



## **Teachers' perspective on their occupational future**

*The role of teachers' work values, school climate, and person-school value fit*

**Master Thesis Human Resource Studies**

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## Abstract

In the dynamic field of education in the Netherlands, schools are on the one hand coping with an increased teacher shortage, while on the other hand they are pushed to establish climates for performance. As the latter might not be of interest to the teacher and can thus in turn influence the first problem, the aim of this study is to provide insight in the relationship between teachers' values, school climate, person-school value fit, and teachers' occupational future time perspective (OFTP). It was thought that teachers' advancement would negatively affect OFTP and that teachers' group orientedness would positively affect OFTP. Also, it was expected that school climate for academic press would negatively relate to OFTP, and that school climate for socialization would positively relate to OFTP. Furthermore, person-school value fit was expected to have a positive effect on OFTP, and it was expected to mediate the effects of climate. To test these hypotheses a probability and convenience sample of 19 teams and 151 teachers filled in a self-administered survey. Hierarchical regression analysis revealed a significant effect of person-school value fit on one of the two dimensions of OFTP, namely remaining opportunities at work. No relationship was found with the other dimension, remaining time at work. Also, via structural equation modeling a significant positive effect was found for the mediating role of P-S value fit in the relationship between climate for socialization and remaining opportunities at work. Furthermore, unexpectedly a positive relationship was found between teachers' advancement and both dimensions of OFTP. For the other hypotheses no significant effects were found. In addition to these findings, the control variable age appeared to have an enormous effect on OFTP. In the discussion section special attention is paid to this, next to a presentation of the limitations and implications of the findings.

**Keywords:** Occupational future time perspective, organizational and psychological climate, person-organization fit, work values, school, teachers.

## 1. Introduction

Within the educational field in the Netherlands several trends can be seen. One of these is the teacher shortage the Netherlands is coping with (Ministerie van Onderwijs, Cultuur en Wetenschap, 2009). This is alarming as the current teacher population (i.e. teachers that are actually working) is aging and facing retirement (Melser, 2004; van Leenen & Berndsen, 2009). As the Netherlands is not the only country having this problem this has resulted in a lot of research on teacher attrition and retention (see for example the meta-analyses by Borman & Dowling, 2008 and Guarino, Santibañez & Daley, 2006). However, no studies focus on teachers' perceptions on their occupational future. This is a missed opportunity as the future time perspective teachers have, may be related to their future work behaviour (Zacher & Frese, 2009). This study fills this gap and applies the recently developed concept of occupational future time perspective (OFTP) (Zacher & Frese, 2009) to teachers.

As this construct is this new, research on it is still in its childhood. Nonetheless a call has been made to research the individual differences in the development of future time perspective (Cate & John, 2007). Therefore, previous research has focused on personality as predictor of OFTP (Zacher & Frese, 2009). However, as the usability of this in practice is questionable, this study will focus on work values. Work related values are expected to relate to work attitudes (Chatman, 1989; Johnson & Jackson, 2009). In light of OFTP, it is therefore expected that these work values will also influence the perspective teachers have regarding their future.

Another trend emerging in the educational sector is the creation of performance oriented school climates, as a way to improve the quality of education in the Netherlands (Ledoux, Blok, Boogaard & Krüger, 2009). However, the employees in this sector are found to choose the teaching profession, not because of a performance oriented climate (Vogels & Bronneman-Helmers, 2006), but because they feel this way they can help others and can contribute to society (Farkas, Johnson & Foleno, 2000).

This tension between climate and personal preferences is interesting. What are, for teachers, the effects of a push towards a performance oriented climate (in school literature a so called 'climate for academic press')? Would a different climate (e.g. a climate that is more aimed at socialization of students) lead to better outcomes for teachers? And are these climates mutually exclusive, or can they co-exist? Because of this the question arises what the effects on teachers' OFTP are, when schools focus on performance oriented school climates, and whether this effect is different when schools focus on a climate for socialization.

So both personal work values and school climate can be expected to influence OFTP. Nonetheless, the feeling one has about a certain situation seems to be as important. Therefore also the person-organization fit approach is used, which explains that a match between employee and organization will lead to better

work-related outcomes (Ostroff, 1993). So if teachers feel misplaced in their schools because for example the school is pushing too much for performance (i.e. they experience a person-school value misfit), this can affect their work attitudes (e.g. Erdogan, Kraimer & Liden, 2004) and their OFTP. A school climate aimed on performance can this way lead to the unintended effect of even a more negative occupational future time perspective among teachers.

This study will investigate these topics and conflicts and this way aims to clarify the relationships between teachers' work values, school climate, person-school value fit, and OFTP. It furthermore wants to indicate implications for practice. To fulfill this aim the following research question will be examined:

*What is the influence of teachers' work values, school climate, and person-school value fit on OFTP?*

### **1.1. Relevance**

The results of this study will have both practical and scientific relevance. Schools will better be able to evaluate the aims and policies they have regarding their organizational climate. The results will help them to question themselves whether they are striving for the right goal. The results are also relevant for teachers as the study can help them understand what contributes to a positive perception of their future career. Also at societal level the study will give interesting insights. One can, based on the results of climate for academic press, reconsider whether a push towards this climate won't have unwanted effects on teachers, which in turn could influence the teachers' labour pool. This would not be beneficial for society.

Next to these practical contributions, the study will also be relevant for science. It will add to the literature about teachers, but it is refreshing as it takes a different perspective: it does not focus on attrition or retention, but on OFTP. This study also contributes to the literature on OFTP, which has rarely been studied before. As far as known, the only article written about this is the study performed by Zacher and Frese (2009). The inclusion of school climate and person-organization value fit is an extra novelty to this field of study.

This study is structured as follows. First a theoretical framework is provided in which OFTP, teachers' work values, school climate, and person-organization value fit are defined and the current theory and research about these variables is discussed. This leads to several hypotheses, which are summarized in a conceptual model. After that the methods and results are presented. The article ends with a critical reflection on the study, suggestions for future research, and conclusions and implications.

## 2. Theoretical Framework

### 2.1. Occupational future time perspective

People can have different expectations and attitudes towards the future. This is defined in the concept of future time perspective (FTP): FTP is the sense people have about the future and is constructed differently at different points in their lives and is influenced by personal and social contextual influences (Leonardi, 2007; Husman & Lens, 1999). It describes how much time people believe they have left in their future and how they perceive this time (Zacher & Frese, 2009).

McInerney (2004) theorizes that FTP can serve as a strong motivator to engage in activities that are instrumental for future outcomes. This counts also for the organizational context, in which FTP is thought to be important for organizational behaviour and career decision making (Marko & Savickas, 1998). Zacher and Frese (2009) therefore introduce the concept of occupational future time perspective (OFTP) and define it in terms of remaining opportunities and remaining time at work. Although some other authors use other sub constructs of FTP, like a division between focus on opportunities and focus on limitations (Cate & Johnson, 2007), or a division between cognitive and affective aspects of FTP (Seijts, 1998) this research will use the division made by Zacher and Frese (2009). First of all this is done, as these two concepts are particularly relevant for the educational sector. First, the sector is known for its limited career possibilities, which gives an extra disadvantage regarding the number of opportunities left at work. Second, the educational sector is known to be ageing and more and more people are facing retirement. This is associated with OFTP and especially remaining time at work (Zacher & Frese, 2009). Another reason that the division between remaining opportunities at work and remaining time at work is chosen is because this study will address OFTP, and not FTP. This concept is relatively new and its conceptualization deserves further attention.

In previous research future time perspective has often been used as an independent variable, for example to examine the effect on goal orientation (e.g. Simons Vansteenkiste, Lens & Lacante, 2004; Husman & Lens, 1999), and on psychological contracts (Bal, Jansen, van der Velde, de Lange & Rousseau, 2010). The consequences of FTP are thus well examined and its effect on future behaviour is well established (Lewin, in Cate & John, 2007). This holds true for the work context as well (Marko & Savickas, 1998). In light of this abundance of research on the consequences of FTP, it becomes more and more interesting to investigate what can in turn influence OFTP. Besides, in research on FTP a call has been made to study the individual differences that can explain FTP development (Cate & John, 2007).

Nonetheless, only little research has addressed the antecedents of (O)FTP and so far, age is one of the few variables of which the effect on FTP is well established (Cate and John, 2009). This is in line with the

socioemotional selectivity theory, in which age and FTP are the central components. The theory states that the amount of time people perceive to have left is linked to their social motivational system (Cate & John, 2007). As death is the ultimate end, ageing is almost automatically connected to this theory (Carstensen, Pasupathi, Mayr and Nesselroade, 2000). Nonetheless, also other social endings can be of importance (Cate & John, 2007). This is used by Zacher and Frese (2009) to develop the construct of occupational future time perspective (OFTP), in which the ending of the contract is the main focus. Although it should be noted that contracts can be ended because of several reasons, age is also for OFTP the most obvious antecedent. Namely, with ageing also retirement and therewith the natural termination of the employment contract is coming closer and the remaining time to work decreases (Hedge, Borman & Lammlein, 2006). Indeed confirmation for the negative effect of age on OFTP is found (Zacher and Frese, 2009; Zacher, Heusner, Schmitz, Zwieranska & Frese, 2010).

As this evidence seems robust, investigating the relationship between age and OFTP does not form the focus of this research. Moreover, it is much more interesting and needed to investigate what can influence OFTP besides age. In previous research personality has been thought to influence someone's (occupational) future time perspective (Cate & John, 2007; Zacher & Frese, 2009). However, as personality is a stable construct this decreases its applicability in practice, especially in the context of teachers. If for example the outcome would be to only select conscientious teachers, this would limit the teachers' labour pool even more. This research will therefore focus on work values. Although values are also thought to be relatively stable individual characteristics, they are learned and can change (Smith & Smith, 2005; Nelson & Campbell Quick, 2005). Besides, their effect on attitudes is generally accepted (Johnson & Johnson, 2009; Nelson & Campbell Quick, 2005), which makes them possible antecedents of OFTP. This study will explore these possible effects.

Also work context related variables have been studied with regard to OFTP (Zacher & Frese, 2009). These can even better be influenced by employers than personal work values, as they form the tools the organization can use to change employees' attitudes or behaviour. In the context of schools that need to create more performance oriented climates, organizational climate (or more specific school climate) is an interesting variable to take into consideration.

In between individual concepts and organizational concepts the interactional perspective proposes the concept of person-organization fit. The feeling one has about a specific context is often found to influence attitudes (e.g. Kristof-Brown, Zimmerman & Johnson, 2005) and can thus also influence his perspective on the future. In this study person-school value fit is thus related to OFTP as well.

