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### Distance in schools

*The influence of psychological and structural distance from management on teachers' trust in management, organisational commitment, and organisational citizenship behaviour*

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# Distance in schools: the influence of psychological and structural distance from management on teachers' trust in management, organisational commitment, and organisational citizenship behaviour

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## ABSTRACT

This study aimed to examine the relationship between teachers' perceived psychological distance and structural distance from management and teachers' affective organisational commitment (AOC) and organisational citizenship behaviour (OCB). Teachers' trust in management was expected to mediate these relationships. Furthermore, the adequacy and openness of communication and participation in decision making were expected to reduce psychological distance. At 10 Dutch schools for vocational education and training, 884 teachers completed a questionnaire. The data were analysed using structural equation modelling. Teachers' psychological distance had a negative effect on trust in management (supervisor and higher management) and AOC. Trust in management had a positive effect on AOC, and trust in the supervisor had a positive effect on OCB. Structural distance did not influence teacher outcomes. Communication and participation in decision making reduced teachers' psychological distance from management. The discussion focuses on the implications of the findings to improve the effectiveness of schools.

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structural distance; interpersonal trust; organisational citizenship behaviour; organisational commitment; schools

## Introduction

Schools in many countries have undergone significant changes in their structure and management in the last few decades. These changes have implications for the distance between teachers and management and may shape teacher–management relationships, influence teacher outcomes, and ultimately affect the effectiveness of schools (e.g., DiPaola & Hoy, 2005; Heck, 2009; Somech & Ron, 2007; Tschannen-Moran, 2009).

One of these changes is an increase in the size of many schools. In The Netherlands, all types of schools have increased in size, particularly schools for vocational education and training (VET). On average, the number of students at each Dutch VET school is currently more than five times what it was 30 years ago (Blank, Felsö, & Van der Aa, 2012). Also in other countries, such as the US, schools have more students on average than in the 1980s (Ahn & Brewer, 2009). Accompanied by larger spans of control (Meier & Bohte, 2000), school management has structurally been placed at a greater distance from teachers.

Another change is a shift towards more school-based management, which became part of the reform in the 1980s in various parts of the world (Caldwell, 1990; David, 1989; Fullan & Watson, 2000). Schools became the major decision-making unit (Karsten & Meijer, 1999). Accompanied by more accountability for their functioning, efficiency, and competitiveness, school-based

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management has led to a greater market orientation of schools (Mattei, 2012; Wasmer & Bruner, 2000). This has given rise to a discussion about possible value discrepancies between management and professionals in school organisations because traditional teacher values, such as academic freedom and autonomy, might conflict with private sector values, such as a focus on output measurements, marketing, business generation, and more rigid control mechanisms (e.g., Smeenk, Eisinga, Teelken, & Doorewaard, 2006).

Differences in work-related values, referred to as psychological distance, and structural distance between teachers and management are likely to have consequences for important aspects of teachers' performance and attitudes, such as their organisational citizenship behaviour (OCB) and affective organisational commitment (AOC). Teachers' OCB, defined as behaviour that is "discretionary, not directly or explicitly recognised by the formal reward system and that in an aggregate promotes the effective functioning of the organisation" (Organ, Podsakoff, & MacKenzie, 2006, p. 3), is critical to a school's success (e.g., Bogler & Somech, 2005). However, OCB may be affected by psychological and structural distance by influencing teachers' motivation to engage in OCB (Organ et al., 2006). Psychological distance may have a negative effect on the judgement of the supervisor's characteristics due to incomprehension and disagreement (Meglino, Ravlin, & Adkins, 1989). Structural distance orders relationships between leaders and subordinates and influences management styles (Meier & Bohte, 2003). This might be negative for the teacher–management relationship and thus also affect teachers' OCB (Organ et al., 2006).

Structural and psychological distance might also reduce teachers' AOC, defined as "the relative strength of an individual's identification with and involvement in a particular organisation" (Mowday, Steers, & Porter, 1979, p. 226). Meglino et al. (1989), for example, found a positive link between value congruence (the opposite of psychological distance) and subordinates' AOC. AOC has been linked to desirable employee behaviours, such as OCB and job performance (e.g., Feather & Rauter, 2004; Meyer, Stanley, Herscovitch, & Topolnysky, 2002).

Because distance is a relevant topic for shaping relationships within schools as well as employees' attitudes and behaviour, and because research on different aspects of distance is scarce (Organ et al., 2006), this study aimed to investigate the relationship between psychological and structural distance and teachers' OCB and AOC. We hypothesised that psychological and structural distance between teachers and management reduces OCB and AOC. Referring to social exchange theory, we expected interpersonal trust (cf. an element of the teacher–management relationship) to play a mediating role. In addition, this study aimed to examine the role of certain human resource management practices, particularly participation in decision making and communication, in reducing the psychological distance between teachers and management.

## Context of the study: Dutch VET schools

Dutch VET schools are usually large schools with an average of 7,450 students in 2013/2014 (MBO Raad, n.d.). Some schools have as many as 20,000 students. These schools have prepared nearly 40% of the Dutch labour force for middle-ranking positions in industry, government, and the service sector (Blank et al., 2012). VET schools operate autonomously from the central government, with much of the formal decision making taking place at the school level (Karsten & Meijer, 1999).

In VET schools, leadership is usually distributed among three management layers: supervisors or middle managers (referred to in the following as supervisors), who usually manage one to four (teacher) teams; location or sector directors, who manage one of the schools' locations or are responsible for one branch of vocational education and training; and the school director(s)<sup>1</sup> (referred to in the following as higher management). In addition, most teachers have certain administrative tasks, such as team coordination or coordination of students' work placement (Groenenberg & Visser, 2011). The supervisor's tasks usually involve translating the school's objectives to the team level, educational leadership and coaching of the teacher team(s), evaluation of

the education provided by the teacher team(s), recruitment and selection of new personnel, and advising higher management levels (De Rooij & Vink, 2009).

