results for all the hypotheses are presented in Table 4. All hypotheses were tested in subsequent steps, starting with an empty model (Model 0) that served as a baseline to investigate changes in the fit of the model when additional variables were included. In Model 1, the control variable age was added. In Model 2, work engagement was added. The interaction effects were tested using the Aiken and West method (1991). To test H1, the interaction of autonomy in the relationship between work engagement and OCBI was added and presented in Model 3 with OCBI as outcome variable. Finally, the results of our second hypothesis, the interaction of LMX in the relationships between work engagement and OCBO, were added to Model 3 with OCBO as outcome variable. The model fit was estimated using the 2 restricted log likelihood.

4.3 Results

Descriptive statistics. Table 3 presents the means, standard deviations, and correlations of the variables in this study. Work engagement has the highest mean (M = 3.76, SD = .49), and autonomy has the lowest mean (M = 3.29, SD = .65). There are positive significant relationships between age, working in education (this school), and working in education (general). OCBI is positively related to OCBO (r =.59, p <.01), work engagement (r =.21, p <.01), autonomy (r =.25, p <.01), and LMX (r =.27, p <.01). OCBO is positively related to work engagement (r =.35, p <.01), autonomy (r =.22, p <.01), and LMX (r =.17, p <.05). Work engagement is positively related to autonomy (r =.22, p <.01) and LMX (r =.18, p <.05). Finally, autonomy and LMX are positively related (r =.16, p <.05). Because

the correlations between age and working in education (this school and general) were larger than .66 , we only used age as a control variable in our further analysis.

Results of the tested hypotheses. The results are presented in Table 4. As expected, positive relationships between work engagement and OCBI (β =.230, p <.001) and between work engagement and OCBO (β =.396, p <.001) were found. The results for H1 are presented in Model 3 with OCBI as outcome variable. Autonomy weakens the relationship between work engagement and OCBI (β =-.199, p <.05). The interaction is illustrated in Figure 1; it shows that when autonomy is low, the relationship between work engagement and OCBI is stronger. This means H1 was confirmed.

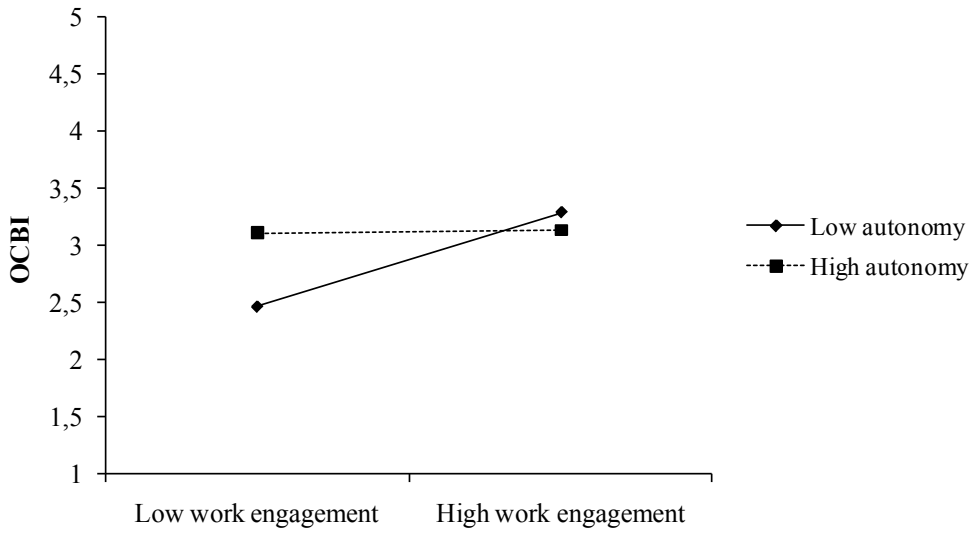

Figure 1. The two-way interaction of work engagement and autonomy on OCBI

Table 3. Means, Standard Deviations, and Pearson Correlations

	M	SD	1	2	3	4	5	6	7
1. Age	2.80	1.23							
2. Working in education (this school)	2.53	1.58	.66**						
3. Working in education (general)	3.11	1.66	.79**	.76**					
4. OCBI	3.53	.56	.14*	.06	.04				
5. OCBO	3.57	.60	.14	.08	.08	.59**	.		
6. Work engagement	3.76	.49	.01	-.05	.09	.21**	.35**		
7. Autonomy	3.29	.65	-.04	.07	-.10	.25**	.22**	.22**	
8. LMX	3.62	.82	.04	.07	.04	.27**	.17*	.18*	.16*

* $p < .05$; ** $p < .01$

Table 4. Multilevel analysis for the influence of autonomy and LMX in the relationship between work engagement and OCBs

	OCBI				OCBO			
	Model 0	*Model 1*	*Model 2*	*Model 3*	*Model 0*	*Model 1*	*Model 2*	*Model 3*
Age		.078*	.081*	.073*		.070†	.072†	.062†
Work engagement (WE)			.230***	.210*			.396***	.310**
Autonomy (AUT)				.123†				.133†
LMX				.082				.072
WE x AUT				-.199*				
WE x LMX								-.195*
Intercept	3.524***	3.305***	2.174***	1.817***	3.542***	3.344***	1.856***	1.498***

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

The results of Hypothesis 2, which stated that LMX weakens the relationships between work engagement and OCBO, are shown in Model 3 with OCBO as outcome variable. The results show a significant interaction for OCBO (β = -.195, p <.05). The interaction is illustrated in Figure 2; it shows that when LMX is high, the relationship between work engagement and OCBO is weaker. Thus, H2 was confirmed.

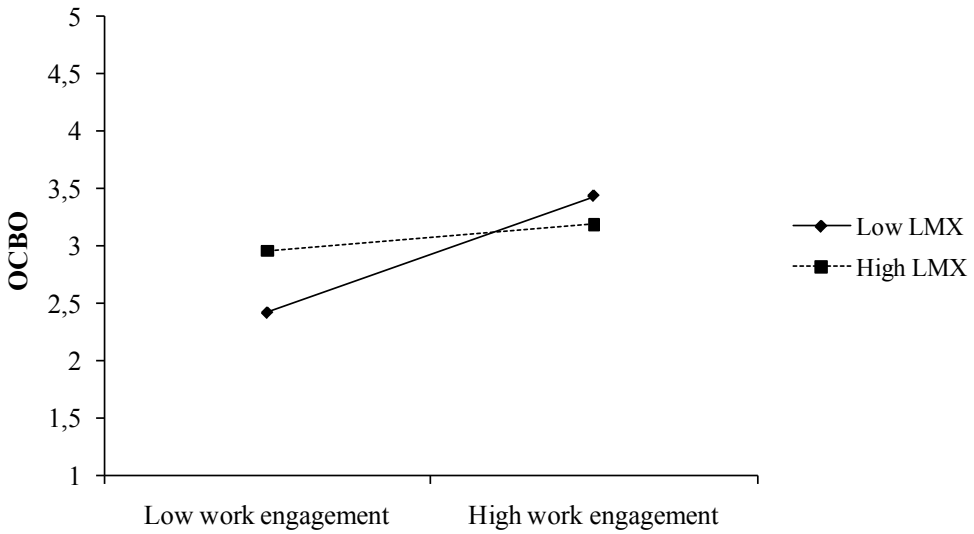

Figure 2. The two-way interaction of work engagement and LMX on OCBO

4.5 Conclusion and Discussion

The aim of this study was to examine the influence of autonomy and LMX in the relationship between work engagement and OCBs. Engaged employees are important for an organization because of their intense involvement and their drive to contribute to the organization's goals and performance (Schaufeli & Bakker, 2010). OCBs are important for an organization because they affect the effectiveness and efficiency of work teams and organizations (Podsakoff et al., 2009). Characteristics of the work situation, in this study autonomy and LMX, can influence whether

engaged employees are willing to invest in extra-role behaviours like OCBs. To answer our research question '*To what extent do autonomy and LMX moderate the relationship between work engagement and OCB?'* we used data from 211 teachers in six schools for secondary education. We examined OCBs in two different forms, OCBI and OCBO, because these two cover most OCB-related constructs (Podsakoff et al., 2009).