## 2.2. Teachers' work values

Values are the beliefs one has about desirable end states, and therewith guide the selection and evaluation of behaviours, people and events. Furthermore, they are ordered by relative importance (Schwartz & Bilsky, 1987; de Clerq, Fontaine & Anseel, 2008; Johnson & Jackson, 2009). Several authors have related values to the work context via the concept of work values (e.g. Sverko & Super, 1995; de Vos, Buyens & Schalk, 2005). Work values are expressions of the more general human values in the context of the work setting (de Vos et al., 2005) and affect how people behave on their jobs in terms of what is right and wrong (Nelson & Campbell Quick, 2005). De Vos et al. (2005) distinguish four types of work values, namely advancement, autonomy, economic/material rewards, and group orientation. In the context of the current educational situation, in which a tension is noted between performance orientation and social motives, the values advancement and group orientation seem most relevant. Advancement is the importance people attach to achievement, making progress, career development, and power. Group orientedness refers to the value that is attached to relations with people (de Vos, 2002; de Vos et al., 2005; Nelson & Campbell Quick, 2005).

Johnson and Jackson (2009) state that it is important to distinguish between different values, because they initiate different attitudes and behaviours. This means they can influence one's attitude regarding his or her OFTP as well. People that are more advancement oriented are focused on the goals they have and want to demonstrate their success (Johnson & Jackson, 2009; de Vos et al., 2005). This can however result in a strong myopic focus on the present task, which can lead to an ignorance of other opportunities (Zacher & Frese, 2009). For the same reason their occupational future time span might be limited, as they want to demonstrate their success as quickly as possible. This leads to a focus on the short term. An achievement oriented attitude also leads to less attachment to the organization (Johnson & Jackson, 2009), because of the individualistic perspective. This can lead to a search for opportunities outside the current profession, which influences turnover intention on the short term (Moynihan & Pandey, 2007), but can influence OFTP, as an attitude towards the short and/or long term, as well. If people on the other hand place more importance to social values like group orientedness, this will have different effects on their OFTP. More group oriented people highly value other people (e.g. colleagues) and the relationships they have with them, which leads to an aim to stabilize these relationships (Johnson & Jackson, 2009; de Clerq et al. 2008). Besides, they are also found to have a stronger attachment to the organization (Johnson & Jackson, 2009). Taken together, this seems to make termination of the contract unlikely and thus indicates more remaining time in their current profession. Because of the large social network they create and the benefits associated with that (i.e. the access to valuable resources, which in turn guides action) (de Vos et

al., 2005; Sparrowe, Liden, Wayne & Kraimer, 2001; Maier & Youngs, 2009), the remaining opportunities group oriented people have in their work will also increase.

Although the relationship between personal values and OFTP has not been researched before, research done on related variables does give indications. Zacher and Frese (2009) for example find a negative relationship between conscientiousness and remaining opportunities at work and Lee, Hui, Tinsley and Niu (2006) find a positive fit between a performance goal orientation and scheduling and a focus on present outcomes. Johnson and Jackson (2009) find a relationship between having a social identity and affective commitment. Furthermore, studies have found that teachers prefer to work in schools in which social support is high (Johnson & Birkeland, 2003; Kardos, Johnson, Peske, Kauffman & Liu, 2001). All in all the following hypotheses can be formulated:

*Hypothesis 1a: For teachers, advancement is negatively related to OFTP.*

*Hypothesis 1b: For teachers, group orientedness is positively related to OFTP.*

### **2.3. School climate**

At the organizational level climate in organizations has been found to influence employees' attitudes (Ostroff, 1993; Carr, Schmidt, Ford & DeShon, 2003). Organizational climate refers to employees' shared perceptions of types of behaviours and actions that are rewarded, supported and expected by the organization's formal and informal policies, practices, and procedures (Reichers & Schneider, 1990). Psychological climate on the other hand is the individual, experiential based perception (Schneider, 1990). As OFTP concerns the individual perception of the teacher on his future, it is also thought that the perception of the teacher with regard to climate (i.e. the psychological form of school climate) is most important for this study. Nonetheless, organizational climate will be more of interest to the school, as this forms the tool that can provide directionality among the schools' teachers and this way can guide their behaviours towards the aimed goals (Reichers & Schneider, 1990). Therefore this form will also be investigated.

Several climates can be distinguished, depending on the criteria of interest, resulting in different 'climates for...' (Schneider, 1975). This research focuses on school climate: a set of shared values, interpretations, and similar definitions of purpose (Kelley, Thornton & Daugherty, 2005), which distinguishes one school from another and influences the behaviour of people (Hoy & Miskal, in Milner and Khoza, 2008). Within this construct of school climate a distinction is often made between a climate emphasizing academic press (i.e. a performance oriented school climate) and a climate emphasizing the school as community (Shouse, 1996; de Fraine, van Damme & Onghena, 2003; de Fraine, 2004). A

climate for academic press (or achievement press, Hoy, Smith & Sweetland, 2002) refers to a school that is driven by achievement oriented values and norms and that sets high academic standards and goals. Students are respected by other students and by their teachers for their academic success and try to perform the best they can (Hoy et al., 2002; Shouse, 1996). The concept of the school as community holds a more traditional understanding of schooling (Shouse, 1996). It aims to shape and change students rather than accept and tolerate them, and wants to create shared understandings about organizational values, beliefs, purposes and (future) behaviour of the students as learners and especially as citizens (Shouse, 1996). It wants to create (a feeling of) school membership and stresses caring social relationships both among colleagues and between teachers and students (Shouse, 1996; de Fraine et al., 2003; Kardos et al., 2001). Compared to the climate for academic press this form of climate is more aimed at a process of socialization and education, in the meaning of the conscious activity directed to the development of an individual's personality (Veugelers & de Kat, 1998). To distinguish it from the more broadly used term of education, this communitarian climate is, in terms of Schneider's (1975) 'climates for...', best described as a school climate for socialization. Both climate for academic press and climate for socialization can be a perception of an individual teacher (i.e. a psychological climate), or can be shared among teachers in a school or team (i.e. an organizational climate).

Research has found that the aspect of children's socialization and education is important to teachers (Veugelers & de Kat, 1998; Farkas et al., 2000; Lovat & Clement, 2008). This suggests a relationship between the degree of climate for socialization a school has and teachers' OFTP. Although this has not explicitly been researched, confirmation is found for the relationship between climates that focus on warmth and participation, which is thought to be essential for value education (Lovat & Clemens, 2008; Cohen, 2006), and teachers' affective organizational commitment (Ostroff, 1993). This can indicate a positive relationship with more remaining time at work. Also the perspective regarding opportunities at work can be expected to be positive, as the focus on socialization leaves space for a variety of activities (e.g. mentorship programs, the arrangement of field trips and the reorganization of in-class programs) that can be developed outside the normal job description (Lovat & Clement, 2008; Veugelers & de Kat, 1998; Cohen, 2006). A climate for academic press can as well be associated with an increase in tasks for teachers (e.g. more assessments). However, research indicates that this is more felt to be a burden than a form of increased opportunities at work (Valli & Buese, 2007). The relationship between climate for academic press and remaining time at work can also be thought to be negative. It seems that the increased workload diminishes the valued relationships with students and increases work related behaviour, like work-stress (Valli & Buese, 2007). This can lead to less commitment and a higher intention to leave. Furthermore, a climate for performance has often been related to a competitive orientation (Quinn &

Rohrbaugh, 1983), which is found to be related to less organizational commitment and less job dedication (Fletcher, Major & Davis, 2008). In conclusion this leads to the following hypotheses:

*Hypothesis 2a: School climate for academic press (both psychological and organizational) is negatively related to teachers' OFTP.*

*Hypothesis 2b: School climate for socialization (both psychological and organizational) is positively related to teachers' OFTP.*

#### **2.4. Person-school value fit**

Not only individual characteristics (e.g. work values) or situational characteristics (e.g. school climate) are important with respect to someone's attitude towards work. Also whether one feels right in the situation he is in, is of importance. This is explained by the person-organization fit (P-O fit) approach, which states that a match between a person and the organization (i.e. a good fit) will result in better work-related responses than when a person does not fit to the organization he or she is working in (Ostroff, 1993; Hoffman & Woehr, 2006). This research will focus on a specific form of P-O fit, namely value-fit. Value fit or value congruence is the fit between personal values and organizational values (Chatman, 1989; Kristof, 1996; Ostroff, Shin & Kinicki, 2005). In the context of schools the concept person-school value fit (P-S value fit) is suitable.

Incompatibility between personal values and organizational values is associated with negative attitudes (e.g. higher withdrawal behaviours and less commitment and satisfaction, Kristof-Brown et al., 2005). It is therefore likely that a value misfit or fit will also influence OFTP. This can be explained by cognitive dissonance theory, which states that individuals want to maintain consistent perceptions (Festinger, 1962). A negative assessment of fit will thus be associated with a more negative assessment of attitudes towards work, including OFTP. Furthermore, a feeling of fit can lead to identification to the organization (Erdogan, et al., 2004). This can cause a strong attachment to the school and the profession and more expected time in this profession. Also because of this one could feel that he is striving for the right goals, and one could be more willing to grasp the opportunities to accomplish these goals.

Research outside the school context that confirms the relationship between a P-O misfit and negative outcomes regarding organizational attitudes is extensive (see Kristof-Brown et al., 2005, or Verquer, Beehr & Wahner, 2003, for an overview). Nonetheless it has been thought that the concept of fit will also be of influence on teachers' work attitudes (Maier & Youngs, 2009). This is confirmed by research, which indeed finds a relationship between value incongruence and negative attitudes (e.g. Erdogan et al., 2004; Siegal & McDonald, 2004). Also Farkas et al. (2000) confirm that teachers are attracted to schools

that have a mission and teaching strategy similar to their own. Although no research on P-O value fit, not to mention P-S value fit, and OFTP has been done, there is no reason to believe the above will not count for teacher's OFTP. All in all this leads to the third hypothesis:

*Hypothesis 3: P-S value fit is positively related to teachers' OFTP.*

As person-school fit is about an individual fitting in a situation, one could argue that the individual preferences one has, in the form of work values, and the situation he is in, in the form of school climate, will influence the fit someone experiences. Given a certain situation, some individual characteristics will result in fit, while others do not. However, climate and work values as investigated in this study are not suitable for this purpose because they are differently defined. The climate dimensions regard the results the schools are aiming for with respect to their students, whereas the work values dimension regard the beliefs about end states teachers have for themselves. The climate scales and the work value scales thus have different targets and cannot directly be compared. In order to be able to compare climate and work values, first their interrelationships need to be well established, but current research has not yet done so.

In this study therefore an other conceptualization of P-S value fit is used, namely perceived P-S value fit. Perceived P-S value fit is the direct assessment by the respondent whether he fits the organization he is working in (i.e. it is directly asked to the respondent whether he does or does not fit in the organization) (Kristof, 1996). This method is preferred to the above mentioned method of comparison. Namely, asking the respondent directly to his or her fit with the organization gives the most valuable information, as perceptions of reality drive people's cognitive appraisals and subsequent actions (Kristof, 1996). P-S value fit is thus a separately measured construct. This variable can in turn be influenced by other variables, and work values and climate dimensions can still be among these. However it is hard to tell which work values or climate scales will lead to a feeling of fit, if they are considered independently from each other. After all this remains a matter of personal preference.