In an attempt to reduce bureaucratic structures in VET schools, more authority has been given to teacher teams (Hermanussen & Thomsen, 2011). Teacher teams are usually responsible for the (further) development and provision of training as well as some administrative tasks. Since 2008, for example, a collective agreement<sup>2</sup> gives teacher teams the right to decide how certain tasks should be distributed in the team. This decision must be approved by management and the majority of the team members (MBO Raad, 2008).

## **Conceptual framework**

In the following, we first provide an overview of the concepts included in this study. Second, we discuss the anticipated relationships and formulate hypotheses.

### ***Affective organisational commitment***

Employees' commitment to their organisation has been studied by several authors in various disciplines (for overviews, see Mathieu & Zajac, 1990; Meyer & Allen, 1997). The literature usually distinguishes three forms of organisational commitment: affective commitment, calculative commitment, and normative commitment. Employees' commitment to their occupation has also received some attention (e.g., Meyer, Allen, & Smith, 1993). AOC has received less attention in educational research than in other fields of research (Chan, Lau, Nie, Lim, & Hogan, 2008). In educational research, four distinct types of commitment have been identified: commitment to the school organisation as a unit, commitment to academic goals, commitment to students, and commitment to "the body of knowledge needed to carry out effective teaching" (Louis, 1998, p. 4). In this study, we focused on affective commitment to the organisation (AOC). AOC has been associated with positive employee behaviour, such as putting extra effort into their work and being less likely to quit their job (Meyer et al., 2002). Teachers' AOC has empirically been linked to positive teacher behaviour, specifically citizenship behaviour (e.g., Bogler & Somech, 2004; Somech & Bogler, 2002). Transformational (e.g., Geijsel, Sleegers, Leithwood, & Jantzi, 2003; Leithwood, Jantzi, & Steinbach, 1999; Nguni, Sleegers, & Denessen, 2006) and distributed leadership (e.g., Hulpia, Devos, & Rosseel, 2009; Hulpia, Devos, & Van Keer, 2011) as well as interpersonal trust (e.g., Tschannen-Moran, 2009) have been found to foster teachers' AOC.

### ***Organisational citizenship behaviour***

OCB is usually seen as a multidimensional construct that includes altruism, conscientiousness, sportsmanship, courtesy, and civic virtue (Organ, 1988). Although OCB does not directly contribute to the core tasks of the organisation, it maintains the broader organisational, social, and psychological environment to facilitate the core activities (Motowildo, Borman, & Schmit, 1997). For effective schools, for example, it is important that teachers help and support each other and that they seek ways to improve work processes and share their experiences. Several studies have investigated antecedents of OCB in the educational context. Empowerment (e.g., Bogler & Somech, 2004, 2005), school climate (e.g., DiPaola & Tschannen-Moran, 2001), interpersonal trust (e.g., DiPaola & Hoy, 2005; Ghamrawi, 2011), and leadership (e.g., Khasawneh, 2011; Somech & Ron, 2007) have all been found to foster teachers' OCB.

### ***Interpersonal trust***

Interpersonal trust is a complex multidimensional concept with a great diversity of conceptualisations and definitions (Gillespie & Mann, 2004; Rousseau, Sitkin, Burt, & Camerer, 1998). Dietz and

Den Hartog (2006) divide interpersonal trust into input, process, and output. Input includes elements such as the trustor's predisposition to trust, characteristics of the trustee, and the quality and nature of the trustor–trustee relationship. The process consists of the belief and the decision to trust, and the output consists of the behavioural consequences. There is a lack of consensus on a precise definition of trust, but many definitions focus on the process and include the willingness to take a risk or to be vulnerable in the relationship with another party (e.g., Mayer, Davis, & Schoorman, 1995; Rousseau et al., 1998; Tschannen-Moran & Hoy, 2000). Rousseau et al. (1998), for example, define interpersonal trust as “a psychological state comprising the intention to accept vulnerability (to another) based upon positive expectations of the intentions or behaviour of another” (p. 395). Although the decision to trust is part of most definitions, in the conceptualisation of interpersonal trust most researchers solely measure the belief that the other party is trustworthy (Dietz & Den Hartog, 2006). An exception is the measuring instrument developed and used by Gillespie (2003). She measures the intention to take a risk based on four characteristics of the trustee: benevolence, competence, integrity, and predictability. In addition to OCB and AOC, collaboration (e.g., Tschannen-Moran, 2001), teacher professionalism (e.g., Tschannen-Moran, 2009), and professional communities of teachers (e.g., Cranston, 2011; Louis, Dretzke, & Wahlstrom, 2010) have been found to correlate with teachers' trust.

### **Distance**

Although distance may be one of the most influential factors in shaping interpersonal relations in organisations (Antonakis & Atwater, 2002; Napier & Ferris, 1993), it has received little research attention. In the supervisor–subordinate relationship, three different types of distance can be distinguished (Antonakis & Atwater, 2002; Napier & Ferris, 1993). The first type describes distance that is produced by the structure of the organisation, including physical, organisational, and supervisory distance (Napier & Ferris, 1993). The second type describes distance that is produced by psychological and/or social differences, such as differences in gender, skin colour, social class, norms, values, and power (Antonakis & Atwater, 2002; Napier & Ferris, 1993). The third type refers to the degree of closeness and the quality of the relationship between the supervisor and the subordinate (Napier & Ferris, 1993). It is likely to be influenced by the other two types of distance (Napier & Ferris, 1993; Organ et al., 2006). Structural distance is likely to hinder the development of a close relationship because it reduces possibilities to interact and thus invest in the relationship, psychological distance might reduce the willingness to develop a close relationship. This type can be seen as the emotional and behavioural manifestations of distance in the functional, working relationship (Napier & Ferris, 1993). This is why we focused in the study on structural and psychological distance, as described in the following.