The results of this study show that work engagement is directly and positively related to both OCBI and OCBO. Autonomy and LMX were examined as moderators in the relationship between work engagement and OCBs. Both hypotheses were confirmed. Autonomy weakened the relationship between work engagement and OCBI, and LMX weakened the relationship between work engagement and OCBO. In a weak situation where autonomy or LMX is perceived as low, it depends on the employees' engagement level whether OCBI or OCBO is showed: The greater employees' work engagement, the more OCBs are showed. Work engagement is thus important to stimulate OCBs, and as our results show this is even more the case in weak situations. In sum, the findings emphasize the importance of specific target behaviours of OCBs, and show that characteristics can have different effects depending on the target behaviour. Thus, the findings show that it does matter whether OCBs are individually or organizationally targeted and that - depending on the behaviour examined (OCBI or OCBO) – other contextual characteristics have to be taken into account. All in all, this contributes to the theory building regarding the relationship between work engagement and OCBs.

Limitations and further research. This research has two limitations with regard to OCBs. *First*, two factors related to OCBs were examined in this study: namely, autonomy and LMX. Further research could be done on other work characteristics to examine whether they have the same impact on the relationship between work engagement and OCBs: for example,

organizational formalization, staff support (George & Bettenhausen, 1990; Podsakoff & MacKenzie, 1995), professional orientation, or the need for interdependence (Podsakoff, MacKenzie, & Bommer, 1996). *Second*, in this study we used the classifications of OCBI and OCBO. We found no significant distinction in the CFA analysis between work engagement, OCBI, and OCBO, although this was found in previous research. Given the small effect sizes, a suggestion for further research might be to replicate this study in more schools. A methodological limitation is that the data used in this study were based on self-reports and were cross-sectional. Although the Harman's one-factor test showed that common method bias was not likely, this cannot be fully excluded. This type of research design makes causality ambiguous, and another research design might be more appropriate, e.g., collecting data from different groups such as employees and leaders, and using a longitudinal research design.

Practical implications. The findings of this study show the importance of the relationship between work engagement and OCBs in the educational sector. Engaged teachers are important for a school, because they are more willing to take on extra tasks that are not part of their job description, such as helping colleagues or volunteering to support extra-curricular activities, all of which enhance the performance of the school. A practical implication is to encourage teachers to show OCBs, for example, by giving teachers who show OCBs resources in return, such as extra teaching resources or materials, support for extra-curricular activities in the form of time and money, a good performance appraisal, social support, or feedback. A school needs to show its teachers that it cares about them and that their contributions are valued.

The importance of having a strong work situation was also shown, one in which the expectations of appropriate behaviour are clear and consistent and teachers know that they are expected to show OCBs. A

practical implication for strong work situations is to maintain the strong situation and to evaluate regularly whether teachers' perceptions of the work situation remain the same. When the work situation is weak, teachers do not know exactly what behaviour is expected of them; then, teachers' *work engagement* is even more important in stimulating them to show OCBs.

As for *autonomy*, the results show that when the level of autonomy in the work situation is low, engaged teachers show behaviour that is beneficial to colleagues, such as helping colleagues. A practical implication is to improve the work situation to a strong situation by discussing the perceptions of autonomy teachers have and finding out how their perceptions can be improved.

Finally, the *relationship with the leader* (LMX) is important in the work engagement – OCB relationship. When teachers perceive that the relationship with the leader is built on trust and mutual exchanges (a high LMX), it reflects only a small difference in the relationship between work engagement and OCBO. In a weak work situation where employees perceive that the relationship with their leader is not built on trust and mutual exchange (a low LMX), the main way for employees to show behaviour that is beneficial to the organization (OCBO) is through their own engagement. Besides improving the level of work engagement and maintaining the strong situation, as discussed above, a practical implication is to improve the relationship with the leader. This can be done, for example, through clear communication, training, or coaching to enable the teacher to gain insight into the expectations, and by showing the teacher that s/he is valued.

Appendix I. Table 2. Model comparisons

	χ^2	Df	χ^2/df	RMSEA	CFI	Comparison	$\Delta\chi^2$	Δdf
3 factor model								
M1 3 factor proposed	316.808	149	2.13	.07	.85			
M2 2 factor (WE, OCBI+OCBO)	316.821	150	2.11	.07	.84	M1-M2	.013	1
M3 2 factor (OCBI, WE+OCBO)	316.821	150	2.11	.07	.84	M1-M3	.013	1
M4 2 factor (OCBO, WE+OCBI)	327.001	150	2.18	.07	.83	M1-M4	10.193***	1
M5 1 factor	360.573	150	2.40	.08	.80	M1-M5	43.765***	1

*** p <.001

CHAPTER 5

Work engagement and innovative behaviour: The role of occupational self-efficacy and high commitment HRM[10]

[10] This chapter was presented at the HRM network conference in 2011, Groningen, The Netherlands.

Abstract

Using the AMO framework, we examined the relationships between work engagement, occupational self-efficacy, high commitment HRM (HC-HRM), and innovative behaviour.

Data were obtained from a survey among 126 employees working in 12 teams, in one school for secondary education. The results showed that work engagement was positively related to innovative behaviour. Occupational self-efficacy mediated this relationship. No moderating effect was found for HC-HRM on the relationship between work engagement and occupational self-efficacy, nor on the relationship between work engagement and innovative behaviour. Instead, HC-HRM mediated the relationship between work engagement and occupational self-efficacy. Following an interactionist perspective, the findings showed how perceptions of individual and contextual characteristics affect innovative behaviour. Specifically, managers who wish to stimulate innovative behaviour may be advised to stimulate employees' work engagement.

5.1 Introduction

In knowledge-based societies where competition is severe, innovative behaviour is regarded as being of critical importance to the sustainability and success of organizations (Nonaka & Takeuchi, 1995; Amabile, 1988; Van de Ven, 1986; West & Farr, 1990). In order for a person to show innovative behaviour, creativity is needed to initiate and develop innovations (Amabile, 1988). Innovative behaviour is defined as a process in which new ideas within a work group or organization are created, developed, promoted, realized, and modified by employees in order to benefit role performance (e.g., Van de Ven, 1986; West & Far, 1990; De Jong & Den Hartog, 2005); it is considered the primary source of competitive advantage (Van de Ven, 1986). Research has shown, for example, positive relationships between innovative behaviour and team and organizational outcomes (Shalley & Gilson, 2004).

The aim of our study was to explain innovative behaviour from the interactionist perspective, according to which employee behaviour is a function of the way employees perceive themselves and their environment (Schneider, 1983). Research on explaining innovative behaviour increasingly uses individual and environmental characteristics (e.g., Janssen, 2005). We aligned ourselves with this so-called interactionist perspective. In order to distinguish between individual and environmental characteristics, we used the AMO framework (e.g., Boxall & Purcell, 2008), in which the behaviour of employees is considered as a function of their ability (A), motivation (M), and opportunity (O). In the interactionist perspective, ability and motivation are considered as individual characteristics, and opportunity as an environmental characteristic. This model has been applied to research on knowledge sharing (Siemsen, Roth, & Balasubramanian, 2008), and behaviour with regard to the use of information systems (Hughes, 2007). For *ability* to show innovative behaviour, we used occupational self-efficacy in this study. Occupational

self-efficacy, defined as an individual's conviction that s/he can cope with difficulties s/he encounters in her/his work (Schyns & Von Collani, 2002), is a form of self-evaluation that influences decisions about what behaviours to undertake, the amount of effort and persistence to put forth when faced with obstacles, and the mastery of the behaviour in the work situation (Bandura, 1982). For *motivation* to show innovative behaviour, we used work engagement (Schaufeli, Salanova, González-Roma, & Bakker, 2002). Work engagement is defined as the positive, fulfilling, work-related state of mind characterized by vigour, dedication, and absorption (Schaufeli et al., 2002, p.74). For *opportunity* to show innovative behaviour, we used Human Resource Management (HRM), which is considered as supporting employees in order to reach a certain level of performance (e.g. Paauwe, 2009). In this research we used high commitment HRM (HC-HRM), defined as the bundle of human resources practices used by the organization to enhance employees' levels of skill, motivation, information, and empowerment (Whitener, 2001).