Nonetheless, the specific context in which this study is performed gives clues regarding the relationship between climate and P-S value fit. It has been found that most of the teachers are attracted to their profession because of the feeling that this way they fulfill a purpose for society and because they can help children (Farkas, Johnson & Foleno, 2000). Teachers' personal values and more specific teachers' values towards the socialization of children can thus be thought to be a large and constant factor. Given this, it can be expected that climate for socialization will increase the feeling of fit and consequently lead to a stronger effect on OFTP, whereas climate of academic press will not necessarily do so. Even worse, a climate that is focused on academic press could lead to a neglect of climate for socialization, for example

because there just is no time left to focus on this form of climate. This way climate for academic press can actually have a negative effect on P-S value fit.

For teachers' work values on the other hand, no such reasoning can be found, as it cannot be said that schools' generally will value one of the two higher. Therefore, no relationship between teachers' work values and P-S fit can be expected. All in all only mediating paths from climate via P-S value fit to OFTP can be expected. This is captured in hypotheses 4a and 4b:

*Hypothesis 4a: For teachers, P-S value fit will mediate the effect between climate for academic press and OFTP, in which academic press will be negatively related to P-S value fit.*

*Hypothesis 4b: For teachers, P-S value fit will mediate the effect between climate for socialization and OFTP, in which climate for socialization will be positively related to P-S value fit.*

### 2.5. Conceptual model

The proposed hypotheses are summarized in the conceptual model (figure 1).

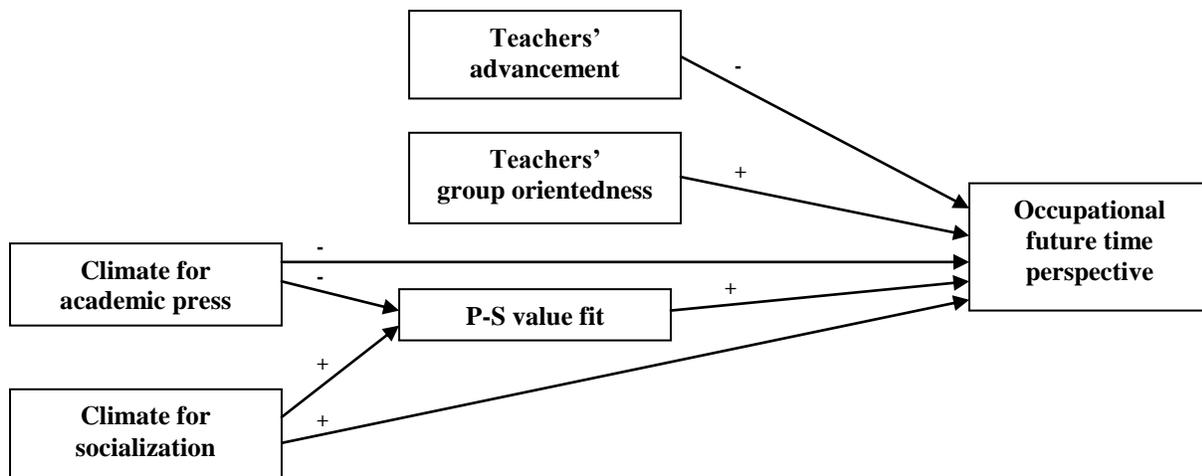


Figure 1. Conceptual model summarizing hypotheses 1-4.

### **3. Methods**

#### **3.1. Research Set-up**

In this study the relationships between teachers' work values and OFTP and school climate and OFTP is tested, as well as the relationship between P-S value fit and OFTP. Furthermore, the mediating effects of P-S value fit on the relationship between school climate and OFTP are examined.

It has been an explanatory study, in which a quantitative, cross-sectional design was used (Bryman, 2004). Surveys were used to collect the data among a sample of teachers in the Netherlands. The study was performed in cooperation with KPC-group, an educational consultancy office in the Netherlands, and is part of a more extensive research on the relationship between school climate and school performance KPC-group and Tilburg University perform.

#### **3.2. Procedure**

First the questionnaire was tested on clarity and comprehensibility, as some changes and adaptations were made in the initial instruments. Therefore a pilot study among acquaintances was performed, which led to a reduction of the items on the value scales. After this the questionnaire was digitalized.

The final questionnaire was spread among 477 teachers of schools all across the Netherlands. The teachers were selected via multi stage probability sampling (Baker, 1999). Initially a probability sample of schools was drawn from a sampling frame consisting of all primary and secondary schools of the Netherlands. However, as it appeared that few schools were willing to participate, a convenience sampling technique was added and schools that the researchers were acquainted with, were also approached. After this, key persons in the schools (e.g. the headmaster of the school, the head of a team, or a HR manager) approached the teachers. The teachers then received an e-mail with a link to the digital questionnaire, an instruction, and a guiding letter, in which the confidentiality and anonymity were stressed. In the e-mail also a deadline till when the questionnaires could be filled in, was given. To increase the response rate a reminder was sent by e-mail after a week. The digital results were directly put in an SPSS data file, without interference of the researchers and the contact persons in the schools.

#### **3.3. Description of the sample**

The data were collected among teachers of primary and secondary education in the Netherlands. All levels of education were included, except special education. 11 schools had agreed to participate with a total of 30 teams. Via these teams a total of 477 teachers were approached. From 28 teams (9 schools) questionnaires were returned, with a total of 234 respondents. Only respondents with complete data on the items for OFTP, school climate, P-S value fit, and work values were selected for this study. Furthermore,

teams of which less than five teachers had filled in the questionnaire were removed from the sample. All together this resulted in a total of 19 teams (a team response rate of 68%) and 151 respondents (a teacher response rate of 32%).

The final sample consisted of 71 men (47%) and 78 women (53%). The age of the respondents ranged from 20 to 65, with a mean of 47,99 (SD = 11,8). The teachers had an average tenure of 16,79 (SD =12,55). Compared to the population the sample has a larger percentage of men (CBS, 2010), and the average age is a bit higher (Bruggink, 2008). In the sample 11,3% of the teachers were employed at primary schools, whereas the majority of the teachers (88,7%) was employed at secondary schools. Although this is also the case in the population, the distribution in the population is less extreme (32,42% primary education, 67,58% secondary education) (CBS, 2010).

### 3.4. Instruments

In this study a survey was used, including the variables OFTP, work values, school climate, and P-S value fit<sup>1</sup>.

*OFTP* was measured by the scale by Zacher and Frese (2009). This scale contains the factors remaining opportunities at work and remaining time at work, both measured by three items. For the current study the items are adapted to the school context. Remaining opportunities at work was measured by the items “Many opportunities await me in my career as teacher”, “I expect that I will set many new goals in my teaching profession” and “My future as teacher is filled with possibilities”. Remaining time was assessed with the items: “Most of my life as teacher lies ahead of me”, “My future as teacher seems infinite to me”, and “As I get older, I begin to experience time in my future as teacher as limited” (reverse coded). Participants rated the degree to which they agreed with the statements on a seven-point scale, ranging from 1 = does not apply at all, to 7 = applies completely. The scale, which had been proved to have a good validity and reliability in other studies (Bal et al., 2010; Zacher & Frese, 2009), was tested on its reliability and validity in this study. Factor analysis showed an explained variance of 87,9% and a KMO of .768 for remaining opportunities at work. The Cronbach's  $\alpha$  was .930. For remaining time at work one item (item 6) had to be removed. The factor explained 89.5% of the variance and the analysis showed a KMO value of .480 The Cronbach's  $\alpha$  was .883.

*Work values* are measured by an adapted version of the international values scale, which was developed by the Work Importance Study group (Sverko & Super, 1995) and was shortened by de Vos (2002). Only the advancement and group orientedness scales were used for this study. Of these scales irrelevant questions were replaced by relevant items of the Portrait Value Questionnaire (Schwartz et al.,

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<sup>1</sup> The complete scales are included in appendix 1.

2001). The number of items was decreased after the pilot study. As a result the advancement scale consisted of 5 items (e.g. "It is important to me to be successful in my work"), and the group orientedness scale also consisted of 5 items (e.g. "It is important to me to be involved in work aimed at helping other people"). Answers were given on a five-point Likert scale, ranging from 1 = not at all important, to 5 = to a great extent important. The advancement scale as used by de Vos (2002) had a Cronbach's  $\alpha$  of .82, and the group orientedness scale had a Cronbach's  $\alpha$  of .76. However, as this scale was adapted to fit the current research, the validity and reliability of the scales needed to be tested.

For *school climate* no scale was found in the current literature. Many climate instruments that are used in research are not suitable in the context of schools or not in the context of academic press and socialization as they are defined in this study. These instruments often use scales like 'clarity of organizational goals', 'efficiency' and 'pressure to produce' (e.g. Patterson et al., 2005), which are not suitable for the current study, or use climate scales in terms of general atmosphere (e.g. certain items by Hoy et al., 2002). Therefore a new scale was developed. For this the Organizational Climate Measure (Patterson et al., 2005) and the Organizational Climate Index (OCI) (Hoy et al., 2002) were used as base. These scales have been proved to have good reliability and validity (Patterson et al., 2005; Hoy et al., 2002), the reliability and the validity of the new scales had to be tested. The new climate for academic press scale consisted of eleven items, three of which are derived from Hoy et al., (2002) and eight are derived from Patterson et al. (2005). All of them are adapted to the school context. An example question is: "This school sets high standards for the academic performance of students". The new climate for socialization consisted of eight items and runs mostly parallel to the climate for academic press scale questions, replacing 'performance' by 'education' or 'socialization'. An example question is: "This school wants to contribute to the socialization of students". Respondents rated the questions on a five-point Likert scale, ranging from 1 = strongly disagree, to 5 = strongly agree.

*P-S value fit* is measured by the three item scale measuring perceived P-O value fit, by Cable and DeRue (2002). An example question of this scale (adapted to the school context) is: "The things that I value in life are very similar to the things that my school values". The three items are measured on a traditional five-point Likert scale, ranging from 1 = strongly disagree, to 5 = strongly agree. Just as the results from previous research (Cable & DeRue, 2002), the scale was proved to have a good validity and reliability. The KMO of the scale was .723 and the explained variance was 78.9%. The Cronbach's  $\alpha$  was .866.

*Control variables* that were included are age, tenure, gender, and the economic environment the students are in. All of these were directly asked for in de questionnaire. Age and tenure were asked in years, the economic situation could be answered as: above, on, or below average economic situation.

### **3.5. Statistical analyses**

#### ***3.5.1. Data preparation***

The data were analyzed on missing values and errors, by use of frequency tables (Pallant, 2007). All the respondents that had failed to fill in any of the items of the OFTP scale, the climate scales, the P-S value fit scale, or the work value scales were removed from the dataset. The remaining missing values were replaced by the median answer for that item. Also the adequacy of the answers was checked, by comparing the answers on tendencies. After this the reversed items were recoded. This had to be done for two items of the scale for climate for academic press (item 6 and 7), for two items of the scale for climate for socialization (item 6 and 7), and for one item of the OFTP scale (item 6). After this the presence of outliers was checked and the normality of the items was assessed (Pallant, 2007). The presence of outliers was measured by comparing the 5% trimmed mean with the mean of the sample. No outliers were found. For the measurement of normality the Kolmogorov-Smirnov test showed significant results, indicating a non normal distribution (Pallant, 2007). However, this is common in larger samples (Pallant, 2007). The histograms did indicate normal distributions.