### **Psychological distance**

Following the conceptualisation of Napier and Ferris (1993), we defined psychological distance in this study as distance produced by perceived work-related value differences and power distance. Based on Byrne's similarity-attraction theory, stating that people are more likely to connect with individuals with similar characteristics (Byrne, 1961, 1971), work-related value differences are believed to produce dislike or repulsion between two individuals and a negative biasing of evaluations based on that repulsion. In fact, work-related value differences have been shown to have negative consequences for supervisor–subordinate relationships by decreasing, for example, supervisors' performance ratings (Senger, 1971) and subordinates' satisfaction and commitment (Meglino et al., 1989). Power distance refers to the extent to which a subordinate perceives “discrepancies in his or her power relative to the power of his or her supervisor” (Napier & Ferris, 1993, p. 331). Power distance might evoke the feeling that the person who has more power is difficult to approach or talk to and thus might produce psychological distance.

### **Structural distance**

In this study, we defined structural distance as distance produced by the organisational structure. One aspect of the organisational structure is the span of control, which refers to the number of subordinates reporting to a particular supervisor (Van Fleet & Bedeian as cited in Napier & Ferris, 1993). "Narrow spans of control imply close supervision, while wider spans of control require more autonomy on the part of the subordinate" (Meier & Bohte, 2003, p. 63). It can be assumed that the span of control is a distancing factor between a supervisor and a teacher because it influences the amount of attention, support, and feedback the supervisor is able to give to each individual teacher (Judge & Ferris, 1993). Moreover, the size of the school is a distancing factor when considering the average structural distance between all members of the school as well as the distance between higher management and teachers. Larger schools imply greater structural distance and might reduce the opportunity for the development of personal relationships as well as a school community (Ahn & Brewer, 2009).

### **Participation in decision making**

Participation in decision making (PDM) is one of the emerging human resource management strategies used in schools to increase the school's effectiveness (Somech, 2010). PDM has been researched quite intensively in the context of private sector organisations (e.g., Becker & Huselid, 1998; Gratton & Truss, 2003) and schools (e.g., Bacharach, Bamberger, Conley, & Bauer, 1990; Geijsel, Sleegers, Stoel, & Krüger, 2009; Pounder, 1997; Smylie, 1992; Smylie, Lazarus, & Brownlee-Conyers, 1996; Somech, 2002, 2010). One of the assumptions is that through PDM, teachers feel more responsible for and committed to goals within their school. Geijsel et al. (2009), for example, found participative decision making to influence teachers' internalisation of school goals into personal goals in Dutch elementary schools. This commitment and felt responsibility for school goals may contribute to teachers' work motivation (e.g., Taylor & Tashakkori, 1997) and may increase their AOC (Hoy, Tarter, & Bliss, 1990; Somech & Bogler, 2002) and their willingness to conduct OCB (Bogler & Somech, 2004; Somech & Bogler, 2002). In school settings, PDM has been found to be multidimensional (e.g., Bacharach et al., 1990).

### **Communication**

Communication can be seen as the lifeblood of any organisation (Tourish & Hargie, 1998). In an organisational context, it can be defined as "the process whereby people within an organisation give and receive messages" (De Nobile & McCormick, 2008, p. 102). These messages can travel upward and downward between people of different hierarchical levels and horizontally between people of the same level. Next to its informative and consultative function, communication has a psychological function, because it enables people, through the display of concern and affection, to establish and develop relationships (Gopinath & Becker, 2000).

Downward communication of organisational leaders is believed to be one of the most frequently used human recourse practices (Ärlestig, 2007). It can be conceptualised in terms of frequency as well as different qualitative aspects, for example, adequacy and openness (O'Reilly & Roberts, 1977; Roberts & O'Reilly, 1974). A range of studies in various settings has found different aspects of leader communication to be linked to employee outcomes, such as job satisfaction (De Nobile & McCormick, 2008; Muchinsky, 1977; Roberts & O'Reilly, 1974; Schweiger & DeNisi, 1991), perceptions of procedural justice (Bies & Shapiro, 1988; Gopinath & Becker, 2000), intention to stay (Mayfield & Mayfield, 2007; Roberts & O'Reilly, 1974), self-reported performance (Schweiger & DeNisi, 1991), trust (Gopinath & Becker, 2000; Schweiger & DeNisi, 1991) and organisational commitment (Gopinath & Becker, 2000; Roberts & O'Reilly, 1974; Schweiger & DeNisi, 1991), as well as organisational outcomes, such as organisational climate (Muchinsky, 1977).



In school settings, aspects of leaders' communication have been studied within other concepts, such as professional orientation of leaders (Tschannen-Moran, 2009) and transformational leadership (e.g., Nguni et al., 2006); however, very few studies have been conducted explicitly on leaders' communication (Årlestig, 2007). One of the exceptions is the study of De Nobile and McCormick (2008). They studied the relationship between, among others, school leaders' communication and teachers' job satisfaction in elementary schools and found positive effects of supportive communication, referring to sharing of messages related to encouragement, raising of morale and affirmation, adequacy of communication, referring to the procession of enough information to perform well, as well as openness of communication, referring to the extent of free flow of information, including opinions and points of view.

### ***Anticipated relationships/hypotheses***

Previous research (e.g., Yukl, 2002; Yukl & Fu, 1999) has indicated that certain qualities of the teacher–management relationship, such as agreement on work-related issues and trust, require PDM to have positive effects on teachers' attitudes and behaviour. We expected that PDM would contribute positively to the relationship between teachers and management by fostering the understanding of and agreement on work-related issues and, thus, by decreasing the psychological distance between teachers and management.

H1: Participation in decision making reduces the psychological distance between teachers and the school's management.

Communication is needed to transmit key concepts, intentions, and ideas to teachers and can thus be seen as a process of creating understanding and building acceptance of organisational goals (Årlestig, 2007). Consequently, we hypothesised that openness and adequacy of communication would reduce the psychological distance between teachers and school management by simulating the understanding and acceptance of management goals and work-related values and decreasing the perceived power distance.