Using data from 126 teachers in 12 teams from one school for secondary education, we answered the following question: *'To what extent can occupational self-efficacy and high commitment HRM explain the relationship between work engagement and innovative behaviour?'*

Our findings contribute to former research in this field in three ways. *First*, we contribute to the growing body of research in which the interactionist perspective is used (e.g., Scott & Bruce, 1994; Janssen, 2005). *Second*, we build upon previous research on innovative behaviour by examining a new antecedent: namely, work engagement. In addition, we build upon previous research on work engagement by examining mediating and moderating effects in the work engagement – performance relationship (Bakker, Albrecht, & Leiter, 2011b). *Third*, we examined the relationships within the educational context. The educational context is subject to many

innovations (Fullan, 2007), but is often ignored in organizational research, although schools are an excellent research subject because of their controlled settings, e.g., a relatively homogeneous set of organizational activities, limited opportunities for deviation in work organization, and a quite consistent organizational structure (Pil & Leana, 2009).

5.2 Theoretical framework and hypotheses

Work engagement and innovative behaviour

Innovative behaviour is showed by employees who like challenges, explore opportunities, generate new ideas, and are willing to adapt to new ways of working (De Jong & Den Hartog, 2005). The *broaden and build theory* (Fredrickson, 2000) can explain the relationship between work engagement and innovative behaviour. In this theory it is stated that positive emotions increase creativity of thought (Isen, Daubman, & Nowicki, 1987). Engaged employees initiate positive emotions through their vigour and enthusiasm in their work (Salanova, Schaufeli, Xanthopoulou, & Bakker, 2010). As a result of having positive emotions, individuals' momentary thought-action repertoires are broadened, which builds and fosters new ideas, and the willingness to play and to be creative (Hakanen & Roodt, 2010) and show innovative behaviour. Hence, the first hypothesis was:

Hypothesis 1 (H1): Work engagement has a positive relationship with innovative behaviour

Occupational self-efficacy as a mediator in the relationship between work engagement and innovative behaviour

While it is acknowledged that innovative behaviour has benefits for the organization, for an employee to show innovative behaviour can be difficult and can be accompanied by feelings of uncertainty (Janssen, 2004). In addition, people generally tend to return to their original behaviours in order to prevent change (Jones, 2001). Thus, innovative

behaviour might lead to resistance from colleagues or supervisors, because innovation is often accompanied by a change in work methods which may lead to insecurity and even stress (Jones, 2001; Janssen, Van de Vliert, & West, 2004). Moreover, engaged employees are in a positive emotional state, and this influences their efficacy beliefs in a positive way (Salanova, 2003). We assume that people with more occupational self-efficacy can better cope with the negative side effects of innovative behaviour.

The relationship between work engagement, occupational self-efficacy, and innovative behaviour can be further explained from the control orientation theory (Frese & Fay, 2001). According to Frese and Fay (2001), control beliefs can appear as control over outcomes and control over one's actions. Occupational self-efficacy refers in their view to control over one's actions, because it involves evaluations or judgements in which one estimates the chances of being effective and thus successful (Frese & Fay, 2001). When employees have a strong control orientation, they feel more responsible for outcomes (Morrison & Phelps, 1999), search for more opportunities to act, and are better able to deal with possible problems (Bandura, 1997). When employees perceive that they have control over the situation, the risk of failure decreases and they have higher hopes for success and search more actively for information (Ashford & Tsui, 1991), which leads to more effective innovative behaviour (Frese & Fay, 2001). Hence, our second hypothesis was:

Hypotheses 2 (H2): The relationship between work engagement and innovative behaviour is mediated by occupational self-efficacy

HC-HRM as a moderator of the relationship between work engagement, occupational self-efficacy, and innovative behaviour

Employees need the support of their organization to be able to show innovative behaviour: for example, they need availability of training and sufficient time to innovate (Amabile, 1988), This can be established through HC-HRM, because HC-HRM influences employee behaviour by

creating opportunities for each employee to give their best performance for the organization (Gould-Williams, 2004). According to Huselid (1995), the presence of HRM has an impact on employees' skills and motivation and allows employees to improve their job performance, for example, through training, performance appraisal, and organizational structures.

In addition, following the results of Dorenbosch, Engen, and Verhagen (2005), which show that HC-HRM influenced innovative behaviour through openness of information, setting up participation mechanisms, or taking part in training, we expected that when engaged employees felt that they were supported by the organization, they would perceive that they were better able to cope with the difficulties they encountered in their work than when this support was not perceived. Based on the above arguments, we expected that in a situation of high HC-HRM, engaged employees would show more innovative behaviour and perceive more occupational self-efficacy. Hence, the third and fourth hypotheses were:

Hypothesis 3 (H3): HC-HRM strengthens the relationship between work engagement and innovative behaviour.

Hypothesis 4 (H4): HC-HRM strengthens the relationship between work engagement and occupational self-efficacy.

All four hypotheses are summarized in Figure 1.

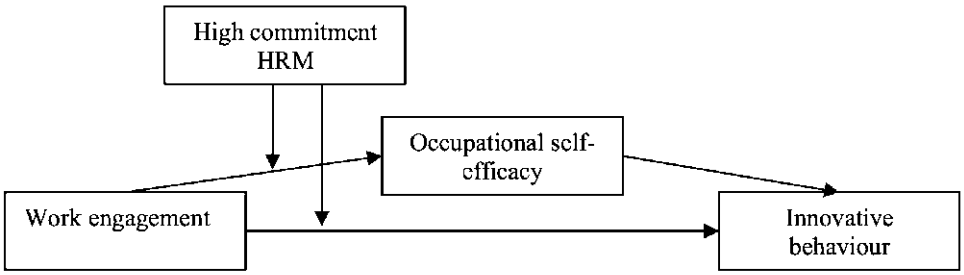

Figure 1. Research model

5.3 Method

Respondents. 126 respondents from 12 teams in one school for secondary education (response rate = 36 percent) were used for this study. 53 percent of the respondents were male. The average age was 45.94 years (SD = 11.26). The respondents' teaching experience in the school varied from less than five years (25 percent), 6-10 years (25 percent), 11-15 years (14 percent), 16-20 years (7 percent), to more than 20 years (29 percent).

Procedure. Teachers received a questionnaire in which the aims of the research were explained, as well as supplementary information about the subjects included in the questionnaire and assurance that the respondents' answers would be treated with the utmost confidentiality. Respondents had four weeks access time to fill out the questionnaire. To solicit a higher response rate, a reminder e-mail was sent to all respondents two weeks after the questionnaire was sent.

Instruments. Four scales were used: innovative behaviour, work engagement, occupational self-efficacy, and HC-HRM. Respondents indicated their responses on a 5-point Likert-type scale with anchors (1) do not agree at all to (5) totally agree.

Innovative behaviour was measured using eight items based on the scale developed by De Jong and Den Hartog (2005). An example of an

item is ‘I am involved in examining new methods and instruments’. The reliability was good (Cronbach’s α = .86).

Work engagement. Work engagement was measured using nine items from the short version of the Utrecht Work Engagement Scale (UWES) (Schaufeli & Bakker, 2004). A sample item is: ‘In my work, I feel I have plenty of energy’. The reliability was sufficient (Cronbach’s α = .79).

Occupational self-efficacy was measured using a five-item scale developed by Schyns and Von Collani (2002), which refers to self-efficacy in the work situation. A sample item is: ‘Whatever happens in my work, I usually can cope with it’. The reliability was sufficient (Cronbach’s α = .71).

HC-HRM was measured using nine items from the scale developed by Dorenbosch, De Reuver, and Sanders (2006; see also Sanders et al., 2008). To improve the reliability, two items that were related to the internal process of dealing with vacancies in the school were removed from the scale, because the skewness measures of the items were larger than 1 (Bulmer, 1979). A sample item is: ‘A plan for my career is made in collaboration with my supervisor’. The reliability was sufficient (Cronbach’s α = .74).

Control variables were gender and age, because they are generally considered to be important controls in the innovative behaviour literature (e.g., Janssen, 2004).

Data analysis. Since the data were collected from 12 teams within one school, we computed the intraclass correlation coefficient (ICC1; Bliese, 2000) to check for differences in innovative behaviour between teams. The intraclass coefficient was .06 for innovative behaviour, meaning that six percent of the variance in innovative behaviour occurs between the different teams. A value of .06 is considered to be a small effect (LeBreton & Senter, 2008), so we analyzed our data on the individual level using

hierarchical regression analysis.

Because all variables in this study were based on self-reports and collected at a single point in time, we used a Harman's one-factor test (Podsakoff & Organ, 1986; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) to investigate the potential influence of common- method variance. Analysis of unrotated principal axis factoring generally resulted in the four expected factors that explained 57 percent of the total variance. The first factor, work engagement, explained 19 percent of the variance. The first (largest) factor did not account for the majority of the variance, nor was there a general factor that accounted for the majority of the covariance in these variables. The results suggest that common method variance for the sample was probably absent.