#### ***3.5.2. Factor and reliability analysis***

Exploratory, principal factor analysis and reliability analysis were conducted to measure the structure and consistency of the scales. This is especially relevant for the adapted work values scales and the new developed climate scales. The other scales had been proved to be reliable and valid (Zacher & Frese, 2009; Cable & DeRue, 2002), so good reliabilities and validities were expected. In general a Cronbach's  $\alpha$  above .7 is recommended, although with short scales low Cronbach's  $\alpha$ 's are often found (Pallant, 2007).

#### ***3.5.3. Correlations and regression analysis***

After the scales had been proved to be valid and reliable, the mean, standard deviations and inter-correlations were examined, the latter by use of Pearson's correlation coefficient (Pallant, 2007). Then hierarchical regression analysis was performed, to measure the direct effects of the independent variables on OFTP (Pallant, 2007). This was done via several regression blocks. Because of the small sample the added value of each variable can this way be tested and conclusions can be drawn about keeping these variables in de subsequent analyses or not. In the first block the control variables and the dependent variable OFTP were tested. Then step by step the work values (advancement and group orientedness), the (psychological) school climates (climate for academic press and climate for socialization), and P-S value fit were added. If a variable did not add to the explained variance, it was excluded in the subsequent

models. These analyses tested hypotheses one till three. It should be noted that the complete regression procedure had to be performed twice, once for remaining opportunities at work and once for remaining time at work.

#### ***3.5.4. Organizational school climate: exploring the possibilities for multi-level research***

In order to test the effects of organizational climate the data on the climate scores would need to be aggregated. In order to check whether the data was suitable for this the interclass (ICC(1)) and intraclass (ICC(2)) coefficients were calculated (LeBreton & Senter, 2008; Bliese, 2000). The ICC(1) indicates whether a substantial amount of variance is explained by group membership. An ICC(1) of .01 is considered a 'small' effect, a value of .10 is considered a 'medium' effect and a value of .25 is considered a 'large' effect (LeBreton & Senter, 2008). The ICC(2) estimates the reliability of the group means. Just as for other reliability analyses, a criterion of .70 for the ICC(2) is used. Negative values occur when the individual variability is large, and group means do not differ (Bliese, 2000). Negative values are therefore an indication that multi-level analysis is not possible.

The results of this showed only sufficient agreement between team members and sufficient reliability between team means with regard to climate for socialization (ICC(1)=.219; ICC(2)=.818). For the dependent variable OFTP the results are insufficient (for remaining opportunities: ICC(1)=.007; ICC(2)=.105; for remaining time: ICC(1)= -.006; ICC(2)= -.103), as is the case for P-S value fit (ICC(1)= -.006; ICC(2)= -.103) and for climate for academic press (ICC(1)= .103; ICC(2)=.648)<sup>2</sup>. These results indicate that the data is not suitable for multi-level research. Hypothesis two will thus only be examined for psychological climate.

#### ***3.5.5. Structural equation modeling***

Lastly, the mediation effects were tested. Multiple regression analysis is only suitable for this purpose if the mediator is not influenced by measurement error (Baron & Kenny, 1986). However, as P-S value fit is an internal psychological concept, it is likely to be measured with error. A better method than multiple regression analysis is structural equation modeling (Baron & Kenny, 1986). In this study the statistical program AMOS Graphics was used. This program calculates the (standardized) regression coefficients and standard errors of the paths, and the fit of the complete model. As fit indices in this study the  $\chi^2$ ,  $\chi^2/df$ , RMSEA, and CFI are used.  $\chi^2$  measures the discrepancy between the sample and fitted covariance matrices. In this the null hypothesis ( $H_0$ ) states that the fitted covariances are valid. A non-significant  $\chi^2$  value indicates a good fit (Byrne, 2001; de Vos, 2002). The  $\chi^2/df$  ratio should have a value smaller or

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<sup>2</sup> These results are presented in table 7 in appendix 2.

equal to around 2-5 (de Vos, 2002). CFI is a fit score that takes sample-size in to account. Its minimum value was originally set at .90, but now a cutoff score of .95 has been advised more often (Byrne, 2001). Finally, the RMSEA takes into account the error of approximation in the population. Overall a value below .05 is considered to represent a good fit, whereas values till .08 indicate reasonable errors of approximation in the population. (Byrne, 2001; de Vos, 2002). However, the RMSEA is quite sensitive to the degrees of freedom and the complexity of the model and tends to unnecessarily reject models, if the sample size is low (Byrne, 2001). Finally, when the best model is chosen, the significance of the mediation paths is calculated by the Sobel test. Several forms of the Sobel test exist. For this study the Aroian test, which is most precise and which is most popular in research, is used (Preacher & Hayes, 2004). The Sobel value can be calculated by dividing the product term of the unstandardized values of the indirect paths by the combined standard error of these paths (Preacher & Hayes, 2004). This combined standard error is calculated as follows (Preacher & Hayes, 2004; Baron & Kenny, 1986):

$$s_{ab} = \sqrt{b^2 s_a^2 + a^2 s_b^2 + s_a^2 s_b^2}.$$

In this formula a and b represent the unstandardized values of the indirect paths from the independent variable to the mediator and finally to the dependent variable.

## 4. Results

### 4.1. Validity and reliability of the new developed measurement scales

Regarding the work value scales the factor analysis showed that the teacher advancement scale consisted of one factor, which explained 44.4% of the variance. The KMO was .688. After removal of one item (item 1) the Cronbach's  $\alpha$  was .670. The teacher group orientedness scale also consisted of one factor, which explained 41.8% of the variance. The KMO value was .680 and the Cronbach's  $\alpha$  was .646. These results are also presented in table 1.

Also the validity of the climate scales was proved by factor analysis. Climate for academic press had a KMO value of .761. Although all the items loaded on the first factor, the eigenvalues and screeplot indicated the possibility of two factors. However, as all the items loaded as well on the first factor, and as the other items did not seem to form a congruent scale content wise, it was decided to do the analysis with the one factor result. This factor explained 32.8% of the variance. The reliability analysis indicated that three items (item 4, 5 and 6) had to be removed. The Cronbach's  $\alpha$  of this scale was .798. The climate for socialization scale did not have to be adapted. The items all loaded on the same factor, which explained 47.2% of the variance. The KMO was .794 and the Cronbach's  $\alpha$  was .837.

Table 1. Results of the factor and reliability analyses

	Explained Variance	KMO value	Cronbach's $\alpha$
Teachers' advancement	44.4%	.688	.670
Teachers' group orientedness	41.8%	.680	.646
Climate for academic press	32.8%	.761	.798
Climate for socialization	47.2%	.794	.837

These results show the validity and reliability of the climate scales used for this study. On the other hand, the teachers' advancement scale and the teachers' group orientedness show a Cronbach's  $\alpha$  below .7. This value cannot be considered to be a good reliability. This can be due to the small number of items (for teachers' advancement 4 items; for teachers' group orientedness 5 items). In any case, caution is needed when interpreting the results. The other scales do form reliable measurement instruments.

Also, the correlations between the variables<sup>3</sup> show that they are overall non redundant and do measure different constructs. High correlations are only found between the two subscales of OFTP, remaining opportunities at work and remaining time at work ( $r_{xy} = .649$ ,  $p < .01$ ), and the control variables age and tenure ( $r_{xy} = .729$ ,  $p < .01$ ). Remaining opportunities at work and remaining time at work are kept separate,

<sup>3</sup> See table 2.

as they can differently be influenced by the other variables (e.g. P-S value fit, which does correlate with remaining opportunities at work, but not with remaining time at work). With regard to the control variables age and tenure, it is decided to continue the analyses with solely taking age in consideration, as this has the highest correlations with the OFTP scales.

#### **4.2. Descriptives and correlations**

In continuance to the previous paragraph the most remarkable descriptive statistics and the remaining inter correlations of the variables are presented. An overview of all descriptive statistics and inter correlations can be found in table 2. With regard to the means and standard deviations, the distribution of remaining time at work shows a large variance ( $SD = 4.01$ ) in comparison to its mean ( $M = 6,54$ ).

Turning to the inter correlations it can be seen that the control variables gender, primary/secondary education, and economic situation correlate with almost none of the other variables. These variables are therefore excluded from the analyses. The only control variables that show significant ( $p < .01$ ) correlations with other variables are age and tenure. They correlate negatively with remaining opportunities at work (resp.  $r_{xy} = -.450$  and  $r_{xy} = -.413$ ), remaining time at work (resp.  $r_{xy} = -.729$  and  $r_{xy} = -.638$ ), and teachers' advancement (resp.  $r_{xy} = -.197$  and  $r_{xy} = -.224$ ). However, as noted above, age and tenure correlate highly with each other ( $r_{xy} = .729$ ,  $p < .01$ ) and therefore it was decided to include only age in the analyses.

The two climate scales correlate significant and positively with each other ( $r_{xy} = .565$ ,  $p < .01$ ), as do the teachers' work values scales ( $r_{xy} = .389$ ,  $p < .01$ ). This indicates that the school climates and teachers' values are not mutually exclusive. Rather, if a teacher or a school scores high on the one dimension, the other will be high as well. This indicates multifacetedness among teachers' values and schools.

The climate scales also correlate high with P-S value fit (for academic press:  $r_{xy} = .451$ ,  $p < .01$ ; for socialization:  $r_{xy} = .554$ ,  $p < .01$ ). The work values scales and P-S value fit scales also correlate, but not as high (for teachers' advancement  $r_{xy} = .301$ ,  $p < .01$ ; for teachers' group orientedness  $r_{xy} = .178$ ,  $p < .05$ ).

Looking at the dependent variables remaining opportunities at work and remaining time at work, correlations are found with teachers' advancement (resp.  $r_{xy} = .329$ ,  $p < .01$  and  $r_{xy} = .255$ ,  $p < .01$ ), and teachers' group orientedness (resp.  $r_{xy} = .264$ ,  $p < .01$  and  $r_{xy} = .213$ ,  $p < .01$ ). Also P-S value fit correlates with remaining opportunities at work ( $r_{xy} = .210$ ,  $p < .01$ ).

Table 2. Descriptives of the main variables under study. Means (M), standard deviations (SD), and Pearson's correlation coefficients (N=151).