H2: Adequacy and openness of communication reduce the psychological distance between teachers and the school's management.

Following Napier and Ferris (1993), we expected the relationships between psychological and structural distance and employee outcomes to be mediated by the quality of the relationship between supervisors and subordinates (cf. functional distance), particularly by the level of interpersonal trust. Both structural and psychological distance might hinder the development of interpersonal trust. To trust another person, certain characteristics of the other person, such as his or her benevolence, reliability, competence, honesty, and openness, are important (Dietz & Den Hartog, 2006; Tschannen-Moran & Hoy, 2000). When a supervisor is structurally distant from a subordinate, it is more likely that the contact between them is infrequent (Antonakis & Atwater, 2002), which may hinder the collection of information on these characteristics. In addition, supervisors who supervise a greater number of subordinates might be less able to use active forms of management and to give individualised attention to each subordinate (Bass, 1998). This situation may lead to a negative judgement of the supervisor's characteristics and reduce the levels of subordinates' trust. Furthermore, the larger a school (cf. the greater the structural distance), the more anonymous and fragmented the school is likely to be. Because anonymity and fragmentation create barriers for communication and collaboration (Herriott & Firestone, 1984; Imants, Slegers, & Witziers, 2001), teachers are more likely to disagree with and become alienated from management,



leading to a negative judgement of management. We therefore expected the following relationship:

H3: The greater the structural distance between teachers and management, the lower the teachers' level of trust in management.

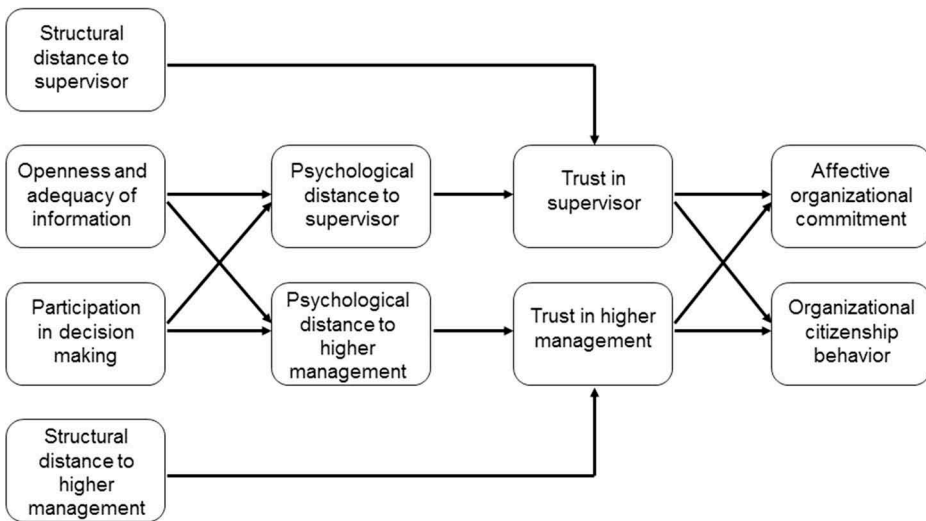
Teachers' perceived psychological distance from management may also have a negative effect on trust. Value differences might lead to incomprehension and disagreement and, thus, to a negative judgement of the manager's characteristics. In contrast, psychological closeness might foster trust. According to Schein (as cited in Meglino et al., 1989), individuals who share the same values are thought to share certain aspects of cognitive processing, such as comparable methods of classifying and integrating events and a common way of communication. According to Meglino et al. (1989), such similarities "are essential to the success of interpersonal activities because they reduce or eliminate uncertainty, stimulus overload, and other negative features of work interactions" (p. 424). Due to reduced uncertainty in the relationship, the level of interpersonal trust is likely to be higher because the manager might seem more reliable and benevolent. Based on this argumentation, we expected the following relationship:

H4: The greater the teachers' perceived psychological distance from management, the lower their level of trust in management.

Referring to social exchange theory (Blau, 1964), we hypothesised that teachers' trust in management influences their OCB and AOC. According to social exchange theory, in a social exchange the exchange partners offer benefits to one another without knowing when or whether the other will reciprocate. The uncertainty about whether the other party will return the favour indicates that risk is always involved in social exchange (Molm, Takahashi, & Peterson, 2000). However, the feeling of risk is likely to decrease once the social exchange relationship has grown stronger and experiences have shown that one party can trust the other to reciprocate. Trust can be seen as a way to reduce uncertainty (Mishra, 1996) and can therefore be expected to be a key element in social exchange. OCB might serve as a way for employees to reciprocate for benefits received from (agents of) the organisation (Organ et al., 2006). In addition, OCB is a behaviour that is not directly rewarded by the formal reward system, so it implies taking the risk of not being rewarded for one's actions (e.g., Konovsky & Pugh, 1994). Thus, when teachers trust management and believe that their behaviour will be reciprocated, they are more willing to conduct OCB. Furthermore, it is more likely that teachers will be open and, for example, share information and cooperate with management when they have trust in management (Mayer et al., 1995). There is some empirical evidence of a positive link between employees' trust in management and OCB (e.g., Aryee, Budhwar, & Chen, 2002; Konovsky & Pugh, 1994). We therefore expected the following relationship:

H5: The greater the teachers' trust in management, the greater their willingness to engage in OCB.

AOC can be assumed to develop through social exchange. Exchange theorists have conceptualised the development of commitments between partners, in addition to purely behavioural patterns of exchange, as "affective bonds that develop from repeated experiences with successful exchanges between the same partners" (Molm et al., 2000, p. 1405). In social exchange, positive experiences with (agents of) the organisation are likely to be attributed to the organisation's good will due to the absence of assurance structures and are thus likely to increase the feeling of affection and commitment towards the organisation. Some scholars have theoretically (e.g., Blau,



**Figure 1.** Hypothesised model of human resource management practices, distance, interpersonal trust, and teacher outcomes.