The results for all the tested hypotheses are presented in Table 2. In the first model, gender and age were entered as control variables. In Model 2, work engagement was added to test the relationship with innovative behaviour (H1). The mediation of occupational self-efficacy (H2) was analyzed using the three-regression equations by Baron and Kenny (1986). The first and second criteria were that the independent variable (work engagement) be related to the dependent variable (Model 2), and the mediating variable (Model 4). The third criterion was met when the mediating variable (occupational self-efficacy) was added, and this substantially reduced or diminished the effect of the independent variable (Model 3). Finally, the Sobel test (Sobel, 1982) was conducted to test the significance of the mediation effect.

The interaction effects were tested using Aiken and West's method (1991). H3, the interaction between work engagement and HC-HRM on innovative behaviour, is presented in Model 5 (with innovative behaviour as the outcome variable). H4, the interaction effect between work engagement and HC-HRM on occupational self-efficacy, is presented in Model 6 (with occupational self-efficacy as the outcome variable).

5.4 Results

Table 1 presents the means, standard deviations, and correlations for the variables examined in this study. Work engagement is positively related to innovative behaviour (r =.27, p <.01). Occupational self-efficacy is positively related to innovative behaviour (r =.42, p <.01), and to work engagement (r =.24, p <.05). Finally, HC-HRM is positively related to innovative behaviour (r =.23, p <.05), work engagement (r =.30, p <.01), and occupational self-efficacy (r =.34, p <.01).

Table 1. Means, Standard Deviations, and Pearson Correlations

	M	SD	1	2	3	4	5
1. Gender	1.47	.50					
2. Age	45.94	11.26	-.29**				
3. Innovative behaviour	3.77	.51	.06	-.08			
4. Work engagement	3.34	.43	.13	.03	.27**		
5. Occupational self- efficacy	3.94	.47	-.12	.28**	.42**	.24*	
6. HC-HRM	2.79	.62	-.09	.06	.23*	30**	.34**

** p < .01; * p < .05; HC- HRM = High commitment HRM

The results of the hierarchical regression analysis are shown in Table 2. For work engagement (Model 2), the findings show a positive relationship with innovative behaviour (β =.27, p <.01). This means that H1 was confirmed. For H2, regarding the mediation of occupational self-efficacy in the relationship between work engagement and innovative behaviour, the results in Model 4 show that work engagement is related to occupational self-efficacy (β =.25, p <.05). This means that the first and second mediation criteria were met. When occupational self-efficacy was added in the regression analysis (Model 3), the results showed that the effect of work engagement on innovative behaviour diminished (work engagement β =.16, *ns*; occupational self-efficacy β =.45, p <.01). This means that the third mediation criterion was confirmed. Furthermore, the Sobel test showed a significant mediation effect (z =2.19; p <.05). Hence, the full mediation of occupational self-efficacy in the relationship between work engagement and innovative behaviour was confirmed.

The results for H3 and H4, concerning the moderating role of HC-HRM in the relationship between, respectively, work engagement and innovative behaviour, and work engagement and occupational self-efficacy (presented in Models 5 and 6), show that the interaction of HC-HRM is non-significant for both relationships (β =-.01, *ns;* β =.06, *ns*). This means that H3 and H4 were not confirmed.

Table 2. Results of the analysis of the relationship between work engagement, occupational self-efficacy, and HC-HRM on innovative behaviour

	IB	IB (H1)	IB (H2)	OSE (H2)	IB (H3)	OSE (H4)	HC-HRM (additional)
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
			Mediation model		Moderation model		Mediation model
Gender	.06	.01	.04	-.06	-.02	-.02	-.11
Age	-.05	-.07	-.18†	.25*	-.19†	.22*	.01
Work engagement		.27**	.16	.25*	.14	.18	.29**
Occupational self-efficacy			.45***		.42***		
HC-HRM					.05	.25*	
WE x HC-HRM					-.01	.06	
R^2	.01	.08	.25	.13	.24	.18	.08
Change in R^2		.07	.17	.05	.00	.05	.07

*** $p < .001$, ** $p < .01$, * $p < .05$, † $p < .10$

IB = Innovative behaviour, WE = Work engagement, OSE = Occupational self-efficacy, HC-HRM = High commitment HRM

Additional analysis

Model 4 showed that work engagement was significantly related to occupational self-efficacy (β =.25, p <.05), and Model 6 showed that this relationship diminished after HC-HRM was entered into the equation (β =.18, *ns*). The results of these analyses suggest that the relationship between work engagement and occupational self-efficacy may be mediated by HC-HRM. This means that the first and third mediation criteria of the three-step equation proposed by Baron and Kenny (1986) were met. The second step concerned the confirmation of a positive relationship between the independent variable (work engagement) and the mediator (HC-HRM). As Model 7 showed, work engagement is positively related to HC-HRM (β =.29, p <.01). Finally, the Sobel test showed a significant mediation effect (z = 2.19; p <.05). Hence, the results show the full mediation of HC-HRM in the relationship between work engagement and occupational self-efficacy.

Our findings are presented in Figure 2.

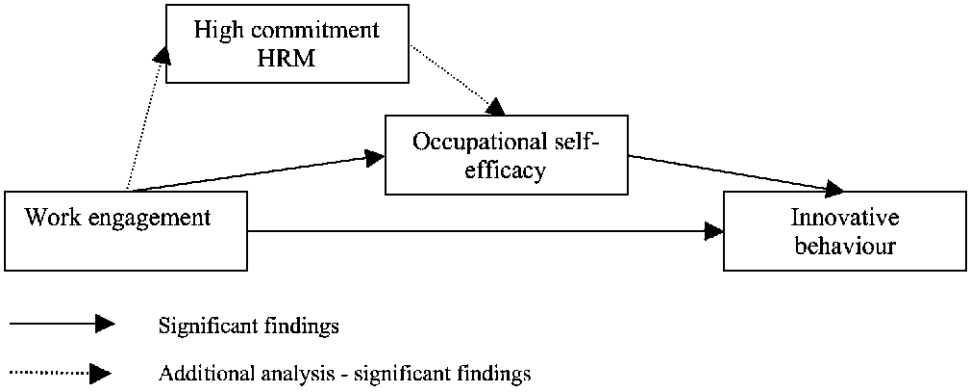

Figure 2. Research findings

5.5 Conclusion and Discussion

The aim of this study was to explain innovative behaviour. This research is important because innovative behaviour is considered to be of critical importance to an organization's success and sustainability, and enables competitive advantage (Nonaka & Takeuchi, 1995; Van de Ven, 1986). We used the AMO framework (ability, motivation, and opportunity) as a means of distinguishing between the individual and environmental variables in this research. To answer our research question, '*To what extent can occupational self-efficacy and high commitment HRM explain the relationship between work engagement and innovative behaviour?',* we sampled 126 employees in 12 teams, working in one school for secondary education.

The results show that work engagement is positively related to innovative behaviour. The results also confirm that occupational self-efficacy mediates the relationship between work engagement and innovative behaviour. We found no significant interaction effect for HC-HRM in the relationship between work engagement and occupational self-efficacy, nor in the relationship between work engagement and innovative behaviour. A possible explanation is that engaged employees have so much positive energy and such a positive emotional state as to create a positive spiral (Salanova et al., 2010), so that they do not need HC-HRM: Engaged employees facilitate themselves in creating their positive emotions and do not need the organization (i.e., HC-HRM) to contribute to that (Salanova et al., 2010).

In the additional analysis, we found a mediation effect for HC-HRM in the relationship between work engagement and occupational self-efficacy. Previous research has confirmed that perceptions of HR practices determine employee attitudes and behaviours (e.g., Bowen & Ostroff, 2004; Kinnie, Hutchinson, Purcell, Rayton, & Swart, 2005).

The finding that engaged employees perceive more HC-HRM can

probably be explained by the fact that dedication is a part of commitment (Stanley & Markman, 1992). In addition, engaged employees are in a positive affective state in which they may perceive more HC-HRM and more occupational self-efficacy. This positive relationship can be increased by HC-HRM when employees have, for example, received training, or perceive openness of information; they feel even more confident to cope with the challenges they might encounter in their work (Gist & Mitchell, 1992). Further research could examine using longitudinal data whether the relationship between work engagement, HC-HRM, and occupational self-efficacy can be considered as a positive spiral.