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Remaining Opportunities	12.17	4.77	1.00												
2. Remaining Time	6.54	4.01	.649**	1.00											
3. Climate for academic press	25.77	3.63	.151	.000	1.00										
4. Climate for socialization	28.25	3.92	.139	.000	.565**	1.00									
5. Teachers' advancement	15.99	1.68	.329**	.255**	.026	.119	1.00								
6. Teachers' group orientedness	18.87	2.16	.264**	.213**	.152	.089	.389**	1.00							
7. P-S value fit	10.21	2.11	.210**	.079	.451**	.554**	.301**	.178*	1.00						
8. Gender			.032	.179*	-.037	-.092	.088	.071	-.107	1.00					
9. Age	47.99	11.82	-.450**	-.729**	.026	.077	-.197**	-.157	.152	-.234**	1.00				
10. Tenure	16.79	12.55	-.413**	-.638**	.145	.168*	-.224**	-.034	.212*	-.213	.729**	1.00			
11. Primary/secondary education			.124	.079	-.185	-.117	.022	.096	-.090	-.089	-.064	-.198*	1.00		
12. Economic situation (below average)			-.005	.003	-.058	.056	-.046	.065	-.031	.096	.022	-.057	.162*	1.00	
13. Economic situation (above average)			.047	.129	-.009	-.007	.071	.007	-.104	-.006	-.129	-.073	.042	-.068	1.00

\* p < .05, \*\* p < .01

#### 4.3. Regression analyses: analyzing the direct effects on OFTP

In the analyses first the effects of the control variable age on OFTP are measured. The results show that age explains a substantial proportion of the variance in as well remaining opportunities at work ( $R^2=.202$ ,  $p<.001$ ) as remaining time at work ( $R^2=.522$ ,  $p<.001$ ). This is also presented in the first model of table 3.

In the second model teachers' advancement is added. This significantly increases the explained variance in the dependent variables (for remaining opportunities  $\Delta R^2=.060$ ,  $p<.01$ ; for remaining time  $\Delta R^2=.013$ ,  $p<.01$ ). In the other models teachers' group orientedness (model 3a), the climate scales (model 3b), and P-S value fit (model 3c) are added. For remaining time none of these models increases the explained variance significantly. For remaining opportunities at work the last model does lead to a significant increase in explained variance ( $\Delta R^2=.025$ ,  $p<.05$ ). So for remaining opportunities at work model 3c will be determinative for confirming or rejecting the hypotheses, for remaining time at work model 2 will be determinative.

Hypothesis 1a stated that teachers' advancement has a negative effect on OFTP and hypothesis 1b stated that teachers' group orientedness is positively related to OFTP. The only significant effects between teachers' work values and OFTP is found between teachers' advancement and remaining opportunities at work ( $B=.196$ ,  $p<.05$ ) and remaining time at work ( $B=.117$ ,  $p<.05$ ). However, these effects are in the opposite direction than expected. With regard to the relationships between teachers' group orientedness and OFTP it was found that adding this variable did not lead to a better prediction of remaining opportunities at work ( $\Delta R^2=.013$ , n.s.) or remaining time at work ( $\Delta R^2=.004$ , n.s.), and even within these models the effects are non significant (resp  $B=.124$ , n.s., and  $B=.069$ , n.s.). Hypotheses 1a and 1b are therefore both rejected.

Hypotheses 2a and 2b regarded school climate. In congruence with the correlation table presented above no relationships are found between psychological climate and OFTP. This is also presented in table 3, which shows a non significant increase in explained variance when the psychological school climate scales are added to the model (for remaining opportunities  $\Delta R^2=.028$ , n.s.; for remaining time  $\Delta R^2=.002$ , n.s.). As multi-level analysis was already rejected based on the ICC(1)'s and ICC(2)'s both hypothesis 2a, indicating a negative effect of climate for academic press on OFTP, and hypothesis 2b, indicating a positive effect of climate for socialization and OFTP, are in total rejected.

Table 3. Results regression analysis: standardized regression coefficients and explained variances.

	Remaining Opportunities					Remaining Time				
	Model 1	Model 2	Model 3a	Model 3b	Model 3c	Model 1	Model 2	Model 3a	Model 3b	Model 3c
<i>Control variable</i>										
Age	-.450***	-.401	-.390***	-.412***	-.418***	-.723***	-.700***	-.694***	-.704***	-.715***
<i>Individual level variables</i>										
Teachers' advancement		.250**	.204**	.235**	.196*		.117*	.091	.111	.091
Teachers' group orientedness			.124					.069		
Climate for academic press				.109					-.012	
Climate for socialization				.081					.048	
P-S value fit					.168*					.081
R <sup>2</sup>	.202***	.262***	.275***	.290***	.287***	.522***	.536***	.548***	.537***	.541***
R <sup>2</sup> Change		.060**	.013	.028	.025*		.013*	.004	.002	.006

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

In the third hypothesis it was expected that P-S value fit would have a positive effect on OFTP. The results of the regression table show that a positive relationship is only found for the effects of P-S value fit on remaining opportunities at work ( $B=.168$ ,  $p<.05$ ). For remaining time at work the effect of P-S value fit does not add to the explained variance ( $\Delta R^2=.006$ , n.s.), nor is it significant ( $B=.081$ , n.s.). Therefore hypothesis three is only confirmed with respect to remaining opportunities at work.

Besides these results, also the effects of age are worth noting. The effect of age on remaining opportunities at work is large, negative, and significant ( $B= -.418$ ,  $p<.001$ ), as is its effect on remaining time at work ( $B= -.700$ ,  $p<.001$ ).

#### **4.4. Structural equation modeling: P-S value fit as mediator**

Hypotheses 4a and 4b stated that P-S value fit would be a mediator in the effects of climate on OFTP. As the analyses of the direct effects showed only a significant relationship between P-S value fit and remaining opportunities at work, the mediation effects are only tested for this dependent variable. Although unexpected, the correlation matrix also showed significant positive correlations between teachers' work values and P-S value fit (for teachers' advancement:  $r_{xy}=.301$ ,  $p<.01$ ; for teachers' group orientedness:  $r_{xy}=.178$ ,  $p<.01$ ). Therefore these two possible paths are investigated in addition to the hypothesized effects of climate. Also the control variable age is included in the analyses. The results can be seen in table 4. In model 1 all the possible forms of P-S value fit mediation are investigated. In the subsequent models paths that are insignificant are removed step by step until the best fitting model is found. It should be noted that the significant direct effects that were found above are included in all models.

Model 3 contains these direct effects and the effects of climate for socialization, climate for academic press and teachers' advancement, via P-S value fit, on remaining opportunities at work. This model shows a good fit to the data ( $\chi^2=6.985$ , n.s.;  $\chi^2/df=1.306$ ; RMSEA=.000; CFI=1.000). The Sobel test confirms the significance of the mediating path starting at climate for socialization ( $z=2.108$ ,  $p<.05$ ). However, the Sobel test does not give significant results for the mediating paths starting at climate for academic press ( $z=1.752$ , n.s.) and teachers' advancement ( $z=1.95$ , n.s.). This is presented in table 5. Therefore in model 4 climate for academic press is excluded and in model 5 the path from teachers' advancement to P-S value fit is excluded. Neither do however lead to a better fit (resp.  $\chi^2=5.224$ , n.s.;  $\chi^2/df=1.306$ ; RMSEA=.045; CFI=.990; and  $\chi^2=21.260$ ,  $p<.01$ ;  $\chi^2/df=2.658$ ; RMSEA=.105; CFI=.927) and therefore the third model is kept. In this model all the individual paths are found to be significant (see table 6). The effect of P-S value fit on remaining opportunities of work has a B of .17 ( $p<.05$ ), the effects of climate for socialization, climate for academic press, and teachers' advancement are significant as well (resp.  $B=.41$ ,

$p < .001$ ;  $B = .22$ ,  $p < .01$ ;  $B = .25$ ,  $p < .001$ ). The remaining direct effects on remaining opportunities at work remain significant (for age  $B = -.42$ ,  $p < .001$ ; for teachers' advancement  $B = .20$ ,  $p < .01$ ). The final structural model is presented in figure 2. All in all, hypothesis 3a, which indicated a mediating path from climate for academic press, via P-S value fit on OFTP was rejected. Hypothesis 3b indicated a mediation effect of P-S value fit for the relationship between climate for socialization and OFTP. In this hypothesis climate for socialization would positively affect P-S value fit, which in turn would positively affect OFTP. The results confirm this expectation only with regard to remaining opportunities at work and thus hypothesis 3b is partly confirmed.

Table 4. Structural model of P-S value fit as mediator on remaining opportunities at work: fit indices

	model 1	model 2	model 3	model 4	model 5
$\chi^2$	37.813***	6.226	6.985	5.224	21.260**
$\chi^2/df$	3.438	1.038	.998	1.306	2.658
RMSEA	.127	.016	.000	.045	.105
CFI	.871	.999	1.000	.990	.927

\*\*  $p < .01$ , \*\*\*  $p < .001$

Table 5. Sobel tests for P-S value fit as mediator on remaining opportunities at work: z-values

	z-value
Teachers' advancement	1.95
Climate for academic press	1.752
Climate for socialization	2.108*

\*  $p < .05$

Table 6. Structural model (model 3) of P-S value fit as mediator on remaining opportunities at work: standardized regression coefficients

	P-S value fit	Teachers' advancement	Remaining opportunities
Age		-.20*	-.42***
P-S value fit			.17*
Teachers' advancement	.25***		.20**
Climate for academic press	.22**		
Climate for socialization	.41***		

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

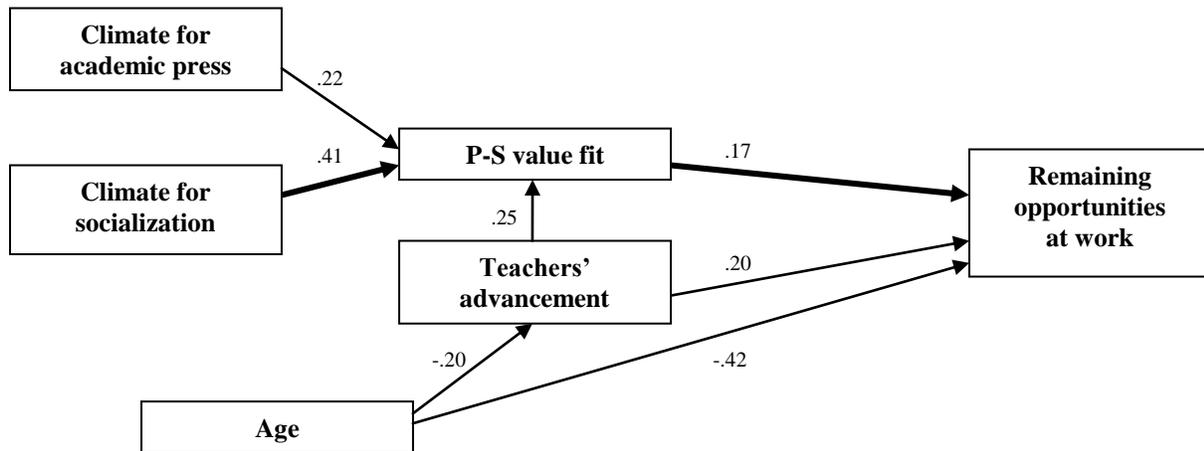


Figure 2. Best fitting structural model for remaining opportunities at work: significant paths and standardized regression coefficients. The bold line represents the only significant mediating path via P-S value fit.