1964; Büssing, 2000; Molm et al., 2000) and empirically (e.g., Aryee et al., 2002; Büssing, 2002) shown a positive relationship between trust and AOC. Molm et al. (2000) suggested that the feeling of affection is generated through social exchange because “in the absence of assurance structures that can explain a partner’s positive behaviour, actors are more likely to attribute the behaviours to the personal traits and intentions” (p. 1406). Because trust is an element of social exchange, we hypothesised trust as being an antecedent of AOC.

H6: The greater teachers’ trust in management, the greater their AOC.

Figure 1 shows the anticipated relationships/ hypotheses.

## Method

### Procedure

For this study, 3,396 teachers of 10 VET schools throughout The Netherlands were informed about the study through email by the researchers and orally by the management staff of the schools and were asked to participate in the survey. A digital questionnaire, which included, among other variables, measures of structural distance, psychological distance, adequacy and openness of communication, participation in decision making, trust in the supervisor, trust in higher management, OCB, and AOC, was distributed to the teachers.

### Sample

Of the 3,396 teachers, 26.5% returned the questionnaire, resulting in a final sample size of 884. The average age of the respondents was 48 years ( $SD = 10.2$ ), 54% of the respondents were 50 years or older, and 46% were female. Based on information about the demographic characteristics of the Dutch VET teachers, the sample can be considered representative. In 2011, 55% of the population of Dutch VET teachers was 50 years or older, and 45% was female (Ministerie van Onderwijs, Cultuur en Wetenschap [Ministry of Education, Culture and Science], 2012).

## **Measures**

The variables were measured with multi-item scales. These scales consisted of previously validated items, translated into Dutch, and newly developed items. We used principal component analyses to check the structure of the questionnaire. In general, each of the items had its highest loading on the component associated with the other items of the same scale. An exception is explained in the section below. For most items, respondents indicated the extent of their agreement with each item on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*).

### **Communication**

A six-item scale based on the work of De Nobile and McCormick (2008) was used to measure the openness and adequacy of communication from management. An example item is "School management provides sufficient information to employees". The alpha coefficient of reliability was 0.85.

### **Participation in decision making**

PDM was measured with an eight-item scale. Respondents were asked to indicate to what extent they had an influence on different decisions on a 5-point Likert scale [1 = *none*, 5 = *very much*]. Principal component analyses (PCA) indicated a two-factor structure of the items: one factor including six items related to educational decisions (PDME) and one including two items related to financial decisions (PDMF). Example items are "How much influence do you have on the (adjustment of) educational goals?" (PDME) and "How much influence do you have on the team budget?" (PDMF). The alpha coefficients of reliability were 0.80 (PDME) and 0.82 (PDMF).

### **Structural distance from the supervisor and structural distance from higher management**

To identify the teacher's structural distance from the supervisor, we used a one-item question about the span of control of the supervisor. To identify the teacher's structural distance from higher management, we used the number of employees of the school. Since schools are relatively flat organisations, an increase in the size of the organisation translates into a larger span of control (Meier & Bohte, 2000) and thus a larger structural distance of teachers from higher management.

### **Psychological distance from the supervisor and psychological distance from higher management**

Psychological distance was measured with seven questions covering two dimensions of Napier and Ferris' (1993) psychological distance: perceived work-related value difference and power distance. The scale for teachers' perceived psychological distance from the supervisor (PDS) consisted of three items, and the scale for teachers' perceived psychological distance from higher management (PDHM) consisted of four items. Example items are "The ideas of my supervisor concerning good education are in line with my own ideas about this" (PDS) and "Higher management is easy to talk to" (PDHM). The alpha coefficients of reliability were 0.79 (PDS) and 0.86 (PDHM).

### **Trust in higher management and trust in the supervisor**

A six-item scale to measure teachers' trust in higher management (THM) and an eight-item scale to measure teachers' trust in the supervisor (TS) were developed based on the work of Gillespie (2003). The THM scale contains questions about teachers' beliefs about the trustworthiness of the higher management staff. An example item is "I believe that the higher management staff takes account of my wishes and needs". The TS scale contains questions about the willingness of teachers to rely on their supervisor or members of their team in situations where they are vulnerable. An example item is "I am willing to rely on my supervisor to make every effort to support my needs". The alpha coefficients of reliability were 0.93 (THM) and 0.94 (TS).

### ***Affective organisational commitment***

The six-item scale of Honingh (2008), based on the work of Allen and Meyer (1990), was used to measure AOC. An example item is “This organisation means a lot to me”. The alpha coefficient of reliability was 0.86.

### ***Organisational citizenship behaviour***

Two scales of the measure of Somech and Drach-Zahavy (2000) developed for elementary schools were adjusted to fit the present context of VET schools. Eight items were eliminated, and two newly developed items were added, resulting in a five-item scale for OCB towards the organisation and a six-item scale for OCB towards the teacher team. Respondents were asked to indicate the frequency of the behaviour on a 5-point Likert scale [1 = (*almost*) *never*, 5 = *very often*]. For the current sample, PCA indicated a three-factor structure of the items: one factor including four items related to helping colleagues (OCBC), one factor including three items related to being informed about what is happening in the organisation and sharing information (OCBIN), and one factor including two items related to the willingness to volunteer for extra tasks (OCBET). Example items are “I help colleagues who have been absent for a while” (OCBC), “I keep myself informed about what is going on in this organisation” (OCBIN), and “I take responsibilities that are formally not part of my job” (OCBET). The alpha coefficients of reliability were 0.78 (OCBC), 0.69 (OCBIN), and 0.86 (OCBET).