Limitations and suggestions for further research. In this study, all scales were examined as individual perceptions and were based on self-reports. Although Harman's one-factor test showed that common method variance was limited, the self-report bias cannot fully be eliminated. In further research, colleagues in the team, or the leader of the team, could be asked about how they perceive the innovative behaviour of their colleagues and the team, and both subjective and objective innovative behaviour could be taken into account in examining, for example, the number of innovations established within a certain time period. Because of the cross-sectional nature of the data, causal relationships between the variables cannot be determined. A longitudinal research design could confirm the causality of the relationships found in this study.

Finally, we explored and found a mediation effect for HC-HRM in the relationship between work engagement and occupational self-efficacy. Further research could be done to theorize this mediation effect.

Theoretical implications. The findings of this study show that there are significant mediation effects of motivation, ability, and opportunity on innovative behaviour, which suggests that the relationship between

work engagement and innovative behaviour occurs primarily through occupational self-efficacy and HC-HRM. These results show that all of the three AMO variables contribute significantly to the innovative behaviour of employees. This contributes to the contextual theories of innovative behaviour. In addition to the componential model of creativity and innovation in organizations (Amabile, 1988), in which three factors are taken into account (motivation to innovate, resources, and management practices), and the extension that Woodman, Sawyer, and Griffin (1993) made to include group and organizational characteristics, the AMO framework shows that all three factors - motivation, ability, and opportunity - should be taken into account when organizations wish to encourage their employees to show innovative behaviour in the workplace.

The findings also have an implication for the AMO framework, because researchers have mainly used this framework to examine the direct relationships or interaction effects (Hughes, 2007; Appelbaum, Bailey, Berg, & Kallenberg, 2000). In further research, the research model of this study could be examined in a one-step calculation, for example, using structural equation modeling.

Practical implications. The findings of the study show that there is possibly a positive relationship between work engagement, HC-HRM, occupational self-efficacy, and innovative behaviour. The more engaged employees are, the more positively they perceive HC-HRM, the more confident they feel in their work, and the more innovative behaviour they show. The findings suggest that work engagement is a very important employee characteristic for the organization to take into account. It is thus important that organizations offer enough resources for employees to stay engaged and/or increase their engagement level, such as through offering challenging work (Salanova et al., 2010), social support, feedback (Halbesleben, 2010), or wellness audits to maintain the balance between

job resources and job demands (Schaufeli & Salanova, 2008). Also, organizations can select only engaged employees, and incorporate work engagement in their hiring criteria. In sum, when an organization is able to maintain a high level of work engagement among its employees, positive results are inevitable.

CHAPTER 6

Discussion

6.1 Introduction

Many challenges exist in secondary education: a low level of job satisfaction for teachers (Ministry of Education, Culture, and Science, 2010), higher burnout levels compared with other industries (TNO, 2010), a shortage of teachers, and an ageing workforce (Ministry of Education, Culture, and Science, 2010, 2011).Secondary education faces the same challenges in other western countries (OECD, 2005; U.K. Department of Education, 2010; U.S. Department of Education, 2007). The main factors that influence the work of teachers in secondary education are a high work load, low autonomy, little support from the leader, and poorly implemented HRM (OECD, 2005; TNO, 2010; Burke & Greenglass, 1994; Carlson & Thompson, 1995; Teurlings & Vermeulen, 2004). As a result, teaching is considered one of the most stressful occupations, and the burnout levels of teachers are relatively high. Also, the work satisfaction of teachers in secondary education is the lowest compared with the total educational sector. Although research has shown that teachers are more engaged compared with workforces in other industries (Smulders, 2006), there are several factors that influence the job satisfaction of teachers (communication, the role of the leader, and the organization), which may influence their engagement level, too.

Work engagement is the central topic of this dissertation, and is defined as the positive, fulfilling work-related state of mind characterized by vigour, dedication, and absorption (Schaufeli, Salanova, González-Roma, & Bakker, 2002, p.74). Work engagement is regarded as a function of job resources, personal resources, and job demands (e.g., Schaufeli & Bakker, 2004), and is related to behavioural as well as financial outcomes such as organizational commitment (Halbesleben, 2010), personal initiative (Sonnentag, 2003), and financial returns (Bakker & Leiter, 2010; Xanthopoulou et al., 2009a).

Surveying the research that has been done on job and personal resources in relation to work engagement, researchers have indicated that there is a research gap to fill regarding the impact of self-regulatory mechanisms on work engagement (Bakker, Schaufeli, Leiter, & Taris, 2008). There is also a research gap to fill to increase understanding of the role of job and personal resources as a mediator or moderator in the relationship between work engagement and its outcomes (Bakker, Albrecht, & Leiter, 2011, Sonnentag, 2011, Parker & Griffin, 2011).

The aim of this research was to provide a deeper understanding of the role of resources in Dutch schools for secondary education: As buffers in the relationship between burnout and work engagement, in direct relationship and as moderators of the relationship between job resources and work engagement, and as moderating or mediating effects on the relationships between work engagement and its outcomes. The main research question was formulated as follows:

To what extent do job and personal resources influence the relationship between antecedents and work engagement, and influence the relationship between work engagement and its outcomes?

To answer the research question, six empirical studies were conducted in this dissertation; these are reported in four chapters. The interaction with pupils and HR practices were examined as antecedents, and HR practices were examined as a moderator in the relationship between the interaction with pupils and work engagement. Goal orientation and LMX were examined as moderators in the relationship between burnout and work engagement. Autonomy and LMX were examined as moderators in the relationship between work engagement and organizational citizenship behaviours (OCBs). Finally, occupational self-efficacy and high commitment HRM (HC-HRM) were examined as, respectively, mediator and moderator in the relationship between work engagement and innovative behaviour.

6.2 Summary of the main findings

In the study reported in Chapter 2, goal orientation and LMX were examined as factors that influence the relationship between burnout (exhaustion, depersonalization, and professional efficacy) and work engagement. The research question was, '*To what extent do goal orientation and LMX influence the negative relationship between burnout and work engagement?'* For goal orientation, learning goal orientation and performance goal orientation were taken into account. Data from six Dutch schools for secondary education (n=211) showed that exhaustion was negatively related to work engagement, and professional efficacy was positively related to work engagement. Learning goal orientation and performance goal orientation moderated the relationship between professional efficacy and work engagement. Not in line with our expectations, learning goal orientation and performance goal orientation did not moderate the relationship between exhaustion and depersonalization, on the one hand, and work engagement, on the other hand. Moreover, LMX strengthened the relationship between depersonalization and work engagement, and also strengthened the relationship between professional efficacy and work engagement. To further examine factors in the burnout – work engagement relationship, an additional study was conducted. Qualitative data from five Dutch schools for secondary education (n=30) showed that social interaction, especially the interaction with pupils, helped teachers to influence the negative relationship between burnout and work engagement.

Chapter 3 reports on the examination of the relationship between the interaction with pupils, HR practices, and work engagement. Two studies were undertaken. The aim of the first study was to gain a deeper understanding of how HR practices are perceived in secondary education, because each industry has a unique bundle of HR practices. A qualitative study was conducted, in which we interviewed 23 respondents in four

schools. The research question of Study 1 was: *'Which HR practices are used in the school?', 'How are those HR practices perceived?'* and *'What are the reasons behind positive or negative perceptions of HR practices in the school?'*. The results of Study 1 show that the following HR practices were used in schools: An introduction program, a personal development plan, performance appraisal, rewards, training and employee development. The identified HR practices were used to construct the scale regarding HR practices in Study 2. Furthermore, HR practices were perceived as positive by most leaders and as neutral (neither positive nor negative) or negative by most teachers. Finally, respondents reported reasons why HR practices are perceived positively or negatively in schools: for example, communication, the embedding of HR practices in the school system, and the way a leader brings HR practices into practice.

Study 2 of this chapter was a quantitative study, in which we surveyed 342 teachers in 13 schools. The research question was: '*To what extent are the interaction with pupils and HRM related to work engagement?'* As expected, the interaction with pupils was positively related to work engagement (vigour, dedication, and absorption), and HR practices were positively related to vigour and dedication. Not in line with our hypothesis, HR practices weakened the relationship between the interaction with pupils and dedication.