## 5. Discussion and conclusions

### 5.1. Findings

The aim of this research was to gain more knowledge on the relationships between work values, climate, person-organization value fit, and occupational future time perspective in the context of schools, by examining the following research question: *What is the influence of teachers' work values, school climate, and person-school value fit on OFTP?* For this, 151 teachers participated in a survey research. The hypotheses about the direct effects were tested by means of regression analysis; the hypotheses regarding the mediating paths were tested by means of structural equation modeling. The third hypothesis, which stated that person-school value fit will be positively related to occupational future time perspective, was confirmed with respect to remaining opportunities at work, but not for remaining time at work. This counted as well for the mediation effect from climate for socialization via P-S value fit on OFTP, which was described in hypothesis 4b. For the other hypotheses no confirmation was found. This was the case for the hypotheses indicating direct effects and relating (1a) teachers' advancement, and (2a) school climate for academic press negatively to OFTP, and relating (1b) teachers' group orientedness, and (2b) school climate for socialization positively to OFTP. Also no confirmation was found for hypothesis 4a, which hypothesized an indirect path from climate for academic press, via P-S value fit, to OFTP.

#### 5.1.1. Teachers' work values

Teachers' work values did not relate to OFTP as expected in the first hypotheses. Teachers' advancement has a significant effect on both dimensions of OFTP, but this effect is in the other direction than was hypothesized: teachers' advancement has a positive effect on both remaining opportunities and remaining time at work. This is not congruent with previous research on OFTP, in which personality, a related construct, was studied (Zacher & Frese, 2009). An explanation could be that people who value advancement might be more planful and might look for opportunities (Cate & John, 2007). Also, the feeling of success and a positive 'flow' (Nakamura & Csikszentmihalyi, 2002; Waterman, 2005) can lead to positive work attitudes (Brown, Cron & Leigh, 1993) and a positive perspective regarding OFTP. On the other hand the effects of teachers' group orientedness on as well remaining opportunities at work, as remaining time at work did not add to the explained variance of the dependent variables. Neither were the effects significant. This can first of all be explained by statistical reasons. Teachers' group orientedness correlated positively to teachers' advancement, which had stronger effects on OFTP. This, in combination with the small sample, can have made the effects redundant. Furthermore the lack of results on remaining time at work can be explained by the enormous effect of age, leaving little variance to be explained by

other variables. This can, among other reasons, also explain the lack of significance for almost all of the other effects related to remaining time at work.

At content level the non significant effects on remaining opportunities at work can be explained by the need for stable relationships with people (Johnson & Jackson, 2009; de Clerq et al. 2008). Maybe this does not as expected have a strong effect on remaining time at work, but it could negatively influence the opportunities one perceives to have left at work. People that are group oriented might have a strong urge to fit into the group and are not willing to differ by means of looking for extra(ordinary) opportunities. Another explanation is given by Lindholm (2003) who finds that as long as exercising ones values is not influencing someone's career advancement, values are not making that much of a difference.

### ***5.1.2. School climate***

With regard to the second hypotheses about the two climate dimensions, no effects on OFTP are found. Climate for academic press apparently does not affect OFTP. It can be that teachers nowadays learn how to combine the focus on results with a focus on education/socialization (Wentzel, 2009), because of which the effects might be diminished. Furthermore, so many schools might now have adapted climates for academic press, that it is perceived by teachers as a given. In the calculation of the inter- and intraclass correlation coefficients it is indeed found that schools do not differ with respect to climate for academic press. It could be that because of this, or maybe this counts for the school context in general, that the competitiveness between schools is not that high. The lack of commitment associated with this (Fletcher et al., 2008) will then also not be present. Another explanation can be that the negative influences as stated before (e.g. increased workload) are diminished by an increase in positive opportunities for teachers. Development opportunities that are offered to 'teach the teacher' in order to achieve higher results, can be positively evaluated.

With respect to climate for socialization an explanation for the insignificant results can be that the tasks regarding socialization reflect tasks that teachers believe in and that they are motivated to do (Valli & Buese, 2007). This can cause teachers to engage in new opportunities, while they are not aware of that. With respect to climate for socialization an extra interesting finding is that schools do seem to differ in their level of climate for socialization. It could be that, although schools might be striving to excel in their climates for academic press, much more can be won by standing out in terms of climate for socialization. In this study the low intraclass and interclass correlation coefficients of the other variables made the exploration of multi-level concepts irrelevant. Future research can however continue with this finding on climate for socialization and can relate it to other concepts, which could give interesting results.

### ***5.1.3. P-S value fit***

The third hypothesis was partly confirmed: the results did indicate a positive relationship between P-S value fit and remaining opportunities at work. This is consistent with other person-organization fit literature, which relates fit to more positive attitudes at work (Kristof-Brown et al., 2005; Erdogan et al., 2004). The results can be explained by the cognitive dissonance theory (Festinger, 1962), which states that a positive assessment of fit will be associated with a more positive assessment of attitudes towards work. Also the feeling that one is striving for the right goals (Erdogan, et al., 2004) will stimulate teachers to take the opportunities to work for these goals.

With respect to remaining time at work the hypothesis was surprisingly not confirmed. Apparently a feeling of fit does not lead to a perception of a longer occupational time span. An explanation might be that people are starting to feel bored in the 'perfect' situation and are looking forward to do something else in the future. With respect to organizational outcomes it is thought that too much P-O fit leads to too much homogeneity and as a consequence to less adaptability and innovation (Schneider, Goldstein & Smith, 1995). A possibility is that this lack of innovation and novelty has negative influence on people who, although they feel they fit to the values of the organization, have the feeling they eventually will need change.

### ***5.1.4. P-S value fit as mediator in the climate - OFTP relationship***

Although the climate scales do not significantly relate to OFTP, the analyses on indirect effects from the climate scales to remaining opportunities at work show different results. Climate for socialization does lead to an increase in remaining opportunities at work, via P-S value fit. This is in line with the article of Farkas et al. (2000) that indicates that teachers choose their profession because of the contribution it has to society. Apparently a climate that stimulates the socialization of students fits teachers, who then perceive to have more opportunities left.

The results of climate for academic press are not as expected. The results reject hypothesis 3a and it can be stated that climate for academic press does not lead to a decrease in P-S value fit. However, the results are not that straightforward about the presence of a positive effect either. On the one hand the mediating effect is not found to be significant, but, on the other hand, removing academic press from the analysis leads to a worse fit of the model. An explanation can be found in the high correlation between climate for academic press and climate for socialization. Apparently if a school scores high on climate for socialization, it also scores high on climate for academic press. It is not a case of either/or. This multifacetedness is also underlined by de Fraine (de Fraine, 2004; de Fraine et al., 2003) and Shouse

(1996). The results thus indicate that for schools having a climate seems to be important. Or, stated differently, schools should have clear objectives and should be ambitious in general.

#### ***5.1.5. P-S value fit and teachers' advancement***

Although work values were not expected to relate to P-S value fit, the correlation matrix gave strong incentives to nevertheless investigate this possibility. For group orientedness indeed no paths towards P-S value fit were found. For teachers' advancement the results were intriguing. Just as for climate for academic press the mediating effect was not found to be significant. Furthermore, adding a mediating path did not change the direct effect of teachers' advancement on remaining opportunities at work and this is a prerequisite for the confirmation of a mediation effect (Baron & Kenny, 1986). Nonetheless, removing teachers' advancement from the analysis led to a worse fit of the model. A reason for a mediating path could be found in what Lindholm (2003) calls intellectual fit: the feeling that one's results are recognized among colleagues and that one can share intellectual interests. This in turn can lead to increased creativity and results. Lindholm (2003) found that this intellectual fit is important to university faculty, and it is likely that it is important for teachers as well. An interest in advancement will increase this form of fit. Nonetheless, first more research is needed that investigates whether a mediating path from teachers' advancement on remaining opportunities at work, via P-S value fit actually exists or not.

#### ***5.1.6. Age***

Unintended, the findings of the study show the importance of age with respect to OFTP. Both with regard to remaining opportunities at work and remaining time at work strong negative effects are found. This is in line with research on future time perspective (e.g. Seijts, 1998; Hesketh 2000; Cate & John, 2007) and with the more specific research on OFTP (Zacher & Frese, 2009; Zacher et al., 2010). Due to retirement, the time left to continue to work automatically decreases by age (Hedge et al., 2006). This is apparently strongly acknowledged by teachers. But not only the actual future time span decreases, also the opportunities left at work decrease with age. This is in congruence with findings of van Veldhoven and Dorenbosch (2008), who find a negative relationship between age and career opportunities. These findings can be explained by literature that states that on the one hand older workers are generally less motivated to develop (Warr & Birdi, 1998; Warr & Fay, 2001) and on the other hand employers are less inclined to offer development opportunities to older workers (Schalk et al., 2010). Because of this remaining opportunities at work decrease. Moreover, Warr (1994) states that older people are working more according to habits and prefer situations with less variety. This also indicates a tendency to engage less in (new) activities.

## 5.2. Limitations and directions for future research

The sample that was used for this study is the first aspect that deserves attention. The sample was partly drawn via convenience sampling. Although anonymity was stressed, this can have led to a feeling among the respondents that they should evaluate their schools positively, which can have influenced the results. Also, the division of teachers from primary and secondary education was more extreme than in the population of teachers' in the Netherland. Furthermore, the response rate was low (32%) and as a consequence the sample relatively small (N=151). Because of these aspects, caution is needed for generalizing the conclusions to the broader population of teachers' in the Netherlands. In addition, the small sample size can lead to a decrease in power of the analysis and therefore hypotheses might wrongly be rejected.

Generalization outside the school context is also not possible, and especially the mediation paths are hypothesized to be population dependent. The study first needs to be replicated in other sectors, before the conclusions can be extended to other contexts.

The use of a one-time self-administered survey measurement also has its limitations. The most important disadvantage of this is that the design is cross-sectional. This is not sufficient for drawing firm conclusions about causal effects. Especially with regard to the effect of teachers' values on OFTP this seems to be a serious limitation. Socioemotional selectivity theory states that people's social motives change, when people have a shorter future time perspective (Cate & John, 2007). And, although it is reasonable that values influence attitudes that in turn influence motives, motives do have similarities with values (Nelson & Campbell Quick, 2005)<sup>4</sup>. Looking this way at the current research the results give interesting indications for reversed causation sequences. Longitudinal designs are thus needed to first of all confirm the causality of the effects found in this study, but also to spread light on possible cyclical relationships. In the current study this was not possible, but as this study is part of a more extensive research, actual causal effects can be confirmed in the future.

The second limitation is the self-administered aspect of the questionnaire. This can lead to common method variance, which means that variance is caused by the measurement method instead of by the concepts that are studied (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). The problem of common method variance can be an explanation for the large correlations between variables (Podsakoff et al., 2003). Nevertheless, literature underlines the concept of multifacetedness in schools (de Fraine, 2004, de

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<sup>4</sup> As the research on OFTP is still in its childhood and the order of the variables could be questioned based on socioemotional selectivity theory, comparative analyses are performed, in which the attitude 'turnover intentions' is used as dependent variable. These analyses also find effects of P-S value fit and teachers' advancement on this other work attitude. Also the multifacetedness of schools is confirmed. The analyses is included in appendix 3.

Fraine et al., 2003). Also the literature on personal values indicates that people can have multiple values (Schwartz & Bilsky, 1987; de Clerq et al., 2008; Johnson & Jackson, 2009).

