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THE SOCIAL DIMENSION OF TEACHING: TRUST AND TEACHERS' EFFICACY BELIEFS

ABSTRACT. Van Maele Dimitri, Van Houtte Mieke, *The social dimension of teaching: Trust and teachers' efficacy beliefs* [Społeczny wymiar nauczania: Zaufanie i poczucie skuteczności nauczycieli]. Studia Edukacyjne nr 22, 2012, Poznań 2012, pp. 301-319. Adam Mickiewicz University Press. ISBN 978-83-232-2502-7. ISSN 1233-6688

Educational research increasingly highlights teachers' trust in other school members to support school functioning. Besides, teachers' efficacy beliefs are considered to be crucial in their functioning. To enhance teachers' effectiveness, an understanding of the sources of their efficacy beliefs is therefore vital. This study investigates whether teachers' trust in students, parents, colleagues, and the principal relate differently to various facets of teachers' efficacy beliefs. Multilevel analyses of data of 2091 teachers across a representative sample of 80 secondary schools in Flanders (Belgium) demonstrate different relationships between teachers' trust in different reference groups at school and their sense of efficacy for instructional strategies, classroom management, and student engagement. Our results also indicate that teachers' efficacy beliefs are not affected by characteristics of the school context, such as faculty trust. Our findings suggest that school policies that focus on trust-building could increase teacher effectiveness.

Key words: trust, self efficacy, teacher characteristics, school effectiveness, secondary school teachers, school surveys

Introduction

The nature of teachers' social relationships with other school members is an inherent aspect of the teaching job. Although teachers work fairly autonomously, they are dependent on other participants in the school community in order to successfully accomplish their teaching goals[1]. Hence, the quality of teachers' relationships with students, parents, colleagues, and the principal might relate to their beliefs about

[1] A.S. Bryk, B. Schneider, *Trust in schools: A core resource for improvement*, New York 2002.

their personal ability to be successful in their teaching tasks, i.e. their sense of efficacy. Such beliefs predict teachers' commitment and well-being, job satisfaction, and burnout feelings[2]. This is because teachers' psychic rewards at work are strongly based on positive experiences about the successfulness of their own teaching efforts[3]. Teachers' efficacy beliefs also affect their classroom behaviors and student outcomes[4]. Knowledge regarding the sources of teachers' efficacy beliefs is therefore pivotal for the formulation of school policies intended to strengthen teachers' and schools' effectiveness.

In improving teachers' work life, research needs to focus on factors which can be altered through school policies[5]. A focus on trust is therefore promising because trust is a relational characteristic which can be developed in schools[6]. Educational research increasingly acknowledges that teacher trust affects schools' effectiveness and improvement[7]. Teacher trust has been related to improved student performances[8], their professionalization[9], and school innovation[10]. However, the connection

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[2] A. Aelterman, N. Engels, K. Van Petegem, J.P. Verhaeghe, *The well-being of teachers in Flanders: The importance of a supportive school culture*, Educational Studies, 2007, 33, s. 285-297; I.A. Friedman, *Self-efficacy and burnout in teaching: The importance of interpersonal-relations efficacy*, Social Psychology of Education, 2003, 6, s. 191-215; R.M. Klassen, M. Bong, E.L. Usher, W.H. Chong, V.S. Huan, I.Y.F. Wong i in., *Exploring the validity of a teachers' self-efficacy scale in five countries*, Contemporary Educational Psychology, 2009, 34, s. 67-76; D. Van Maele, M. Van Houtte, *The role of teacher and faculty trust in forming teachers' job satisfaction: Do years of experience make a difference?* Teaching and Teacher Education, 2012, 28, s. 879-889; H. Ware, A. Kitsantas, *Teacher and collective efficacy beliefs as predictors of professional commitment*, The Journal of Educational Research, 2007, 100, s. 303-310.

[3] D.C. Lortie, *Schoolteacher: A sociological study* (2nd ed.), Chicago 2002.

[4] M. Tschannen-Moran, A.W. Hoy, W.K. Hoy, *Teacher efficacy: Its meaning and measure*, Review of Educational Research, 1998, 68, s. 202-248.

[5] See: K.S. Louis, *Effects of teacher quality of work life in secondary schools on commitment and sense of efficacy*, School Effectiveness and School Improvement, 1998, 9, s. 1-27.

[6] S. Cosner, *Building organizational capacity through trust*, Educational Administration Quarterly, 2009, 45, s. 248-291; J.R. Kochanek, *Building trust for better schools: Research-Based Practices*, California: Corwin Press, Thousand Oaks 2005.

[7] P. Bishop, *School-based trust in Victoria: Some telling stories*, Australian Journal of Education, 1999, 43, s. 273-284; A.S. Bryk, B. Schneider, *Trust in schools*; P.B. Forsyth, *The empirical consequences of school trust*, [w:] *Improving schools: Studies in leadership and culture*, red. W.K. Hoy, M. DiPaola, , Charlotte 2008, s. 1-28.

[8] R.D. Goddard, S.J. Salloum, D. Berebitsky, *Trust as a mediator of the relationship between poverty, racial composition, and academic achievement*, Educational Administration Quarterly, 2009, 45, s. 292-311.

[9] M. Tschannen-Moran, *Fostering teacher professionalism in schools: The role of leadership orientation and trust*, Educational Administration Quarterly, 2009, 45, s. 417-447.

[10] N.M. Moolenaar, P.J.C. Sleegers, *Social Networks, Trust, and Innovation: The Role of Relationships in Supporting an Innovative Climate in Dutch Schools*, [w:] *Social Network Theory and Educational Change*, red. A.J. Daly, Cambridge 2010, s. 97-114.

between teacher efficacy and trust has not yet been explored in depth[11]. Whereas earlier studies have related these concepts to each other, both were mainly conceptualized and measured at the school level, and labeled collective teacher efficacy and faculty trust[12], without paying sufficient attention to the connection between individual teacher trust and efficacy. This is because the trust items used in these studies probe a teacher's judgments about the other teachers in school, whereas trust items with a personal orientation are needed to probe the level of trust of an individual teacher[13]. Besides, teachers' sense of efficacy (TSE) is composed of three dimensions: efficacy for instructional strategies, classroom management, and student engagement[14]. From the existing research, though, it is unclear how separate dimensions of teacher trust relating to different reference groups at school associate with distinct TSE-facets. First we intend to answer the question of whether teacher trust in a specific reference group at school is of particular importance for the establishment of positive teacher efficacy beliefs. Second, we investigate how trust in the different reference groups relates to a teacher's efficacy for instructional strategies, classroom management, and student engagement. Finally, given that a school's sense of community has been associated with teacher efficacy[15], we explore whether an independent effect of faculty trust – a collective feature of teachers instructing in the same school – on a teacher's efficacy beliefs exists above and beyond individual trust effects.