In the study reported in Chapter 4 the relationships between work engagement and organizational citizenship behaviours (OCBs) were examined for OCBI, which is mainly targeted at benefits for the individual, and for OCBO, which is mainly targeted at benefits for the organization in general. To get a deeper insight into the relationships between work engagement and OCBs, we examined the influence of autonomy and leader member exchange (LMX). The research question was: *To what extent do autonomy and LMX moderate the relationship between work engagement and OCBs?'* Using data from six Dutch schools for secondary education

(n=211), the results showed autonomy and LMX acted as moderators in the relationships between, respectively, work engagement and OCBI, and work engagement and OCBO. As expected, autonomy and LMX weakened these relationships.

In the study reported in Chapter 5 we examined the relationship between work engagement and innovative behaviour. Using the AMO framework, we examined the relationships between work engagement, occupational self-efficacy, high commitment HRM (HC-HRM), and innovative behaviour. The research question was: '*To what extent can occupational self-efficacy and high commitment HRM explain the relationship between work engagement and innovative behaviour?'* Survey data from one Dutch school for secondary education (n=126) showed that work engagement was positively related to innovative behaviour. Occupational self-efficacy mediated the relationship between work engagement and innovative behaviour. Not in line with our expectations, no moderating effect was found for HC-HRM in the relationship between work engagement and self-efficacy, and work engagement and innovative behaviour. Instead, HC-HRM mediated the relationship between work engagement and occupational self-efficacy.

6.3 Main conclusions of the research

The findings of this dissertation offer important insights into the role of job and personal resources in the relationship between work engagement, its antecedents, and outcomes.

Job resources as antecedents of work engagement

As the findings show, the interaction with pupils and HR practices have a positive relationship with work engagement and can as such be regarded as important job resources. This implies that besides resources that reflect general characteristics of work or personal resources, also more context-

specific resources can be taken into account that address the intrinsic motivational side of work. These findings align with those of previous research in which it was found that intrinsic motivation (challenge) was related to occupational affective commitment, mediated by dedication and absorption as aspects of work engagement (Yousaf, 2010). Further research on work engagement could incorporate context-specific resources, depending on the context of the work: for example, the interaction with patients in health care organizations.

Job and personal resources as a self-regulatory mechanism or moderator
Besides the direct relationship between resources and work engagement, the research findings show that resources can play other roles. Goal orientation can be seen as a resource that acts as a self-regulatory mechanism; it moderates the relationship between burnout and work engagement. However, this was only found for the relationship between professional efficacy and work engagement. Furthermore, LMX was found to strengthen the relationship between depersonalization and work engagement, and between professional efficacy and work engagement. The findings also suggested that social interaction, especially the interaction with pupils, is a factor that influenced the relationship between burnout and work engagement. These findings are in line with the results of previous research in which social interaction reduced the impact of stressors on well-being (Cohen & Wills, 1985). In addition, the findings showed that resources (HR practices) weakened the relationship between resources (interaction with pupils) and work engagement. This confirms previous findings on the implementation of HRM in Dutch schools for Vocational Education and Training that teachers perceive HRM as not contributing to their primary role as a teacher (Runhaar & Sanders, 2007). This raises the question of how HR practices can have a positive influence on teachers' work engagement.

The role of job and personal resources in the relationship between work engagement and its outcomes

The findings of the research reported in this dissertation show that job and personal resources can act as mediators or moderators in the relationship between work engagement and OCBs, and work engagement and innovative behaviour. Occupational self-efficacy mediated the relationship between work engagement and innovative behaviour, while the findings of the additional analysis suggested that HC-HRM mediated the relationship between work engagement and occupational self-efficacy. Autonomy and LMX acted as moderators in the relationship between work engagement and, respectively, OCBI and OCBO, but they had a negative impact. A possible explanation is that work-engaged teachers are so engaged and have such a resource caravan (Hobfoll, 2002) that they do not need stimuli in their environment to reach more positive outcomes than they already show. Does this imply that autonomy and LMX are only of use as job resources for work engagement, and not as strengthening job resources when employees are already engaged? Further research could be done to examine the differences in autonomy and LMX when measured as antecedents or moderators with work engagement as an outcome variable, and in the relationship between work engagement and other outcomes. This will make clearer the role of autonomy and LMX as resources.

In addition, the role of HRM was found to vary across the studies. The study in the second chapter showed that HR practices had a positive relationship with work engagement. But when HR practices were examined in the relationship between the interaction with pupils and work engagement, they were found to have a negative impact on this relationship. In the study reported in Chapter 5, HC-HRM was introduced, and was found to have a mediating effect in the relationship between work engagement and occupational self-efficacy, instead of the moderating effect hypothesized. This raises the question of which HRM construct

has the most impact: HRM in the form of HR practices, or HC-HRM. HR practices were defined as 'all those activities that are associated with the management of work and people in firms and other formal organizations' (Boxall & Purcell, 2008, p.1), and HC-HRM was defined as the bundle of HR practices that organizations use to enhance employees' levels of skill, motivation, information, and empowerment (Whitener, 2001). Although HRM in the educational sector is meant to support the commitment, knowledge, and competencies of employees (SBO, 2005), and is perhaps more closely related to HC-HRM, it might be perceived otherwise by teachers in practice. It would be interesting to examine how teachers perceive HRM as a sensemaking process, defined as a cognitive process that individuals employ in organizations to cope with surprise and novelty, through which they understand, interpret, and respond to their environment (Louis, 1980). Sensemaking processes can be critical in the development of attitudes and behaviour at work, and are, for example, used in psychological contract research (De Vos, Buyens, & Schalk, 2003).

The research findings showed that job and personal resources could play other roles than those mentioned in the job demands resources model, which contributes to the understanding of job and personal resources in this model. A possible suggestion for the job demands resources model might be to do further research on mediators or moderators, such as knowledge and skills (Parker & Griffin, 2011), and personality traits (Halbesleben, 2011), in the relationship between work engagement and outcomes.

In sum, the overall findings contribute to the understanding of the role of job and personal resources in relation to work engagement and its outcomes. When job or personal resources are examined in relation to work engagement, they are positively related. When job or personal resources are examined as moderators in the relationship between burnout and work engagement, they strengthen or weaken this relationship. When job resources are examined as moderators in the relationship between job

resources and work engagement, they weaken this relationship. When job or personal resources are examined as mediators in the relationship between work engagement and outcomes, they have a positive effect. This suggests that employees need job and personal resources in their work that stimulate their work engagement, but when they are engaged, every examined job or personal resource that is available in the context might weaken their work engagement, or outcomes of their work engagement. Specifically for teachers, it seems as though they are so engaged with their teaching that every job resource that has nothing to do with teaching itself decreases their work engagement and outcomes of work engagement. Exceptions are HC-HRM and occupational self-efficacy, because these have a closer relationship with the primary tasks of teachers' work.

The question remains whether we all need to have engaged employees? In general, engaged employees bring lot of advantages to organizations because they bring competitive advantage (Bakker & Leiter, 2010). On the other hand, as Macey and Schneider (2008, p. 80) stated, 'people cannot expend their energy at the highest levels all of the time – there is a need for recovery to ensure continued employee well-being'. Research has shown, for example, that when employees are highly engaged, there are higher levels of work interference with family (Halbesleben, 2009). Especially for engaged teachers, who, for example, do their correction work at home or prepare their lessons at home, this might something to keep in mind. The school organization can support teachers in managing their engagement and help them to understand the importance of recovery, so that negative consequences such as burnout or workaholism can be prevented.

As research has shown, 21% of employees in the United States are engaged in their work (Gebauer & Lowman, 2009). The question is whether a school organization wants all its teachers to be engaged? Could there be an engagement percentage from which teachers and

school organizations benefit most? Can engagement be seen through the eyes of diversity, in which a blend of men and women, or people from different cultural backgrounds, have more benefits for an organization (Van Knippenberg & Schippers, 2007)? It would be interesting to examine those questions in further research.

6.4 Limitations and directions for future research

In this dissertation all variables were examined as individual perceptions and based on self-reports of behaviour. Although Harman's one-factor test showed that common method variance was limited, the self-report bias cannot fully be eliminated. Further research could be done in an extended way, for example, by collecting data from employees and leaders, or, when they are working in teams, employees and colleagues, or by taking both subjective and objective performance indicators into account.