### ***Analytical method***

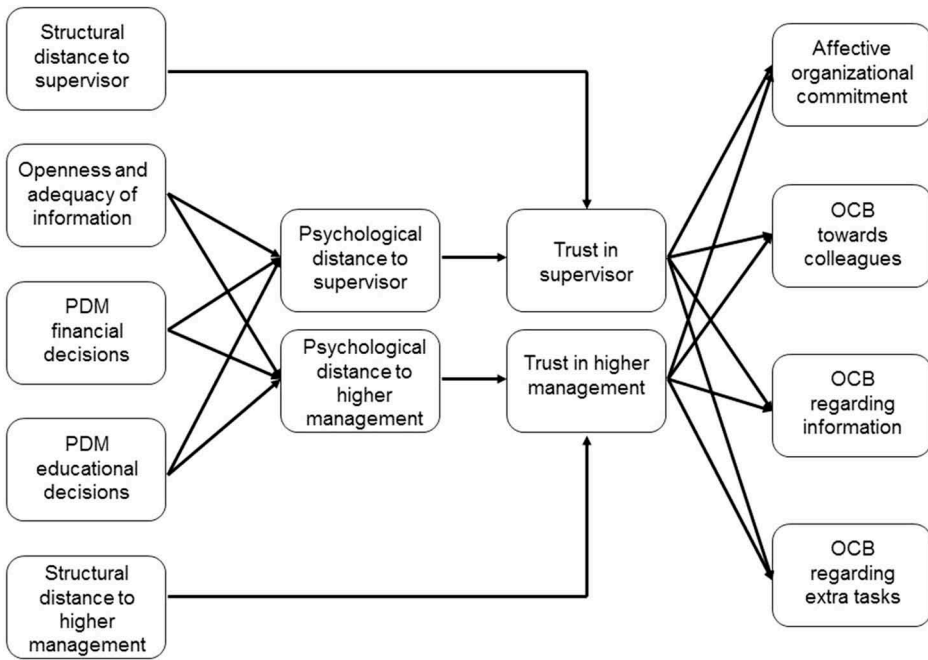
The research questions were investigated through structural equation modelling. The overall goodness of model fit was evaluated using the maximum likelihood chi-square ( $\chi^2_M$ ), the root mean square error of approximation (RMSEA), and the standardised root mean square residuals (SRMR). The  $\chi^2_M$  measure provides a test of exact fit; if the  $\chi^2_M$  value is significant, then we assume that the model does not exactly fit the data. The RMSEA is an index of approximate fit. An RMSEA value smaller than 0.05 indicates a close fit of the model, a value between 0.05 and 0.08 indicates a reasonable fit, and a value larger than 0.08 suggests a poor fit (Browne & Cudeck, 1992; Hooper, Coughlan, & Mullen, 2008). The SRMR is a measure of the mean absolute differences between the observed covariances and the model-implied covariances. A value of the SRMR of zero indicates perfect fit, with increasingly higher values indicating worse fit. Values of less than 0.10 are generally considered to indicate satisfactory fit (Kline, 2005).

To account for the dependency between members of the same team, we identified clusters through team membership and applied the maximum likelihood robust (MLR) method, as implemented in Mplus (Muthén & Muthén, 1998–2015). When information regarding team membership of a respondent was not available, we used school membership instead.

The initial path model was modified on the basis of standardised residuals and modification indices as indicators for poor representation of the observed relationships, but only when theoretically justified. To test whether the fit of the adjusted model improved significantly compared with the previous model, we used the Satorra-Bentler scaling of the chi-square difference test ( $\chi^2_D$ ) to account for non-normality (Satorra, 2000). If the  $\chi^2_D$  is statistically significant, the modified model represents the data better than the previous model.

## **Results**

To test the hypothesised relationships, we assessed the fit of the initial path model. The initial model (Figure 2) had a poor fit ( $\chi^2_M = 324.622$ ,  $df = 43$ ,  $p < 0.000$ , RMSEA = 0.086, 90% confidence interval CI = [0.077, 0.095], SRMR = 0.075). Based on modification indices and residuals, we modified the model step by step and added the following direct effects: communication on trust



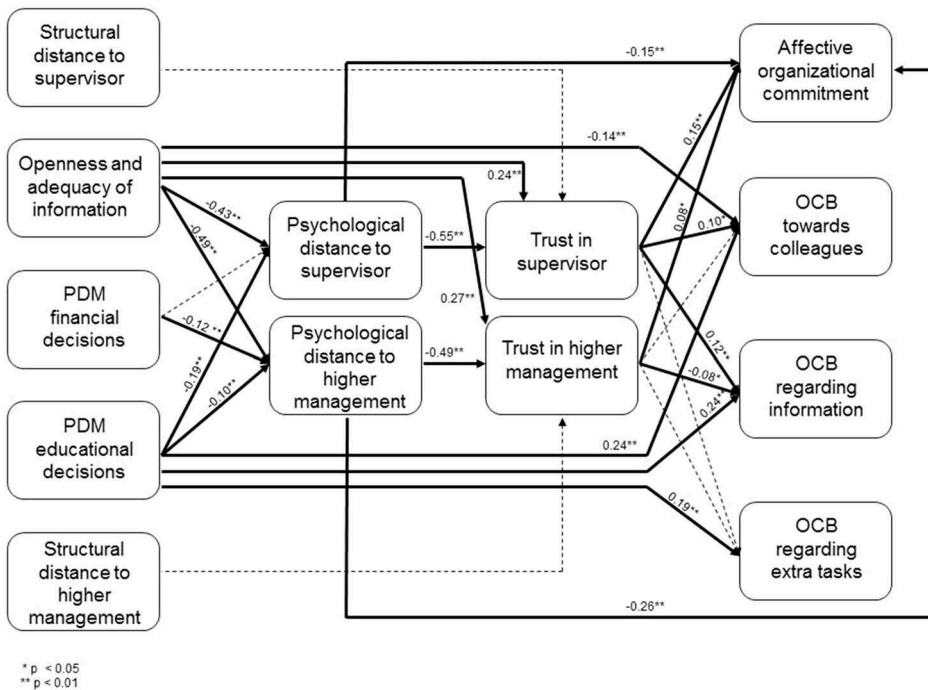
**Figure 2.** Initial path model of human resource management practices, distance, interpersonal trust, and teacher outcomes.