Teacher trust and efficacy

According to Bryk and Schneider's relational trust perspective (2002), trust in school is embodied in the social exchanges within the

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[11] K.L. Wahlstrom, K.S. Louis, *How teachers experience principal leadership: The roles of professional community, trust, efficacy, and shared responsibility*, Educational Administration Quarterly, 2008, 44, s. 467.

[12] See: M. Tschannen-Moran, A.W. Hoy, W.K. Hoy, *Teacher efficacy*, s. 202-248; P.B. Forsyth, *The empirical consequences*, s. 1-28.

[13] D. Van Maele, M. Van Houtte, *Faculty Trust and Organizational School Characteristics: An Exploration across Secondary Schools in Flanders*, Educational Administration Quarterly, 2009, 45, s. 556-589.

[14] M. Tschannen-Moran, A.W. Hoy, *Teacher efficacy: capturing an elusive construct*, Teaching and Teacher Education, 2001, 17, s. 783-805.

[15] V.E. Lee, R.F. Dedrick, J.B. Smith, *The Effect of the Social Organization of Schools on Teachers' Efficacy and Satisfaction*, Sociology of Education, 1991, 64, s. 190-208; F.M. Newmann, R. Rutter, M. Smith, *Organizational factors that affect school sense of efficacy, community, and expectations*, Sociology of Education, 1989, 62, s. 221-238.

school around distinct sets of role relationships[16]. Four reference groups for teacher trust are generally distinguished based on the organizational roles that occur in school: students, parents, colleagues, and the principal[17]. Teachers will have trust in these role groups if there is mutual understanding of personal obligations and expectations. When teachers view the actions of these parties as meeting their own role expectations, they will perceive them as trustworthy[18]. Furthermore, Hoy and Tschannen-Moran (1999, p. 189) describe trust in school as "an individual's or group's willingness to be vulnerable to another party based on the confidence that the latter party is benevolent, reliable, competent, honest, and open." These facets of trust have been empirically demonstrated to form a unitary concept of teacher trust[19].

Regarding teacher efficacy, research indicates that teachers' beliefs about their own teaching efficacy determine their general perspectives on the educational process and their instructional activities and goals[20]. Research on teacher efficacy took a crucial step when Tschannen-Moran et al. (1998) defined teacher efficacy as "the teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context"[21]. A vast body of literature follows the above conceptualization and focuses on efficacy relating to teaching tasks in the classroom context, although an argument can be made for the conceptualization of teacher efficacy in other roles and contexts[22]. Three dimensions of effective instruction have been distinguished in TSE: efficacy for instructional strategies, classroom management, and student engagement[23]. The first dimension indi-

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[16] R.K. Merton, *The role-set: Problems in sociological theory*, The British Journal of Sociology, 1957, 8, s. 106-120; P. Blau, *Exchange and power in social life* (2nd ed.), New York 1986.

[17] C.M. Adams, *Building trust in schools: A review of the empirical evidence*, [w:] *Improving schools: Studies in leadership and culture* red. W.K. Hoy, M. DiPaola, Charlotte 2008. s. 29-54; D. Van Maele, M. Van Houtte, *Faculty Trust and Organizational School Characteristics: An Exploration across Secondary Schools in Flanders*, Educational Administration Quarterly, 2009, 45, s. 556-589.

[18] A.S. Bryk, B. Schneider, *Trust in schools*.

[19] W.K. Hoy, M. Tschannen-Moran, *Five faces of trust: An empirical confirmation in urban elementary schools*, Journal of School Leadership, 1999, 9, s. 184-208.

[20] A. Bandura, *Social foundations for thought and action: A social cognitive theory*, Englewood Cliffs 1986; *Self-efficacy: The exercise of control*, New York 1997; C.A. Wolters, S.G. Daugherty, *Goal structures and teachers' sense of efficacy: Their relation and association to teaching experience and academic level*, Journal of Educational Psychology, 2007, 99, s. 181-193.

[21] M. Tschannen-Moran, A.W. Hoy, W.K. Hoy, *Teacher efficacy*, s. 233.

[22] I.A. Friedman, E. Kass, *Teacher self-efficacy: A classroom-organization conceptualization*, Teaching and Teacher Education, 2002, 18, s. 675-686.

[23] M. Tschannen-Moran, A.W. Hoy, *Teacher efficacy*, s. 783-805.

cates a teacher's confidence that he or she can develop and use alternative strategies to facilitate student learning, whereas the second reflects a teacher's beliefs that he or she can maintain a non-disruptive class environment. Efficacy for student engagement refers to a teacher's confidence that he or she can motivate students to become involved in and committed to learning. This three-factor model of teacher efficacy has already proven its validity across culturally diverse settings[24].

Teacher trust as a source of teacher efficacy. A necessary question, however, is why having trust in other school participants should foster teachers' efficacy beliefs. Jaina and Tyson (2004) have already demonstrated that trust is the key feature of work-based relationships that supports and builds the self-efficacy beliefs of employees. Theoretically, the relationship between teacher trust and efficacy can be derived from the fact that verbal or social persuasion acts as a source of teachers' efficacy beliefs[25]. This process involves efficacy information gained from verbal interactions with significant others in the teaching context about one's capability to perform particular tasks. Yet, social persuasion can only affect TSE when the persuading party is conceived to be trustworthy[26]. Thus, the perception that other participants in the school organization are trustworthy is a precondition for their verbal persuasion to serve as a potential source of a teacher's efficacy beliefs. This means that the more trustworthy a teacher perceives a specific reference group at school to be, the stronger the influence of the verbal interactions with that group will be on TSE. Furthermore, individuals who trust another party experience less uncertainty, and those who experience trust will in turn act to meet the trusting party's expectations[27]. This kind of work environment should positively affect teachers' beliefs regarding their capability to be successful in their teaching tasks given that their work is not undertaken in isolation.