All data were gathered at one point in time, using a cross-sectional approach. Because of the cross-sectional nature of the data, causal relationships between the variables cannot be determined. A longitudinal research design – collecting data from the same respondents at regular intervals - could confirm the causality of the relationships found in this research, and perhaps examine reciprocal relationships.

A limitation of this dissertation is that the variables were chosen in relation to the daily practice of teachers. This means that there is no theoretical 'umbrella' to explain why these variables were chosen. However, they can be divided into job resources (the interaction with pupils, autonomy, LMX, HR practices, HC-HRM) and personal resources (goal orientation and occupational self-efficacy). Through not having a theoretical 'umbrella', this research was able to go beyond what was examined before, and one of the surprising findings was that teachers had negative perceptions of the moderators autonomy, LMX, and HR practices, while previous research has identified autonomy and LMX as job resources

(e.g., Halbesleben, 2010; Hakanen, et al., 2006).

Another limitation is that originally job demands were not taken into account to measure work engagement, while research has shown that the combination of job demands and job and personal resources predicts work engagement (e.g., Bakker & Demerouti, 2007; Xanthopoulou et al., 2007). Although Mauno et al. (2007) showed that job resources predicted work engagement better than job demands, a suggestion for further research would be to incorporate job demands and measure the job demands resources model in its entirety.

In this dissertation, work engagement was measured using the Utrecht Work Engagement Scale (UWES) (Schaufeli & Bakker, 2003); the short version was used in three studies, and the full version in one study, in which vigour, dedication, and absorption were examined separately. In previous research both versions of the UWES were used and work engagement was examined as one construct (e.g., Xanthopoulou et al., 2007), and as three subscales (e.g., Schaufeli et al., 2002). We found no indication in the literature of when the short or full version of work engagement could be used for a particular type of research. The structure of both versions of the UWES was found to be good, although the short version of the UWES showed the best structure in a longitudinal research design in which the two versions of the UWES were compared (Seppälä et al., 2009).

With regard to job and personal resources, further research could be done to examine which other roles the identified job or personal resources – for example organizational climate, feedback, and social support (Halbesleben, 2010) - have with regard to work engagement and its outcomes. It would be interesting to find out what kinds of resources have the greatest impact on work engagement, and under which circumstances.

As for the relationships between job resources, personal resources, work engagement, and its outcomes, other outcomes of work engagement

could be examined, e.g., financial factors, health, turnover intentions, and resources could be taken into account to examine moderator or mediator relationships to determine what resources enhance or impede the relationships.

The generalizability of the results is good for knowledge-based organizations like schools. Schools rely on teachers as knowledge workers, and on their complex interdependent relationships with different kinds of professional groups and organizations (Fullan, 1997). In addition, it would be interesting to examine whether the relationships examined in this research would be the same if the research was replicated across cultures. Research has shown that engagement levels are differently spread between geographic regions, for example, Mexico and Brazil had the highest percentage of highly engaged employees (40% and 31%, respectively), and Asia the lowest percentage(7%) (Gebauer & Lowman, 2009). In this dissertation we examined work engagement in The Netherlands; it is possible that if the research were replicated in, for example, South America (e.g., Mexico, Brazil), and Asia (e.g., China), the results would be different. Further research could be done to examine if this is the case.

6.5 Practical implications

A practical implication is that resources in the form of social support (interaction with pupils, support from the leader) can help teachers to buffer the negative relationship between burnout and work engagement. Also, job and personal resources support teachers' work engagement. It is, therefore, important that teachers identify job and personal resources for themselves, pay attention to their job and personal resources, and evaluate regularly whether they have enough, so they can increase their job and personal resources when this is needed to feel engaged at work.

In addition, a practical implication is to use High commitment HRM (HC-HRM). HC-HRM stimulates teachers' commitment; the way

HRM is organized nowadays in schools involves the management of work and can be perceived as controlling. In designing HR practices, more attention should be paid to practices that support the development of skills, motivation, information, and empowerment, such as comprehensive training and development activities, and development appraisal (Whitener, 2001). Both commitment and control HRM are important to the school performance. This raises the question why leaders do not use both HRM forms. A possible explanation might be the school culture. Schools are controlled by the government and have to obey certain rules, and are accountable. Schools have only recently become accountable for their finances. Before that, all money was labeled (e.g., for personnel, learning materials, housekeeping); now, schools receive a so-called 'lump sum' and are able to make their own decisions about the budget they allocate to personnel or learning materials. In practice, schools have a defensive allocation strategy which can be reflected on and perceived as control HRM. Another possible explanation might be that, in the past, the best teachers were promoted to be leaders, although they may not necessarily have been the best leaders. Often, they lacked the qualities to be good leaders and they tended to use only the control HRM to make sure that the rules set by the government were obeyed. A practical implication is to promote both forms of HRM in the educational sector by points of view about commitment and control HRM (Walton, 1985), and showing the advantages of having both HRM perspectives in the school organization.

Finally, the findings of this dissertation show the importance of work engagement for teachers. A high level of work engagement leads to better performing employees and is, therefore, an employee characteristic for the school to take into account. It is thus important that the school offers enough resources for employees to stay engaged and/or increase their engagement level. A practical implication for schools is to include work engagement in their school strategy, and put it on the daily agenda.

Schools are no different from business-like organizations which measure resources and work engagement as part of their satisfaction survey, and provide regular interventions in order to increase employees' work engagement, such as wellness audits (Schaufeli & Salanova, 2008), a stress intervention program and the offer of challenging work (Salanova, Schaufeli, Xanthopoulou, & Bakker, 2010). When schools pay attention to work engagement, provide job resources and stimulate the development of teachers' personal resources that positively influence their engagement, such as the interaction with pupils, autonomy, and support from their leader, and measure and adjust their engagement strategy accordingly, not only teachers but everyone in the school will benefit from this.

6.5 Concluding remarks

The main aim of this research was to examine the different roles of job resources in relation to work engagement, its antecedents, and its outcomes. Work engagement is considered to be important for organizations, because of the positive impact it has on employees and the performance of organizations. The findings of this research provide a deeper understanding of the role of goal orientation and LMX in the relationship between burnout and work engagement, the role of the interaction with pupils and HR practices in relation to work engagement, and the role of autonomy, LMX, occupational self-efficacy, and HC-HRM in the relationship between work engagement and, respectively, OCBs and innovative behaviour.

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SUMMARY IN DUTCH

Bevlogenheid van leraren

EEN DIEPER BEGRIP VAN DE ROL VAN HULPBRONNEN IN DE RELATIE MET BEVLOGENHEID, HAAR ANTECEDENTEN, EN HAAR UITKOMSTEN

Introductie

Het voortgezet onderwijs in Nederland heeft met vele uitdagingen te maken: een lage arbeidstevredenheid van leraren, hogere burnout niveaus in vergelijking met andere sectoren, een tekort aan leraren en vergrijzing. Ook in andere westerse landen doen deze uitdagingen zich voor. De belangrijkste oorzaken zijn dat leraren in het voortgezet onderwijs ervaren dat zij een te hoge werkdruk hebben, te weinig autonomie in het werk, weinig steun van hun leidinggevende, personeelsbeleid (Human Resource Management, HRM) dat hen onvoldoende ondersteunt in het uitoefenen van hun werk. Het resultaat is dat het leraarberoep als een van de meest stressvolle beroepen wordt gezien. Ofschoon onderzoek laat zien dat leraren meer bevlogen zijn dan medewerkers in andere sectoren, kunnen factoren zoals communicatie, de rol van de leider en de organisatie wel degelijk van invloed zijn op de arbeidstevredenheid van leraren en dus ook op de bevlogenheid van leraren.

Bevlogenheid is het centrale thema van dit proefschrift, gedefinieerd als een positieve toestand van opperste voldoening, die wordt gekenmerkt door vitaliteit, toewijding en absorptie. Bevlogenheid wordt positief beïnvloedt door werkgerelateerde hulpbronnen en persoonlijke hulpbronnen, en taakeisen kunnen de bevlogenheid doen afnemen. Werkgerelateerde hulpbronnen verwijzen naar de fysieke, sociale of organisatorische aspecten van het werk die helpen om doelen te bereiken, taakeisen te verminderen, of persoonlijke groei, ontplooiing en actief leergedrag stimuleren, zoals feedback over prestaties en ontplooiingsmogelijkheden. Persoonlijke hulpbronnen zijn positieve zelfevaluaties die informatie geven over de weerbaarheid van mensen, zoals zelfvertrouwen en optimisme. Taakeisen zijn fysieke, sociale of organisatorische aspecten van het werk die van negatieve invloed kunnen zijn op bevlogenheid, zoals een slechte fysieke werkomgeving of een hoge werkdruk. Uitkomsten van bevlogenheid zijn bijvoorbeeld dat

medewerkers meer initiatief nemen, de financiële resultaten beter zijn en medewerkers zich meer betrokken voelen bij de organisatie.