Common method variance is also concerned a big disadvantage when fit is measured by direct assessment (i.e. making use of perceived P-S value fit) (Kristof, 1996). In order to address these critical notes, future research could replicate this study by means of other forms of fit, for example subjective fit methods or objective fit methods<sup>5</sup>. Subjective fit is the match between the person and the organization (e.g. the teachers' work values and the school values) as perceived and reported by the respondent. It differs from perceived fit in that both personal values and organizational values are rated separately and the respondent is not asked for an immediate assessment of his or her fit with the organization. Objective fit is the match between the person and the environment as it actual exists, independent of the respondent's perceptions (Kristof, 1996). Objective fit makes use of other measurement methods (i.e. a multi-method design), or of multiple actors (i.e. a multi-actor design). These two different designs would better address the issue of person-situation interdependency, which was mentioned in the theoretical overview.

Another disadvantage concerning the way P-S value fit is measured in this study, is that it is measured in broad terms. Future research could investigate whether questions in which a specific kind of value is proposed (e.g. "My personal values match my school's emphasis on achievement") would give different results. These questions would on the one hand narrow down the construct, but would on the other hand give more insight in the occurrence of misfit.

Other limitations of surveys concern the questions and response styles. Questions can be misinterpreted, which can lead to incorrect answers. This is especially the case for the new developed scales, although the work value scales were tested in a pilot study. In addition, to test the validity and reliability of the scales, factor and reliability analyses were performed. The barely sufficient reliabilities of the work values scales is a limitation that implicates that caution is needed for the interpretation of these results. Also, exploratory factor analysis is not the best method to perform confirmatory factor analysis. For future studies it is therefore recommended to perform factor analysis via structural equation modeling, which is more suitable for this purpose (Byrne, 2001). Also checking the redundancy of the

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<sup>5</sup> The data in this study did give the opportunity to slightly address this issue. By means of an interaction term between the climate scales and teacher values the combination of these two dimensions was investigated. Even though all the scales were centered (Aiken & West, 1991) the interaction terms correlated extremely high (see appendix 4, table 15) with the subscales and therefore regression analysis was not possible. Future research can investigate these aspects further and can focus in more detail on subjective fit and objective fit, especially as these methods are preferred above interaction techniques (Kristof, 1996).

scales is better performed by structural equation modeling (Byrne, 2001). Due to time constraints this could not be done in the current study, but future research can address this.

The possibility that respondents answer in tendencies is another disadvantage of surveys. It could be that the respondents do not use the full range of answering options (e.g. only provide neutral answers). The data were checked on tendencies, especially with regard to the reverse coded items. Unfortunately many illogic answers were found for the sixth item of the OFTP scale (29%). The number was too big in comparison to the small sample to remove all these respondents. Also, it could be an indication that the question itself was not valid. This was confirmed by the factor analysis, which indicated the option of a second factor. This is in line with the article of Podsakoff et al. (2003), which states that if more than 10% of the respondents fails to recognize reverse coded items, a new factor might emerge. Also reliability analysis in which all items were included, confirmed the lack of reliability for this item and it had to be removed. However, the respondents remained in the sample, which raises questions about the reliability of the other answers they have given.

In addition to the mentioned openings for future research, this study provides more interesting starting points for future studies. For example next to multi-method en multi-actor design, that have been named, the current study also gives starting points for multi-level designs that focus on organizational school climate. Especially with respect to climate for socialization this form of research seems to be interesting, as schools appear to differ on this aspect.

School climate is not only interesting because of its possibilities for multi-level research. The current study finds that schools are multifaceted with regard to their climates. This indicates it is not a matter of the one climate or the other; rather it gives thought for a new concept here called 'the ambitious school'. Future research on school climates should investigate this concept to a larger extent.

Finally, this research indicates that the new developed construct of OFTP by Zacher and Frese (2009), has many more sides that can and need to be explored. Although age is confirmed to have an enormous influence, the explained variance that is left leaves possibilities for future research. Therefore, the gap in literature on the antecedents of OFTP still needs further exploration. Also, the differences between remaining opportunities at work and remaining time at work can be investigated in more detail. Also, other sub concepts like perceived limitations (Cate & John, 2007), and directionality or affectivity (Seijts, 1998) can be studied.

### 5.3. Main conclusions and implications

All in all, in response to the research question about the influence of teachers' work values, school climate, and person-school value fit on OFTP, it can be concluded that, despite the strong effects of age, person-school value fit and teachers' advancement directly influence occupational future time perspective. Person-school value fit has a positive effect on the teachers' perspective regarding remaining opportunities at work, and teachers' advancement has a positive effect on both the perception of remaining opportunities at work and on the perception of remaining time at work. In addition, climate for socialization affects occupational future time perspective via its influence on person-school fit.

These conclusions have implications for science as well as for practice. Multiple studies have shown the effect of future time perspective on a variety of organizational concepts (e.g. Simons et al., 2004; Bal et al., 2010). As it is thought that future time perspective can be applied to the specific context of organizations and work, this study narrows down the concept of future time perspective to occupational future time perspective and this way follows the path that is initiated by Zacher and Frese (2009). The results of this study indicate the importance of personal work values, in particular the advancement value, and person-organization fit on this occupational future time perspective of teachers.

The study also confirms the effect of age on occupational future time perspective. This effect is especially strong for remaining time at work. Future studies should therefore not underestimate these effects and should reconsider the use of including remaining time at work as dependent variable. Zacher et al. (2010) have started to continue their studies with only remaining opportunities at work, and maybe future studies are wise to do so as well.

Besides implications on OFTP, this study also has implications for studies on P-S value fit. In addition to the often studied concepts of commitment, satisfaction and turnover (e.g. Kristof, 1996, Kristof et al., 2005) now a new dependent variable has come on stage. Instead of endlessly repeating the 'old' research, this study gives good starting points for future studies on other variables. The results demonstrate P-S value fit does influence the perspective teachers have on remaining opportunities at work, while it does not influence the perception of remaining time at work. Also the effect of climate on P-S value fit is further demonstrated. Besides, this is done with scales that explicitly address school climate. These new scales, which were found to be reliable and valid, can be used in future studies

The possibility of multifaceted or ambitious schools is another construct that emerged during this research. Climate scales can thus be used independently, but it seems they will correlate. This should be taken into account in future research.

At the practical side, schools can learn from this study that, in order to keep their teachers positive about the future, it is important to stimulate teachers to value their own advancement. Furthermore,

schools should be aware that teachers need to have the feeling they fit in the organization they work for. The results of this study indicate that school climate can be the tool to address this. However, schools should be aware not to focus on only one form of climate and they should definitely not overestimate the importance of climate for academic press. It seems to be that climate for socialization is just as, or even more important, as this increases the feeling of fit teachers have. Furthermore, schools should start considering their multi-ambitiousness. This in turn can send important messages to teachers. Teachers can namely learn from this study that they should find a school in which they fit, as this will keep them more positive about their occupational future. But the results indicate that teachers can also start questioning themselves, what do they value in their work, and would it suit them if they were more advancement oriented.

For society the results are also of importance. It should start considering whether its pressure on schools to become more performance oriented is the best thing to do. Especially in the current situation of teacher shortage an acknowledgement of schools as places to socialize children seems to be as important, at least with respect to the teacher.

In the end the results of this study are clear. Although complaints about the decrease in job applicants, and the ageing of the teacher population remain valid, a base for a positive proactive attitude has been led. So, schools and teachers: look for fit, be ambitious; in the end the future belongs to those who prepare for it today!

## 6. Literature

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## Appendix 1: Measurement scales

Items marked with an \* are reversed coded.

### **OFTP: Toekomstperspectief**

1. Er wachten mij nog veel kansen in mijn loopbaan als leraar.
2. Ik verwacht dat ik veel nieuwe doelen zal stellen in mijn baan als leraar.
3. Mijn toekomst als leraar biedt mij veel mogelijkheden.
4. Het grootste deel van mijn leven als leraar ligt voor me.
5. Ik heb nog een lange loopbaan als leraar voor me.
6. Naarmate ik ouder wordt, ervaar ik de tijd die ik nog te gaan heb als leraar als beperkt.\*

### **Climate for academic press: Het belang van leerresultaten**

1. Deze school stelt hoge normen voor de leerresultaten van leerlingen.
2. Prestatie wordt herkend en erkend door deze school.
3. Er wordt van de leerlingen verwacht dat ze de leerdoelen halen die voor hen gesteld zijn.
4. Leerlingen krijgen feedback op de kwaliteit van het werk dat ze verricht hebben.
5. De leerresultaten van leerlingen worden op regelmatige basis gemeten.
6. Er wordt zelden nagegaan hoe goed leerlingen hun werk uitvoeren. \*
7. Leerlingen komen er hier mee weg als ze zo weinig mogelijk doen. \*
8. Leerlingen willen hier altijd zo goed mogelijk presteren.
9. Leerlingen zijn bereid om zich extra in te zetten om goede prestaties te leveren.
10. Leerlingen op deze school leveren meer inzet in hun werk dan ze hoeven te doen.
11. Deze school heeft een goede reputatie ten aanzien van de leerresultaten.

### **Climate for socialization: Het belang van socialisering**

1. Deze school wil expliciet een bijdrage leveren aan het opvoeden van leerlingen.
2. De socialisering van leerlingen wordt herkend en erkend door de school.
3. Leerlingen krijgen over het algemeen feedback over hun sociale functioneren.
4. Er wordt in deze school op regelmatige basis geëvalueerd hoe het staat met de pedagogische aspecten van het onderwijs.
5. Er wordt in deze school op regelmatige basis geëvalueerd hoe het staat met de pedagogische vorming van de leerlingen.
6. Er wordt zelden nagegaan hoe leerlingen sociaal functioneren.\*

7. Leraren op deze school komen er mee weg als ze zo weinig mogelijk doen aan de socialisering van hun leerlingen.\*
8. Deze school heeft een goede reputatie ten aanzien van zijn pedagogisch karakter.

**P-S value fit: Persoonlijke waarden in vergelijking met die van de school**

1. De dingen die ik waardeer in het leven zijn hetzelfde als de dingen die deze school waardeert.
2. Mijn persoonlijke waarden komen overeen met de normen en waarden van deze school.
3. Mijn kijk op het leven komt overeen met die van deze school.

**Teachers' work values: Persoonlijke Waarden**

*(A=Teachers' advancement, GO=Teachers' group orientedness)*

Het is voor mij belangrijk:

1. om een hoog niveau te halen in de inhoud van mijn werk. *(A)*
2. om betrokken te zijn in werk dat als doel heeft om andere mensen te helpen. *(GO)*
3. om een baan te hebben waarin ik gemakkelijk vrienden kan maken. *(GO)*
4. om in mijn werk erkenning te krijgen voor mijn resultaten. *(A)*
5. om resultaten te boeken in mijn werk. *(A)*
6. om in een groep te werken in plaats van alleen. *(GO)*
7. om succesvol te zijn in mijn werk. *(A)*
8. om ambitieus te zijn in mijn werk. *(A)*
9. om in mijn werk mensen om me heen te hebben die tijd hebben voor een praatje. *(GO)*
10. om in mijn werk voor andere mensen te zorgen. *(GO)*

## Appendix 2: Interclass and intraclass correlation coefficients

Table 8. Interclass and intraclass correlation coefficients.