Contemporary research has suggested interactions between teacher efficacy and trust in students and parents[28]. Yet, this research only relates trust in clients to efficacy, whereas relationships with other school actors, such as colleagues, are also important for teachers' well-being[29].

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[24] R.M. Klassen, M. Bong, E.L. Usher, W.H. Chong, V.S. Huan, I.Y.F. Wong i in., *Exploring the validity*.

[25] A. Bandura, *Social foundations*; *Self-efficacy*.

[26] Ibidem; M. Tschannen-Moran, A.W. Hoy, *Teacher efficacy*.

[27] N. Luhmann, *Trust and power*, New York 1979.

[28] K.S. Beard, W.K. Hoy, A.W. Hoy, *Academic optimism of individual teachers: Confirming a new construct*, Teaching and Teacher Education, 2010, 26, s. 1136-1144.

[29] G. Troman, *Teacher stress in the low-trust society*, British Journal of Sociology of Education, 2000, 21, s. 331-353.

It seems reasonable, then, to assume that having trust in each distinct reference group is positively associated with teacher efficacy. We will therefore explore whether teachers' trust in the different reference groups at school make independent positive contributions to teachers' efficacy beliefs. To our knowledge, this study is the first to empirically explore which dimension of teachers' trust, in terms of trust in a specific reference group, most accurately predicts TSE.

We also propose that trust in different reference groups could relate differently to the efficacy dimensions as identified by Tschannen-Moran and Hoy (2001). Given that we conceive teacher efficacy as related to the teaching role in the classroom context, we propose that trust in the students will have a positive relationship with efficacy for instructional strategies, classroom management, and student engagement. Furthermore, efficacy for student engagement is partly related to the teaching role regarding family and community engagement[30], whereas having trust in parents indicates the nature of family-school partnerships[31]. It seems acceptable then to assume that trust in parents has the strongest association with the efficacy dimension which relates to home-school partnerships. Moreover, trust in colleagues and the principal could have the strongest relationship with efficacy for student engagement, given that teachers generally experience autonomy in their classrooms[32], and because this efficacy dimension is least related to the teaching role in the classroom[33]. Finally, trust in the principal could affect efficacy for instructional strategies because the principal creates the kind of school environment in which teachers are stimulated to explore and to use different instructional strategies and practices[34]. In sum, we investigate whether the trust dimensions relating to different reference groups for teacher trust have different and independent relationships with the various dimensions of teacher efficacy.

Faculty trust and teacher efficacy. Research has empirically demonstrated the influence of a school's sense of community on teachers' efficacy[35]. This indicates how a positive school climate supports that

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[30] E. Labone, *Teacher efficacy: maturing the construct through research in alternative paradigms*, Teaching and Teacher Education, 2004, 20, s. 341-359.

[31] K.S. Adams, S.L. Christenson, *Trust and the family-school relationship examination of parent-teacher differences in elementary and secondary grades*, Journal of School Psychology, 2000, 38, s. 477-497.

[32] D.C. Lortie, *Schoolteacher: A sociological study* (2nd ed.), Chicago 2002.

[33] E. Labone, *Teacher efficacy*.

[34] K. Leithwood, A. Harris, D. Hopkins, *Seven strong claims about successful school leadership*, School Leadership and Management, 2008, 28, s. 27-42.

[35] V.E. Lee, R.F. Dedrick, J.B. Smith, *The Effect of the Social Organization of Schools on Teachers' Efficacy and Satisfaction*, Sociology of Education, 1991, 64, s. 190-208;

efficacy[36]. An important indicator of such a positive school climate is the nature of faculty trust in school[37]. Trust can indeed be considered not only as a feature of individual teachers, but also as a collective feature of the teaching staff[38]. Viewing school teachers as a unified group embedded in similar roles within a same organizational context, social information processes – such as the structuring of a person's attention or the communication of constructed meanings, including evaluations of objects and events – can lead to a collective trust phenomenon[39]. Tschannen-Moran (2009) has shown that when faculty trust is high, teachers show a stronger degree of professionalism. Therefore, faculty trust could lay the base for positive efficacy beliefs. Accordingly, we propose that teachers in schools with high levels of faculty trust display higher levels of positive efficacy beliefs than those in schools in which faculty trust is lacking. The question is, however, whether effects of faculty trust on teachers' efficacy beliefs exist in addition to individual teacher trust effects.

Methods

Sample and Procedure. Data were gathered during the 2004-2005 school year by means of anonymous written questionnaires across 85 secondary schools in Flanders (the Dutch-speaking region of Belgium). A sample of 85 secondary schools was determined via multistage sampling. Based on data from the Flemish Educational Department, 240 proportional-to-size postal codes were selected, with size defined as the number of schools within the postal code. Therefore, large municipalities had a greater chance of selection. From the postal codes, 48 were selected with a slight overrepresentation of greater municipalities. Next, we asked all regular secondary schools within these municipalities to participate, resulting in a positive response of 31%. The 48 municipalities and the 85 participating schools are representative for the Flemish situation[40].

F.M. Newmann, R. Rutter, M. Smith, *Organizational factors that affect school sense of efficacy, community, and expectations*, Sociology of Education, 1989, 62, s. 221-238.

[36] E. Labone, *Teacher efficacy*.

[37] W.K. Hoy, C.J. Tarter, R.B. Kottkamp, *Open schools, healthy schools: Measuring organizational climate*, Newbury Park 1991.

[38] E.g., W.K. Hoy, M. Tschannen-Moran, *Five faces of trust: An empirical confirmation in urban elementary schools*, Journal of School Leadership, 1999, 9, s. 184-208; D. Van Maele, M. Van Houtte, *Faculty Trust*.