in higher management, communication on trust in the supervisor, distance from higher management on AOC, communication on OCB towards colleagues, distance from the supervisor on AOC, PDM concerning educational decisions on OCB towards colleagues, PDM concerning educational decisions on OCB regarding extra tasks, and, finally, PDM concerning educational decisions on OCB regarding information. The addition of each direct effect improved the model fit significantly. The final model was the preferred model because additional adjustments did not lead to a significantly better fit or more theoretically plausible models. The  $\chi^2_M$  measure of exact fit remained significant ( $\chi^2_M = 87.070$ ,  $df = 35$ ,  $p = 0.000$ ), but the RMSEA index indicated a close fit (RMSEA = 0.041, CI = [0.030, 0.052]). The SRMR decreased significantly (SRMR = 0.029). Figure 3 provides a graphical display of this final model with standardised estimates of all significant direct effects.

In line with Hypotheses 1 and 2, the adequacy and openness of communication as well as PDM seem to reduce teachers' perceived psychological distance from management. PDM regarding financial decisions reduces psychological distance from higher management ( $-0.12$ ,  $p < 0.01$ ) and PDM regarding educational decisions reduces both psychological distance from higher management ( $-0.10$ ,  $p < 0.01$ ) and psychological distance from the supervisor ( $-0.19$ ,  $p < 0.01$ ). Also adequacy and openness of communication reduces teachers' perceived psychological distance from higher management ( $-0.49$ ,  $p < 0.01$ ) and from the supervisor ( $-0.43$ ,  $p < 0.01$ ) significantly. Moreover, PDM regarding educational decisions influences all types of OCB directly. The effect of PDM is stronger on OCB towards colleagues and OCB regarding information (both  $0.24$ ,  $p < 0.01$ ) than on OCB regarding extra tasks ( $0.19$ ,  $p < 0.01$ ). Adequacy and openness of communication has a direct positive effect on trust in higher management ( $0.27$ ,  $p < 0.01$ ) and on trust in the supervisor ( $0.24$ ,  $p < 0.01$ ) and seems to influence OCB towards colleagues in a negative way ( $-0.14$ ,  $p < 0.01$ ).

Hypothesis 3 is not supported by the data. No significant relationship is found between structural distance and teachers' trust in management.

Hypothesis 4 is supported by the data. Teachers' perceived psychological distance from higher management has a significant negative effect on teachers' trust in higher management ( $-0.49$ ,  $p < 0.01$ ) and teachers' perceived psychological distance from the supervisor vastly reduces the level of



**Figure 3.** Final model of human resource management practices, distance, interpersonal trust, and teacher outcomes.

teachers' trust in the supervisor ( $-0.55$ ,  $p < 0.01$ ). Moreover, the results show that teachers' perceived psychological distance from higher management as well as from the supervisor directly reduces their AOC ( $-0.26$ ,  $p < 0.01$ ;  $-0.15$ ,  $p < 0.01$ ).

Hypothesis 5 is also supported by the data, but only for trust in the supervisor. Trust in the supervisor positively affects teachers' willingness to engage in OCB, particularly OCB towards colleagues ( $0.10$ ,  $p < 0.05$ ) and OCB regarding extra information ( $0.12$ ,  $p < 0.01$ ). Trust in higher management, in contrast, does not seem to influence teachers' OCB in a positive way. Teachers' trust in higher management even seems to slightly reduce OCB regarding information ( $-0.08$ ,  $p < 0.05$ ).

The data also support Hypothesis 6: the greater teachers' trust in management, the greater their AOC. This holds particularly for teachers' trust in the supervisor ( $0.15$ ,  $p < 0.01$ ) and, to a lesser degree, for teachers' trust in higher management ( $0.08$ ,  $p < 0.05$ ).

## Discussion and conclusions

To increase the effectiveness of schools, it seems worthwhile to pay attention to interpersonal relationships within schools. The results of this study suggest that school management has different means to minimise psychological distance between teachers and managers and to foster teachers' trust in management. By doing so, management might be able to increase teachers' attitudes and performances, which in the end might lead to better student results.

As this study shows, perceived psychological distance seems to be harmful to the teacher–management relationship. Thus, differences in work-related values as well as power distance might hinder the development of a trusting relationship between teachers and management. Because interpersonal trust is associated with teachers' attitudes and behaviours that are linked to aspects that foster the effectiveness of schools, it is worthwhile to reduce teachers' perceived psychological distance from management.



As predicted, perceived psychological distance seems to be influenced by human resource management practices. Open and adequate downward communication seems to be a suitable way to reduce psychological distance and seems to lead to more trust of teachers in management. This finding implies that management should be transparent about decisions and courses of action at all times. However, it does not mean that all information should be transmitted to teachers without being requested. Not all information is equally important to teachers, and too much information may be problematic because it may overload teachers. Research in Dutch VET schools indicates that information from higher management usually is available through written means, such as newsletters, but that teachers sometimes are overwhelmed by the amount of written information (Van Schoonhoven, Olthof, & Thomsen, 2011). Management should consider communication from the teacher's perspective to determine what type of information and what means of transmitting it is appropriate. Nonetheless, willingness to explain and justify all activities, if required, is likely to increase teachers' agreement with the management's goals and values as well as teachers' trust in management (Hoy & Miskel, 2008).