	ICC(1)	ICC(2)
<i>Independent variables</i>		
Climate for academic press	.103	.648
Climate for socialization	.219	.818
<i>Independent or mediator variable</i>		
P-S value fit	-.008	-.151
<i>Dependent variables</i>		
Remaining opportunities	.007	.105
Remaining time	-.006	-.103

### Appendix 3: A comparison: turnover intentions as dependent variable

OFTP is a new developed concept by Zacher and Frese (2009). Therefore, not many antecedents have been researched and the results found in this study cannot directly be compared to other studies. Furthermore, as socioemotional selectivity theory emphasizes the influence FTP has as predictor on social motives, questions might rise on the order of the variables, even though social motives and personal work values are thought to be distinct concepts (Nelson & Campbell Quick, 2005). In order to provide material for comparison, and in order to investigate the effect of teachers' work values, school climate, and P-S value fit on another attitude, comparative analyses have been performed. In these analyses turnover intentions, the self-reported plans or intentions to quit (van Breukelen, van der Vlist & Steensma, 2004), is used as dependent variable. This variable is used because turnover among teachers is, in the context of the increased teacher shortage in the Netherlands (Ministerie van Onderwijs, Cultuur en Wetenschap, 2009) detrimental for schools.

First the data was prepared for analysis (e.g. missing values were replaced by the median answer for that item) and factor and reliability analyses were performed. The scale proved to be valid and reliable (see table 9).

After the factor analysis and reliability analysis, correlations were checked and based on this regression analyses and structural equation modeling were performed to replicate the analyses done in the main study. Below, in table 10 and 11, the results of the regression analyses are shown. In table 10 climate for academic press was added first, in table 11 climate for socialization was added first. The results are in line with the concept of 'the ambitious school' in which schools are multifaceted regarding their climates. Namely, including both climate scales makes the effects non significant (resp.  $B = -.170$ , n.s. for climate for academic press;  $B = -.113$ , n.s. for climate for socialization), while adding them separately does lead to significant results (resp.  $B = -.233$ ,  $p < .01$  for climate for academic press;  $B = -.211$ ,  $p < .01$  for climate for socialization). Nevertheless in both tables the most variance is explained by model 4b. In this model the climate effects have become insignificant (resp.  $B = -.152$ , n.s. for climate for academic press;  $B = -.107$ , n.s. for climate for socialization). Model 4b on the other hand shows that teachers' advancement (in both sets of analyses) does have a negative effect on turnover intentions (resp.  $B = -.201$ ,  $p < .05$ ;  $B = -.186$ ,  $p < .05$ ), as has P-S value fit (resp.  $B = -.185$ ,  $p < .05$ ;  $B = -.198$ ,  $p < .05$ ).

Table 9. Results of the factor and reliability analyses

	Explained Variance	KMO value	Cronbach's $\alpha$
Turnover intentions	81,46%	.734	.868

Table 10. Results regression analysis in which climate for academic press is inserted first: standardized regression coefficients and explained variances.

	Turnover intentions					
	Model 1	Model 2	Model 3a	Model 3b	Model 4a	Model 4b
<i>Control variable</i>						
Age	-.055	-.107	-.110	-.100	-.090	-.083
<i>Individual level variables</i>						
Teachers' advancement		-.265**	-.254**	-.258**	-.244**	-.201*
Teachers' group orientedness			-.031			
Climate for academic press				-.233**	-.170	-.152
Climate for socialization					-.113	
P-S value fit						-.185*
R <sup>2</sup>	.003	.071**	.071**	.125***	.133***	.149***
R <sup>2</sup> Change		.068**	.001	.107**	.068	.024*

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Table 11. Results regression analysis in which climate for socialization is inserted first: standardized regression coefficients and explained variances

	Turnover intentions					
	Model 1	Model 2	Model 3a	Model 3b	Model 4a	Model 4b
<i>Control variable</i>						
Age	-.055	-.107	-.110	-.085	-.090	-.075
<i>Individual level variables</i>						
Teachers' advancement		-.265**	-.254**	-.236**	-.244**	-.186*
Teachers' group orientedness			-.031			
Climate for socialization				-.211**	-.113	-.107
Climate for academic press					-.170	
P-S value fit						-.198*
R <sup>2</sup>	.003	.071**	.071**	.114***	.133***	.139***
R <sup>2</sup> Change		.068**	.001	.096**	.016	.025*

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

In order to decide which of the two series of analyses (table 11 or table 12) better resembles the data, and in order to investigate the mediating paths that both tables give signals for, structural equation modeling was performed. The results are presented in table 13. Model 1 contains the direct effects of P-S value fit, teachers' advancement, climate for academic press, and climate for socialization on turnover intentions, as well as the effects of teachers' advancement, climate for academic press, and climate for socialization on P-S value fit. This model shows a good fit ( $\chi^2=2.521$ , n.s.;  $\chi^2/df=1.261$ ; RMSEA=.042; CFI=.997). As, in congruence with the regression analyses the direct effects of climate for academic press, and climate for socialization were found to be insignificant, these are removed in model 2. However, the fit of this model is worse ( $\chi^2=5.873$ , n.s.;  $\chi^2/df=1.468$ ; RMSEA=.056; CFI=.987). In model 3, climate for socialization is removed from the analysis, but the direct effect from climate for academic press is included again. In model 4 climate for socialization (both its direct and indirect effect) are included, whereas climate for academic press is excluded from the analysis.

Model 3 shows the best fit ( $\chi^2=.099$ , n.s.;  $\chi^2/df=.099$ ; RMSEA=.000; CFI=1.000). Also, via the Sobel test the mediating path from climate for academic press via P-S value fit, on turnover intentions was found to be significant ( $z= -2.959$ ,  $p<.01$ ), as was the mediating part starting at teachers' advancement ( $z= -2.565$ ,  $p<.05$ ). However, although the direct effects of P-S value fit on turnover intentions remains significant ( $B= -.19$ ,  $p<.05$ ) as does the direct effect of teachers' advancement on turnover intentions ( $B= -.18$ ,  $p<.05$ ), this does not hold true for climate for academic press ( $B= -.15$ , n.s.). Also, the direct effect of climate for academic press does not change in comparison to the analyses without the mediating effects ( $B$  still is  $-.15$ , n.s.). As this the direct effect has to decrease in order to confirm mediation (Baron & Kenny, 1986), no confirmation can be found for this indirect effect. Nonetheless, removing the direct effect leads to a worse fit of the model (model 5): ( $\chi^2=3.158$ , n.s.;  $\chi^2/df=1.579$ ; RMSEA=.062; CFI=.983). For teachers' advancement the direct effect changes a little (from  $B=-.20$ ,  $p<.05$  to  $B=-.18$ ,  $p<.05$ ). This mediating path is therefore, although just, confirmed. The results are presented in figure 3.

Table 12. Structural model of P-S value fit as mediator on turnover intentions: fit indices

	model 1	model 2	model 3	model 4	model 5
$\chi^2$	2.521	5.873	.099	2.137	3.158
$\chi^2/df$	1.261	1.468	.099	2.137	1.579
RMSEA	.042	.056	.000	.087	.062
CFI	.997	.987	1.000	.987	.983

\*\*  $p < .01$ , \*\*\*  $p < .001$

Table 13. Sobel tests for P-S value fit as mediator on turnover intentions: z-values

	z-value
Teachers' advancement	-.2565*
Climate for academic press	-.2959**

\*  $p < .05$ , \*\*  $p < .01$

Table 14. Structural model (model 3) of P-S value fit as mediator on turnover intentions: standardized regression coefficients

	P-S value fit	Turnover intentions
P-S value fit		-.19*
Teachers' advancement	.29***	-.18*
Climate for academic press	.44***	-.15

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

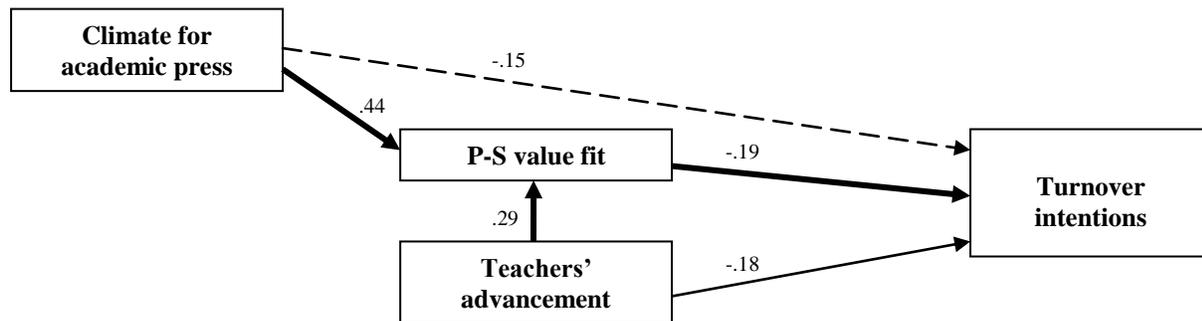


Figure 3. Best fitting structural model for turnover intentions: significant paths and standardized regression coefficients. The bold lines represent the significant mediating paths via P-S value fit. The dotted line represents the insignificant effect of climate for academic press on turnover intentions.

In conclusion, these comparative analyses, in which turnover intentions is used as dependent variable instead of one of the dimensions of OFTP, confirm several findings of the main study. First, the multifacetedness of schools with regard to the climate dimensions is underlined. Second, both P-S value fit and teachers' advancement appear to be the main predictors. This is in congruence with the findings on remaining opportunities at work.

The results of the comparative analyses do also differ to some extent to the findings of the main study. Namely, in this study climate for academic press seems to be of more importance than climate for socialization. Nonetheless, the mediation effects cannot be confirmed. Furthermore, an indirect effect between teachers' advancement and turnover intentions, via P-S value fit, exists. This is different than the results for OFTP. However, turnover intentions form after all a different construct than OFTP and thus differences can be expected.

## Appendix 4: Correlations of the interaction terms and subscales

For these analysis the interaction terms and subscales were first centered (i.e. transformed to a mean of zero) (Aiken & West, 1991).

Table 15. Descriptives of the interaction terms and their subscales. Means (M), standard deviations (SD), and Pearson's correlation coefficients (N=151)..

	M	SD	1	2	3	4	5	6
1. Climate for academic press	25.77	3.63	1.00					
2. Climate for socialization	28.25	3.92	.565**	1.00				
3. Teacher's advancement	15.99	1.68	.026	.119	1.00			
4. Teachers' group orientedness	18.87	2.16	.152	.089	.389**	1.00		
5. Academic press* advancement			.806**	.511**	.608**	.348**	1.00	
6. Socialization* group orientedness			.499**	.800**	.329**	.662**	.585**	1.00

\*  $p < .05$ , \*\*  $p < .01$