[39] B. Shamir, Y. Lapidot, *Trust in organizational superiors: Systemic and collective considerations*, Organization studies, 2003, 24, s. 463-491.

[40] M. Van Houtte, P.A.J. Stevens, A. Sels, K. Soens, R. Van Rossem, *De Invloed van Structurele en Compositorische Schoolkenmerken op Prestaties en Welbevinden van Leerlingen in het Secundair Onderwijs. Een Verklaring via Cultuur*, Ghent 2005.

From the sample schools, 11 872 third- and fifth-grade students completed questionnaires (with a response rate of 87%), and school principals provided information about school characteristics. Additionally, all third- and/or fifth-grade teachers were asked to complete questionnaires and return it in a sealed envelope to an assigned person in their school. A total of 2104 teachers across 84 schools did respond, yielding a response rate of 60%[41]. In following Halpin (1959), only the information from schools in which at least five teachers responded was considered appropriate for analysis. This selection criterion was imposed to make generalizations about a school's staff more stable, resulting in data from 2091 teachers across 80 schools.

Research design. Because of the clustered nature of our sample, and given that we relate teacher and school characteristics to a teacher's efficacy beliefs, multilevel analysis (HLM 6.0) is used. First, an unconditional multilevel model is specified to determine the school-level variance for teacher efficacy and for the three efficacy dimensions. In a second step, individual teacher characteristics are included. Besides the teacher trust dimensions, we account for other teacher characteristics. We assume that teaching experience and the number of weekly teaching hours positively contribute to TSE[42]. The nature of the subject taught has also been thought to influence teacher efficacy[43]. Therefore we investigate whether teaching general/theoretical or practical courses has different implications for teachers' efficacy beliefs. Because male teachers reported slightly lower efficacy levels than female teachers[44], we control for a gender effect. We also account for a teacher's socioeconomic background. In a final step, faculty trust in students, parents, colleagues, and the principal are included at the school level if significant school-level variance remains in step two[45]. Because faculty trust in students and parents were highly correlated ($r = 0.78$, $p < 0.01$), faculty trust in parents will be excluded from this model to avoid multicollinearity problems.

Measures. *Teacher trust* was measured using 29 items of the trust scales developed by Hoy and Tschannen-Moran (1999). The original

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[41] D. Van Maele, M. Van Houtte, *Faculty Trust*.

[42] Cf. Bandura A., *Self-efficacy*.

[43] V.E. Lee, R.F. Dedrick, J.B. Smith, *The Effect of the Social Organization*.

[44] D.L. Taylor, A. Tashakkori, *Decision participation and school climate as predictors of job satisfaction and teachers' sense of efficacy*, Journal of Experimental Education, 1995, 63, s. 217-230.

[45] S.W. Raudenbush, A.S. Bryk, *Hierarchical linear models. Applications and data analysis methods* (2nd ed.), Thousand Oaks 2002.

items were translated into Dutch and reworded so that an individual teacher's trust was probed instead of a teacher's perceptions of the staff's trust levels (e.g. "I am suspicious of my colleagues" instead of "Teachers in this school are suspicious of each other"). The items, after being rescored where necessary, were rated from *absolutely disagree* (1) to *definitely agree* (5), with the highest score indicating the highest trust level. A principal component analysis with varimax rotation was conducted on the trust items to assess whether teachers distinguish between trust in students, parents, colleagues, and the principal. Four factors with an eigenvalue higher than 1 were found; all items loaded as expected. We thus discovered that individual teachers do distinguish between trust in students, parents, colleagues, and the principal. For each trust dimension relating to a specific reference group, missing values on the items were substituted by means of item correlation substitution: a missing value for one item was replaced by the value of the item correlating most highly with it[46].

Trust in students was measured using 10 items, such as "You have to closely supervise the students". Calculating the sum score across these items resulted in a reliable scale (N = 2053; M = 32.00, SD = 4.61) with a Cronbach's alpha of 0.77. *Trust in parents* was calculated using 5 items, such as "You can believe what parents tell you". A reliable scale (N = 2044; M = 16.47, SD = 2.80) with a Cronbach's alpha of 0.78 was obtained by totaling the scores on these items. *Trust in colleagues* was calculated by totaling the scores on 7 items, such as "I have faith in the integrity of my colleagues". The composed scale (N = 2021; M = 26.78, SD = 4.33) had a Cronbach's alpha of 0.89. *Trust in the principal* was measured using 7 items, such as "The principal keeps his or her word". Calculating the sum score of the 7 items resulted in a scale (N = 2042; M = 26.10, SD = 4.75) with a Cronbach's alpha of 0.90.

To assess *faculty trust* in each reference group, i.e. a group feature, the aggregation of the particular trust scales is a necessary next step. A customary aggregation strategy is the calculation of the mean score of individual members of the group[47]. Yet, one must be sure that aggregation is permitted in terms of individual responses being shared at the group level. To determine this, we opted for an index of mean rater reliability based on the intraclass correlation coefficient (ICC) from a one-way analysis of variance: ICC (1, k) = (between mean square – within mean square) / between mean square (with k = number of raters in each

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[46] M. Huisman, *Imputation of missing item responses: some simple techniques*, Quality and Quantity, 2000, 34, s. 331-351.

[47] E.g., G. Hofstede, B. Neuijen, D.D. Ohavy, G. Sanders, *Measuring organizational cultures - A qualitative and quantitative study across 20 cases*, Administrative Science Quarterly, 1990, 35, s. 286-316.

group) (see Glick, 1985). The ICC must be at a minimum of 0.60 to permit aggregation to the group level (Glick, 1985). We found that speaking of faculty trust is legitimate with respect to the four trust dimensions (*ICCs* > 0.73; see tab. 1). The means for teacher trust in each reference group differed significantly from school to school ($p < 0.001$), indicating that each dimension of faculty trust varies in its magnitude between schools. We obtained four faculty trust scales: *Faculty trust in students* ($N = 80$; $M = 32.03$, $SD = 2.61$), *Faculty trust in parents* ($N = 80$; $M = 16.43$, $SD = 1.42$), *Faculty trust in colleagues* ($N = 80$; $M = 26.87$, $SD = 1.64$), and *Faculty trust in the principal* ($N = 80$; $M = 25.95$, $SD = 2.12$).