Uit het onderzoek dat tot nu toe gedaan is naar bevlogenheid blijkt dat de rol van hulpbronnen vooral is onderzocht in directe relatie tot bevlogenheid. De bijdrage van dit proefschrift is dat de rol van hulpbronnen – naast de rol als antecedent van bevlogenheid- wordt onderzocht op drie andere manieren:

1. Als een zelfregulerend mechanisme in de relatie tussen burnout en bevlogenheid
2. Als een moderator in de relatie tussen hulpbronnen en bevlogenheid
3. Als een mediator of moderator in de relatie tussen bevlogenheid en uitkomsten

De vraagstelling van dit proefschrift was dan ook: *'In welke mate beïnvloeden werkgerelateerde en persoonlijke hulpbronnen de relatie tussen antecedenten van bevlogenheid en bevlogenheid, en de relatie tussen bevlogenheid en uitkomsten van bevlogenheid?'*

Om deze onderzoeksvraag te beantwoorden zijn zes studies uitgevoerd, beschreven in vier hoofdstukken. Als antecedenten van bevlogenheid zijn burnout, de interactie met leerlingen en HR praktijken onderzocht. Doelorientatie is onderzocht als een zelfregulerend mechanisme in de relatie tussen burnout en bevlogenheid, en de relatie met de leidinggevende is onderzocht als mogelijke buffer in de relatie tussen burnout en bevlogenheid. HR praktijken zijn daarnaast onderzocht als moderator in de relatie tussen de interactie met leerlingen en bevlogenheid. Autonomie en de relatie met de leidinggevende zijn onderzocht in de relatie tussen bevlogenheid en 'organizational citizenship behaviour' (OCB, gedrag dat medewerkers meer laten zien dan in hun functieomschrijving staat). Tot slot zijn werkgerelateerd zelfvertrouwen en 'high commitment HRM' (HC-HRM, HRM gericht op het verkrijgen van commitment van medewerkers) onderzocht als

mediator en moderator in de relatie tussen bevlogenheid en innovatief gedrag.

Resultaten

De resultaten van het proefschrift laten zien dat de interactie met leerlingen en HR praktijken als antecedent van bevlogenheid kunnen worden gezien. Deze bevindingen laten zien dat naast werkgelateerde en persoonlijke hulpbronnen, ook intrinsiek motiverende hulpbronnen van invloed kunnen zijn op bevlogenheid.

Hulpbronnen spelen daarnaast ook andere rollen in relatie tot bevlogenheid, haar antecedenten, en haar uitkomsten:

1. *Hulpbronnen als een zelfregulerend mechanisme in de relatie tussen burnout en bevlogenheid*

   De resultaten laten zien dat doeloriëntatie als een zelfregulerend mechanisme werkt in de relatie tussen burnout en bevlogenheid, alhoewel het alleen aangetoond is voor de relatie tussen professioneel zelfvertrouwen en bevlogenheid. Daarnaast suggereert het onderzoek dat sociale interacties, zoals de interactie met leerlingen, een buffer kunnen zijn in de relatie tussen burnout en bevlogenheid.

2. *Hulpbronnen als een moderator in de relatie tussen hulpbronnen en bevlogenheid*

   De relatie met de leidinggevende modereert de relatie tussen depersonalisatie en professioneel zelfvertrouwen aan de ene kant, en bevlogenheid aan de andere kant, alhoewel dit een versterkend effect geeft in plaats van een verzwakkend effect. Daarnaast zijn HR praktijken een moderator in de relatie tussen de interactie met leerlingen en bevlogenheid. HR praktijken verzwakken deze relatie en is overeenkomstig eerder onderzoek. Het roept in ieder geval de vraag op hoe HRM wel een positieve bijdrage kan leveren aan het werk als leraar.

3. *Hulpbronnen als een mediator of moderator in de relatie tussen bevlogenheid en uitkomsten*
   Het onderzoek in dit proefschrift laat zien dat zowel werkgerelateerde hulpbronnen als persoonlijke hulpbronnen een moderator of mediator kunnen zijn in de relatie tussen bevlogenheid en uitkomsten van bevlogenheid. Meer specifiek modereren autonomie en de relatie met de leidinggevende de relatie tussen bevlogenheid en respectievelijk OCB gericht op het individu, en OCB gericht op de organisatie. Zowel autonomie als de relatie met de leidinggevende verminderden de positieve relatie tussen bevlogenheid en de twee vormen van OCB. Een mogelijke reden zou kunnen zijn dat bevlogen leraren zoveel energie hebben om meer te doen dan van hen verwacht wordt, dat zij geen andere hulpbronnen nodig hebben in hun omgeving die dit gedrag kunnen versterken. En dus als deze hulpbronnen wel aanwezig zijn, de relatie verminderen. Daarnaast laat het onderzoek zien dat werkgerelateerd zelfvertrouwen de relatie tussen bevlogenheid en innovatief gedrag medieert, en dat HC-HRM de relatie tussen bevlogenheid en werkgerelateerd zelfvertrouwen medieert.

Samengevat laten de resultaten zien dat zowel werkgerelateerde hulpbronnen als persoonlijke hulpbronnen andere rollen kunnen spelen in relatie tussen de antecedenten van bevlogenheid, en bevlogenheid en haar uitkomsten.

Implicaties

Een implicatie van dit onderzoek is het belang van bevlogenheid voor leraren. Bevlogen leraren doen meer dan wat er van hen verwacht wordt en vertonen meer innovatief gedrag. Bevlogen leraren kunnen hun bevlogenheid in stand houden door middel van hulpbronnen. Bijvoorbeeld hulpbronnen in de vorm sociale interactie (zoals de interactie met

leerlingen), die leraren kunnen ondersteunen als een buffer in de relatie tussen burnout en bevlogenheid. Ook ondersteunen andere hulpbronnen, zoals HR praktijken, leraren in hun bevlogenheid. Het is daarom belangrijk dat leraren inzien welke hulpbronnen in hun werk belangrijk voor hen zijn, en dat zij regelmatig evalueren (met zichzelf of met hun leidinggevende, afhankelijk van waar zij invloed op uit kunnen oefenen) of zij over genoeg hulpbronnen beschikken en dit eventueel kunnen bijstellen om zich bevlogen te blijven voelen in het werk.

Schoolorganisaties kunnen steun bieden om leraren bevlogen te houden door hen in staat te stellen om hulpbronnen aan te boren in hun werk. Schoolorganisaties kunnen bevlogenheid deel uit laten maken van hun personeelsbeleid en het bespreekbaar maken in de school of in lerarenteams. Bijvoorbeeld door het als onderdeel op te nemen in de medewerkertevredenheidsonderzoeken en interventies uit te voeren als een gezondheidscheck of een stress interventieprogramma. Wanneer schoolorganisaties aandacht besteden aan de bevlogenheid van hun leraren en hulpbronnen faciliteren, zal dat de bevlogenheid van leraren op een positieve manier beïnvloeden. Niet alleen leraren, maar ook alle andere medewerkers en vooral de leerlingen van de school zullen hierbij baat hebben.

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Judith Konermann, 26 september 2011

Dutch schools for secondary education face many challenges: A low level of job satisfaction for teachers, higher burnout levels compared with other industries, continuous innovation, a shortage of teachers, and an ageing workforce. The main factors that influence the work of teachers in secondary education are a high work load, a low level of autonomy, little support from the leader, and poorly implemented HRM. The result is that teaching is considered one of the most stressful occupations and the burnout levels of teachers are relatively high. Also, the work satisfaction of teachers in secondary education is the lowest compared with the total educational sector. Although research has shown that teachers are more engaged compared with workforces in other industries, several factors may influence their engagement level.

This dissertation contains six studies in which factors are examined that can influence work engagement and outcomes such as organizational citizenship behaviours and innovative behaviour. The roles of goal orientation, LMX, the interaction with pupils, HR practices, autonomy, occupational self-efficacy, and high commitment HRM are examined as resources in these relationships.

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