PDM also seems to reduce psychological distance. In VET schools, PDM seems to consist of two factors: participation in financial decisions and participation in educational decisions. Participation in educational decisions is mainly related to psychological distance from the supervisor, and participation in financial decisions is related to psychological distance from higher management. Considering the tasks of different management levels in Dutch VET schools, this division is understandable. Higher management is mainly concerned with financial and strategic decisions, whereas the supervisor is responsible for operational decisions. A useful course of action for management is the development of decision-making structures in which teachers are consistently involved. However, in line with other research, this study finds that not all domains of decision making are equally relevant (Bacharach et al., 1990; Hoy & Tarter, 2008). In particular, participation in decisions that directly relate to students and teaching seems to be a suitable way to reduce psychological distance. In relation to shared decision making in schools, Hoy and Tarter (2008) suggested that teachers should only be involved in decisions if they have relevant knowledge, if they have a personal stake in the outcome, and if they can be trusted to set aside personal preferences. As far as educational decisions are concerned, it is likely that teachers will appreciate involvement in decision making, and they are very likely to have knowledge advantages. In addition, personal characteristics have been found to moderate the relationship between PDM and teacher performance (Somech, 2010). A careful investigation of who should be involved in what type of decisions is thus likely to be crucial for PDM to reduce psychological distance as well as for direct effects on teacher performance. In Dutch VET schools, individual teachers within a teacher team usually are responsible for extra tasks, such as team coordination or coordination of students' work placement (Groenenberg & Visser, 2011). In these areas, teachers participate in decision making. However, research (Brouwer & Van Kan, 2015) shows that the distribution of these tasks between team members is not always based on a careful consideration of operational, tactical, as well as strategic rationales. Often, individual aspects, such as gained rights and habits, are decisive. This might hinder a distribution of responsibilities and participation in decision making most optimal for teacher and team performance.

Interestingly, only participation in educational decisions relates to teachers' OCB directly. This finding might indicate that participation in decisions that are directly related to teachers' daily work is particularly important to teachers and thus directly affects their performance. Other domains, such as finance, might matter less to teachers; thus, being involved in decisions in these domains might have fewer consequences. This notion is supported by previous findings in school organisations (Smylie, 1992; Smylie et al., 1996), which showed that for most teachers, important aspects of work are related to students and teaching, not to the school organisation. Moreover, our results indicate that participation in educational decisions influences teachers' OCB directly. In line with other studies (e.g., Bogler & Somech, 2005), this finding might indicate that inclusion in formal decision making widens teachers' perceived roles and increases their impact on school life. This



situation may increase teachers' sense of responsibility for achieving the school's objectives and may motivate them to "go the extra mile" for the organisation.

Contrary to our expectations, trust in higher management does not seem to influence OCB in a positive way. Paradoxically, structural distance in VET schools might be an explanation. Greater structural distance might reduce the interactions between teachers and management. Consequently, the contribution of trust in management to teachers' overall judgement of the organisation might be relatively small compared with, for example, trust in direct colleagues, which might reduce the significance of trust in management.

In contrast to our expectations, structural distance did not influence trust in management, although greater structural distance might imply that contact is less frequent, communication is fragmented, and less attention is paid to each individual employee. These aspects might reduce trust in management. However, less structural distance might also lead to less perceived control. In other words, it might give teachers more autonomy and motivate them to work independently and to take on responsibilities (Meier & Bohte, 2000). This situation might be positive for their attitudes towards their job and towards management. The autonomy teachers receive may make them feel they are trusted by management and may foster the development of a trusting teacher–management relationship. It is thus possible that the relationship between structural distance and interpersonal trust is more complex depending on other interpersonal factors, such as leadership style. As the findings of Tschannen-Moran (2009) indicate, when teachers "perceived that the administrators treated them as professionals, with flexibility and less ridged stance towards rules, they were likely to have more trust in principals" (p. 239). Although school size is a popular policy issue, its relation to certain modes of work, personal relationships, the development of community, and student achievement remains unclear (Ahn & Brewer, 2009). In relation to school performance, a study in American schools (Meier & Bohte, 2003) revealed that larger spans of control at the first-line supervision and middle-management levels had positive effects. As Meier and Bohte (2003) state, "The optimal span of control is likely to depend on the specific (organisational) context" (p. 65). In situations where the supervisor has information and skill advantages over the subordinate, smaller spans of control might be preferable, whereas in situations where the knowledge advantage is in favour of the subordinate, larger spans of control might be more effective (Meier & Bohte, 2000). In schools, the knowledge advantage concerning educational issues is usually with the teacher. Thus, at least in terms of effectiveness, larger spans of control might be preferable.

The design of this survey study was correlational. Therefore, our results support but do not prove causality. Nevertheless, the independent variables in our model were identified by theory and/or empirical research as antecedents of the dependent variables, and the final path model fit the data closely. Furthermore, participation in the study was voluntary; therefore, the respondents may reflect a selected group. Although the sample seems representative of the population of Dutch VET teachers with respect to demographic characteristics, respondents with specific characteristics might be over- or underrepresented in the sample. Finally, common method bias might account for some of the significance of the findings.

A number of directions for further research emerge from this study. One direction is an investigation of the relationship between structural distance and trust. As our results indicate, the relationship is likely to be complex. On the one hand, less structural distance might enable managers to use more active styles of management and to have more frequent contact with teachers, which might nurture the development of a trusting relationship. On the other hand, less structural distance might be perceived by teachers as being controlling. It would be interesting to investigate how certain management styles and human resource management practices mediate structural distance and teachers' perceived trust in management. In addition, research on the effects of structural distance in the different work domains of teachers would be worthwhile because it is likely that the most suitable amount of distance depends on whether the knowledge advantage is with the teachers or with management.

Another direction for future research is the role of teachers' trust in different trust targets in relation to their attitudes and performances. The results of our study indicate that teachers' trust in the supervisor is particularly important to increasing teachers' willingness to "go the extra mile" for the organisation. Therefore, it seems worthwhile to study the role of human resource management practices in increasing the level of teachers' trust, particularly in the supervisor. This research could guide managers in finding effective strategies to enhance teachers' performance. Furthermore, trust in other trust targets, such as other teachers, might be important. Thus, it might be worthwhile to include other trust targets in the study of trust in relation to teachers' attitudes and performances.

## Notes

1. Large schools may distribute responsibilities among multiple directors.
2. Collective agreement: contract between an employer or employers and one or more unions on behalf of all employees represented by the union(s). It usually establishes wages, rules, rights, and working conditions.

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