Teacher efficacy was measured using the short form of the Teachers' Sense of Efficacy Scale (TSES)[48]. This measure consists of 12 items assessed along a 9-point continuum with anchors at 1-Not at all, 3-a Little, 5-Somewhat, 7-Quite a Lot, 9-a Great Deal. Respondents were asked to indicate the extent to which they perceive themselves as capable of conducting a particular action successfully. Missing values on the items were again substituted by means of item correlation substitution[49]. The TSES was obtained by calculating the sum score across the 12 items ($N = 2050$; $M = 82.62$, $SD = 8.71$), and demonstrated a Cronbach's alpha of 0.82.

To investigate whether our efficacy scale was composed of the three dimensions as identified by Tschannen-Moran and Hoy (2001), we conducted a principal component analysis with varimax rotation on the 12 items. Three factors with an eigenvalue higher than 1 were found. Each factor consisted of 4 items and all items loaded high on the relevant efficacy dimension. *Efficacy for Instructional Strategies* was obtained by calculating the sum score across 4 items, such as "To what extent can you provide an alternative example or explanation when students are confused?". This scale ($N = 2051$; $M = 27.75$, $SD = 3.83$) has a Cronbach's alpha of 0.71. *Efficacy for Classroom Management* was also calculated by totaling the scores on 4 items, such as "How much can you do to control disruptive behavior in the classroom?". The composed scale ($N = 2059$; $M = 29.95$, $SD = 3.20$) was reliable given its Cronbach's alpha of 0.80. Finally, *Efficacy for Student Engagement* was calculated by summing the scores of 4 items, such as "How much can you do to help your students to value learning?". This scale ($N = 2059$; $M = 24.90$, $SD = 3.95$) showed a Cronbach's alpha of 0.66, which is still acceptable given the number of items on which the scale is based. Table 1 reports the descriptive characteristics of, and the bivariate correlations among, the individual teacher trust and efficacy scales.

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[48] M. Tschannen-Moran, A.W. Hoy, *Teacher efficacy*.
[49] M. Huisman, *Imputation of missing item responses*.

Table 1

Descriptive statistics of and bivariate correlations
among the individual teacher trust and efficacy variables

Variables	N	Mean	SD	ICC[a]	Cron-bach's α	1	2	3	4	5	6	7
1. Teacher efficacy	2050	82.62	8.71	0.35	0.82							
2. Efficacy for instructional strategies	2051	27.75	3.83	0.31	0.71	.82***						
3. Efficacy for classroom management	2059	29.95	3.20	0.19	0.80	.71***	.38***					
4. Efficacy for student engagement	2059	24.90	3.95	0.42	0.66	.84***	.54***	.40***				
5. Trust in students	2053	32.00	4.61	0.87	0.77	.21***	.14***	.15***	.21***			
6. Trust in parents	2044	16.47	2.80	0.82	0.78	.16***	.08***	.10***	.19***	.46***		
7. Trust in colleagues	2021	26.78	4.33	0.73	0.89	.04	.03	.06*	.01	.28***	.24***	
8. Trust in the principal	2042	25.99	4.75	0.82	0.90	.13***	.10***	.08**	.13***	.24***	.18***	.41***

Note: *$p < .05$; **$p < .01$; ***$p < .001$; a: ICC = (BMS-WMS)/BMS, W.H.Glick, *Conceptualizing and measuring organizational and psychological climate: pitfalls in multilevel research*, Academy of Management Review, 1985, 10.

With regard to teachers' *gender*, a total of 770 men (coded 0) and 1282 women (coded 1) answered this item. Teachers' *socioeconomic background* was measured by means of the occupational prestige of their father and mother[50]; the highest of both was used as an indicator of their socioeconomic background (N = 2015; M = 4.99, SD = 1.68). *Teaching experience* was measured by the number of years that a teacher had been working in his/her participating school (N = 2049; M = 16.00, SD = 10.92). *Teaching hours* indicated a teacher's weekly instruction hours in the school (N = 1972; M=17.98, SD=5.30). *Subject* was dichotomized into teaching theoretical courses (coded 0), such as mathematics, languages, history, and so forth, and teaching practical courses (coded 1), such as physical education, woodwork, plastics education, and so forth. There were 1444 teachers who taught theoretical courses and 646 teachers who taught practical courses.

Results

Bivariate correlations among the individual teacher trust and efficacy dimensions showed significant positive but moderate associations, except for trust in colleagues (see Table 1). The unconditional multilevel models demonstrated that the school-level variance ($\tau_0 / (\tau_0 + \sigma_0^2)$) was negligible regarding teachers' efficacy (2.1%; $p < 0.01$), their efficacy for instructional strategies (1.7%; $p < 0.01$), and their efficacy for student engagement (2.9%; $p < 0.001$). The small school-level variance for efficacy for classroom management was even insignificant. At this point it was already clear that variance in school characteristics added little to the variation in teachers' efficacy beliefs. Next, we included the individual teacher characteristics into the multilevel models (tab. 2). The small but significant school-level variances for teacher efficacy and for efficacy for instructional strategies and student engagement became insignificant, suggesting that the initial small and significant school-level variances were probably due to selection effects. Given these results, it was unnecessary and unadvisable to include school characteristics, such as faculty trust, into the multilevel models because they did not add to the variance in teachers' efficacy beliefs.

However, the results suggested important associations between teacher trust and teacher efficacy (tab. 2). With respect to teacher efficacy, we found significant and positive effects of trust in parents (stan-

[50] R. Erikson, J.H. Goldthorpe, L. Portocarero, *Intergenerational class mobility in three Western European societies: England, France and Sweden*, British Journal of Sociology, 1979, 30, s. 415-441.

dardized gamma $y^* = 0.111$; $p < 0.01$), trust in students ($y^* = 0.178$; $p < 0.001$), and trust in the principal ($y^* = 0.117$; $p < 0.001$). Efficacy for instructional strategies was significantly and positively associated with trust in students ($y^* = 0.111$; $p < 0.001$), and the principal ($y^* = 0.083$; $p < 0.001$). Efficacy for classroom management was positively associated with trust in students ($y^* = 0.145$; $p < 0.001$), and trust in the principal ($y^* = 0.060$; $p < 0.05$). Finally, teacher trust in each reference group was significantly related to a teacher's efficacy for student engagement (see tab. 2), although trust in colleagues demonstrated a negative association ($y^* = -0.099$; $p < 0.01$). These findings indicated that teacher trust in the various reference groups related differently to the three efficacy dimensions.

Regarding other teacher characteristics, we found that socioeconomic background and the number of weekly teaching hours positively related to teacher efficacy. Female teachers reported slightly higher levels of efficacy for student engagement than male teachers, as did teachers teaching practical courses compared to those teaching theoretical ones. Those teaching practical courses, however, reported slightly lower levels of efficacy for instructional strategies than those teaching theoretical ones. Finally, efficacy for classroom management was positively associated with a teacher's experience and weekly teaching hours (see tab. 2).

Table 2

Association between teacher characteristics and teachers' efficacy beliefs. Results of multilevel analysis – standardized gamma coefficients (y^*) with standard errors in parentheses

	Teacher efficacy	Efficacy for instructional strategies	Efficacy for classroom management	Efficacy for student engagement
Teacher characteristics				
Gender	0.029	0.020	0.007	0.043*
(male = 0)	(0.406)	(0.185)	(0.148)	(0.171)
SES	0.043*	0.053*	0.023	0.033
	(0.104)	(0.048)	(0.039)	(0.052)
Experience	0.039	-0.049	0.139***	0.019
	(0.019)	(0.009)	(0.007)	(0.008)
Teaching hours	0.075**	0.033	0.118***	0.038
	(0.038)	(0.018)	(0.014)	(0.017)
Subject	-0.005	-0.083**	0.021	0.051*
(theoretical courses = 0)	(0.494)	(0.245)	(0.171)	(0.187)

	Teacher efficacy	Efficacy for instructional strategies	Efficacy for classroom management	Efficacy for student engagement
Trust in parents	0.111**	0.040	0.031	0.159***
	(0.100)	(0.041)	(0.030)	(0.044)
Trust in students	0.178***	0.111***	0.145***	0.164***
	(0.049)	(0.021)	(0.016)	(0.025)
Trust in colleagues	-0.058	-0.028	0.015	-0.099**
	(0.070)	(0.029)	(0.021)	(0.029)
Trust in the principal	0.117***	0.083***	0.060*	0.119***
	(0.053)	(0.023)	(0.019)	(0.026)
Variance Components				
Intercept U0	1.017	0.200	0.132	0.464
Gender U1	1.309	0.496	0.351	0.140
SES U2	0.091	0.017	0.016	0.036
Experience U3	0.004	0.000	0.001	0.001
Teaching hours U4	0.017	0.003	0.003	0.005
Subject U5	4.448*	1.516**	0.302	0.332
Trust in parents U6	0.330*	0.040*	0.011	0.052
Trust in students U7	0.008	0.004	0.003	0.007
Trust in colleagues U8	0.160**	0.022	0.009**	0.019*
Trust in the principal U9	0.071*	0.015	0.302	0.018

Note: *$p < .05$; **$p < .01$; ***$p < .001$

Discussion

Understanding the antecedents of teachers' efficacy beliefs may be important in increasing teachers' effectiveness. Because teachers do not work independently from other actors in school, we investigated whether their trust in students, parents, colleagues, and the principal contribute independently to positive beliefs about the own efficacy for instructional strategies, classroom management, and student engagement. For this reason, we contribute to the research on the connection between teacher trust and efficacy[51]. Furthermore, we have explored the importance of the school context for teacher efficacy. In essence we wanted to know whether faculty trust contributes to explaining teachers' efficacy beliefs above and beyond effects of individual teacher trust.

Contrary to previous findings[52], our study demonstrates that teacher efficacy is not significantly influenced by the variation of school-level

[51] K.L. Wahlstrom, K.S. Louis, *How teachers experience principal leadership*, p. 467.
[52] E.g. V.E. Lee, R.F. Dedrick, J.B. Smith, *The Effect of the Social Organization*.

characteristics, such as the level of faculty trust. Our findings thus suggest that teacher efficacy is specifically associated with individual teacher characteristics. Individual teachers' trust in students, parents, and the principal relate significantly and independently to teacher efficacy. The more trust a teacher has in the students, parents, or principal at school, the more the teacher believes that he or she can be successful in the teaching efforts. Trust in students makes the strongest contribution to teacher efficacy. This is obviously related to the fact that the efficacy measure relates to teaching tasks in the classroom[53], where teachers interact with students the most. Trust in students most accurately predicts positive efficacy beliefs regarding instructional strategies, classroom management, and student engagement. It is thus clear that a teacher's efficacy beliefs are fostered most when he or she acknowledges the students' trustworthiness. This aligns with the significance of trust as an indicator of positive teacher-student relationships producing favorable outcomes for teacher functioning and student learning[54].

Trust in school participants other than students also influences the different dimensions of teacher efficacy. Trust in parents particularly strengthens efficacy for student engagement. This finding could be explained by the fact that trust in parents relates to family-school relationships[55], whereas efficacy for student engagement relates to home-school partnerships as well[56]. Teachers will thus feel more efficacious in engaging the students in school when they perceive parents to be trustworthy. This also holds true when a teacher trusts the principal. Moreover, trusting the principal positively affects efficacy for instructional strategies and classroom management. This indicates that the principal creates the kind of school environment in which teachers work[57], thus also determining their efficacy beliefs. The negative association between trust in colleagues and efficacy for student engagement may be explained by the fact that teachers compare themselves to each other in terms of their student engagement efforts. When teachers perceive their colleagues to be trustworthy, they view them as capable and successful in their teaching tasks. As a result, social comparison – a process affecting self-efficacy beliefs[58] – could prompt teachers to downplay their own

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[53] I.A. Friedman, E. Kass, *Teacher self-efficacy*.

[54] A.S. Bryk, B. Schneider, *Trust in schools*; P.B. Forsyth, *The empirical consequences*

[55] K.S. Adams, S.L. Christenson, *Trust and the family-school relationship examination of parent-teacher differences in elementary and secondary grades*, Journal of School Psychology, 2000, 38, s. 477-497.

[56] E. Labone, *Teacher efficacy*.

[57] K. Leithwood, A. Harris, D. Hopkins, *Seven strong claims about successful school leadership*, School Leadership and Management, 2008, 28, s. 27-42.

[58] Cf. A. Bandura, *Self-efficacy*.

efficacy beliefs for student engagement. Future qualitative research[59] is necessary, however, to interpret the association between trust in colleagues and efficacy for student engagement.

It should be noted that teaching experience and the number of weekly teaching hours demonstrate relatively strong and positive associations with teacher efficacy for classroom management. This might indicate the role of mastery experience as a source of teacher efficacy[60]. The more experience a teacher has, the more efficacious he or she feels in terms of maintaining a non-disruptive classroom environment. Experience did not, however, relate to the other two dimensions of efficacy. This finding indicates the necessity of distinguishing between different facets of teachers' efficacy beliefs. Finally, since Lee et al. (1991) suggested that the discipline taught affects teachers' efficacy, it is interesting to note that those teaching practical courses differ in their efficacy beliefs from those teaching theoretical courses. The former feel more efficacious in engaging students, whereas the latter feel more efficacious in using different instructional strategies. Future research is necessary to investigate in depth how and why the nature of the subject taught affects these dimensions of teacher efficacy differently.

To conclude, our findings demonstrate that teachers' positive perceptions regarding the quality of the relationships with other school participants support their sense of efficacy. Where teachers perceive the students, parents, and principal in school to be trustworthy, they are more likely to expose positive beliefs about their teaching efficacy. Trust relationships with other adults in school, in particular, relate to teachers' efficacy for student engagement. Viewing trust as a way to enhance teachers' efficacy beliefs is promising because it is an aspect of school relationships which can be developed through principals' actions[61]. If trust-building actions contribute to positive perceptions among teachers about their own efficacy, these actions could also reduce teachers' feelings of alienation at work[62]. Therefore school policies that focus on trust-building could not only be a way to enhance teacher effectiveness, but also to increase teacher retention, which is a concern for contemporary educational policies[63].

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[59] See E. Labone, *Teacher efficacy*.

[60] A. Bandura, *Self-efficacy*.

[61] S. Crosner, *Building organizational capacity through trust*, Educational Administration Quarterly, 2009, 45, s. 248-291; J.R. Kochanek, *Building trust for better schools*.

[62] Cf. F.M. Newmann, R. Rutter, M. Smith, *Organizational factors that affect school sense of efficacy, community, and expectations*, Sociology of Education, 1989, 62, s. 221-238.

[63] K. Müller, R. Alliata, F. Benninghoff, *Attracting and retaining teachers: A question of motivation*, Educational Management Administration and Leadership, 2009, 37, s. 574-599.

BIBLIOGRAPHY

Adams C.M., *Building trust in schools: A review of the empirical evidence*, [w:] *Improving schools: Studies in leadership and culture* red. W.K. Hoy, M. DiPaola, NC: Information Age Publishing Inc., Charlotte 2008.

Adams K.S., Christenson S.L., *Trust and the family-school relationship examination of parent-teacher differences in elementary and secondary grades*, Journal of School Psychology, 2000, 38.

Aelterman A., Engels N., Van Petegem K., Verhaeghe J.P., *The well-being of teachers in Flanders: The importance of a supportive school culture*, Educational Studies, 2007, 33.

Bandura A., *Social foundations for thought and action: A social cognitive theory*, NJ: Prentice-Hall, Englewood Cliffs 1986.

Bandura A., *Self-efficacy: The exercise of control*, Freeman and Company, New York 1997.

Beard K.S., Hoy W.K., Hoy A.W., *Academic optimism of individual teachers: Confirming a new construct*, Teaching and Teacher Education, 2010, 26.

Bishop P., *School-based trust in Victoria: Some telling stories*, Australian Journal of Education, 1999, 43.

Blau P., *Exchange and power in social life* (2nd ed.), Wiley, New York 1986.

Bryk A.S., Schneider B., *Trust in schools: A core resource for improvement*, Russell Sage Foundation, New York 2002.

Crosner S., *Building organizational capacity through trust*, Educational Administration Quarterly, 2009, 45.

Erikson R., Goldthorpe J.H., Portocarero L., *Intergenerational class mobility in three Western European societies: England, France and Sweden*, British Journal of Sociology, 1979, 30.

Forsyth P.B., *The empirical consequences of school trust*, [w:] *Improving schools: Studies in leadership and culture*, red. W.K. Hoy, M. DiPaola, NC: Information Age Publishing Inc., Charlotte 2008.

Friedman I.A., Kass E., *Teacher self-efficacy: A classroom-organization conceptualization*, Teaching and Teacher Education, 2002, 18.

Friedman I.A., *Self-efficacy and burnout in teaching: The importance of interpersonal-relations efficacy*, Social Psychology of Education, 2003, 6.

Glick W.H., *Conceptualizing and measuring organizational and psychological climate: pitfalls in multilevel research*, Academy of Management Review, 1985, 10.

Goddard R.D., Salloum S.J., Berebitsky D., *Trust as a mediator of the relationship between poverty, racial composition, and academic achievement*, Educational Administration Quarterly, 2009, 45.

Halpin A.W., *The leader behavior of school superintendents*, Midwest Administrative Center, Chicago 1959.

Hofstede G., Neuijen B., Ohavy D.D., Sanders G., *Measuring organizational cultures - A qualitative and quantitative study across 20 cases*, Administrative Science Quarterly, 1990, 35.

Hoy W.K., Tarter C.J., Kottkamp R.B., *Open schools, healthy schools: Measuring organizational climate*, , CA: Sage, Newbury Park 1991.

Hoy W.K., Tschannen-Moran M., *Five faces of trust: An empirical confirmation in urban elementary schools*, Journal of School Leadership, 1999, 9.

Huisman M., *Imputation of missing item responses: some simple techniques*, Quality and Quantity, 2000, 34.

Jaina J., Tyson S., *Psychological similarity in work-based relationships and the development of self-efficacy beliefs*, Human Relations, 2004, 57.

Klassen R.M., Bong M., Usher E.L., Chong W.H., Huan V.S., Wong I.Y.F. i in., *Exploring the validity of a teachers' self-efficacy scale in five countries*, Contemporary Educational Psychology, 2009, 34.

Kochanek J.R., *Building trust for better schools: Research-Based Practices*, California: Corwin Press, Thousand Oaks 2005.

Labone E., *Teacher efficacy: maturing the construct through research in alternative paradigms*, Teaching and Teacher Education, 2004, 20.

Lee V.E., Dedrick R.F., Smith J.B., *The Effect of the Social Organization of Schools on Teachers' Efficacy and Satisfaction*, Sociology of Education, 1991, 64.

Leithwood K., Harris A., Hopkins D., *Seven strong claims about successful school leadership*, School Leadership and Management, 2008, 28.

Lortie D.C., *Schoolteacher: A sociological study* (2nd ed.), The University of Chicago Press, Chicago 2002.

Louis K.S., *Effects of teacher quality of work life in secondary schools on commitment and sense of efficacy*, School Effectiveness and School Improvement, 1998, 9.

Luhmann N., *Trust and power*, Wiley, New York 1979.

Merton R.K., *The role-set: Problems in sociological theory*, The British Journal of Sociology, 1957, 8.

Moolenaar N.M., Sleegers P.J.C., *Social Networks, Trust, and Innovation: The Role of Relationships in Supporting an Innovative Climate in Dutch Schools*, [w:] *Social Network Theory and Educational Change*, red. A.J. Daly, MA: Harvard Education Press, Cambridge 2010.

Müller K., Alliata R., Benninghoff F., *Attracting and retaining teachers: A question of motivation*, Educational Management Administration and Leadership, 2009, 37.

Newmann F.M., Rutter R., Smith M., *Organizational factors that affect school sense of efficacy, community, and expectations*, Sociology of Education, 1989, 62.

Raudenbush S.W., Bryk A.S., *Hierarchical linear models. Applications and data analysis methods* (2nd ed.), CA: Sage, Thousand Oaks 2002.

Shamir B., Lapidot Y., *Trust in organizational superiors: Systemic and collective considerations*, Organization studies, 2003, 24.

Taylor D.L., Tashakkori A., *Decision participation and school climate as predictors of job satisfaction and teachers' sense of efficacy*, Journal of Experimental Education, 1995, 63.

Troman G., *Teacher stress in the low-trust society*, British Journal of Sociology of Education, 2000, 21.

Tschannen-Moran M., Hoy A.W., Hoy W.K., *Teacher efficacy: Its meaning and measure*, Review of Educational Research, 1998, 68.

Tschannen-Moran M., Hoy A.W., *Teacher efficacy: capturing an elusive construct*, Teaching and Teacher Education, 2001, 17.

Tschannen-Moran M., *Fostering teacher professionalism in schools: The role of leadership orientation and trust*, Educational Administration Quarterly, 2009, 45.

Van Houtte M., Stevens P.A.J., Sels A., Soens K., Van Rossem R., *De Invloed van Structurele en Compositorische Schoolkenmerken op Prestaties en Welbevinden van Leerlingen in het Secundair Onderwijs. Een Verklaring via Cultuur*. [The Influence of Structural and Compositional School Features on Achievement and Well-being of Secondary School Students. An Explanation through Culture]. Un-

published research report, Department of Sociology, Research Group Youth, Education, and Gender, Ghent University, Ghent 2005.
Van Maele D., Van Houtte M., *Faculty Trust and Organizational School Characteristics: An Exploration across Secondary Schools in Flanders*, Educational Administration Quarterly, 2009, 45.
Van Maele D., Van Houtte M., *The role of teacher and faculty trust in forming teachers' job satisfaction: Do years of experience make a difference?* Teaching and Teacher Education, 2012, 28.
Wahlstrom K.L., Louis K.S., *How teachers experience principal leadership: The roles of professional community, trust, efficacy, and shared responsibility*, Educational Administration Quarterly, 2008, 44.
Ware H., Kitsantas A., *Teacher and collective efficacy beliefs as predictors of professional commitment*, The Journal of Educational Research, 2007, 100.
Wolters C.A., Daugherty S.G., *Goal structures and teachers' sense of efficacy: Their relation and association to teaching experience and academic level*, Journal of Educational Psychology, 2007, 99.

Społeczny wymiar nauczania. Zaufanie i poczucie skuteczności nauczycieli

Streszczenie

Badania edukacyjne coraz częściej ukazują znaczenie zaufania nauczycieli do uczestników szkolnego życia dla funkcjonowania szkoły. Ponadto, przekonanie nauczycieli o własnej skuteczności uznaje się za kluczowe dla ich funkcjonowania. Aby zwiększyć poczucie skuteczności nauczycieli, niezbędne jest zrozumienie jego źródeł. Zbadaliśmy, czy poziom zaufania nauczycieli do uczniów, rodziców, kolegów i przełożonych koreluje z przekonaniami o skuteczności. Wielopoziomowe analizy danych od przebadanych 2091 nauczycieli z 80 szkół we Flandrii (Belgia), a zatem z reprezentatywnej próby, pokazują różnorodne zależności między zaufaniem nauczycieli do różnych grup szkolnych i poczuciem skuteczności. Nasze wyniki wskazują również, że przekonania nauczycieli o własnej skuteczności nie korelują ze specyfiką szkoły. Uzyskane wyniki wskazują, że polityka szkoły koncentrująca się na budowaniu zaufania może zwiększyć skuteczność nauczycieli.

Słowa klucze: zaufanie, skuteczność, cechy nauczyciela, skuteczność szkoły, nauczyciele szkół podstawowych, sondaże szkolne