



Inter- and intra-individual differences in teachers' self-efficacy: A multilevel factor exploration



Marjolein Zee^{a,*}, Helma M.Y. Koomen^a, Francine C. Jellesma^a, Jolien Geerlings^b, Peter F. de Jong^a

^a Research Institute of Child Development and Education, University of Amsterdam, The Netherlands

^b Utrecht University, The Netherlands

ARTICLE INFO

Article history:

Received 1 March 2015

Received in revised form 24 August 2015

Accepted 10 December 2015

Available online 12 January 2016

Keywords:

Teacher self-efficacy

Upper elementary school

Intra-individual differences

Multilevel confirmatory factor analysis

Cluster bias

ABSTRACT

This study explored inter- and intra-individual differences in teachers' self-efficacy (TSE) by adapting Tschannen-Moran and Woolfolk Hoy's (2001) Teachers' Sense of Efficacy Scale (TSES) to the domain- and student-specific level. Multilevel structural equation modeling was used to evaluate the factor structure underlying this adapted instrument, and to test for violations of measurement invariance over clusters. Results from 841 third- to sixth-grade students and their 107 teachers supported the existence of one higher-order factor (Overall TSE) and four lower-order factors (Instructional Strategies, Behavior Management, Student Engagement, and Emotional Support) at both the between- and within-teacher level. In this factor model, intra-individual differences in TSE were generally larger than inter-individual differences. Additionally, the presence of cluster bias in 18 of 24 items suggested that the unique domains of student-specific TSE at the between-teacher level cannot merely be perceived as the within-teacher level factors' aggregates. These findings underscore the importance of further investigating TSE in relation to teacher, student, and classroom characteristics.

© 2015 Society for the Study of School Psychology. Published by Elsevier Ltd. All rights reserved.

The last decades have witnessed the growth of teacher self-efficacy (TSE) studies from a small side-branch of school effectiveness research to a major area of educational psychology (Klassen, Tze, Betts, & Gordon, 2011). One of the triggers for this progress is the belief that generalized TSE, or the self-confidence with which teachers approach and bring about their daily teaching tasks, is a central determinant of teachers' behaviors and actions in the classroom (Bandura, 1997; Tschannen-Moran & Woolfolk Hoy, 2001). Both theoretical and empirical sources have surfaced the tacit notion that teachers high in self-efficacy are more likely than poorly efficacious educators to set high goals for themselves, to activate adequate effort to perform specific teaching tasks, and to persist when the goings get tough (e.g., Bandura, 1997, 2000; Gibson & Dembo, 1984; Tschannen-Moran & Woolfolk Hoy, 2001). Moreover, there is evidence to suggest that teachers with a resilient sense of self-efficacy are generally effective in providing the instructional and affective supports that match their students' needs and lead to positive learning outcomes (e.g., Guo, McDonald Connor, Yang, Roehring, & Morrison, 2012; Justice, Mashburn, Hamre, & Pianta, 2008; Leroy, Bressoux, Sarrazin, & Trouilloud, 2007).

To date, empirical research has predominantly concentrated on measuring between-teacher differences in TSE and its outcomes (cf., Ross, 1994). As such, most studies have implicitly assumed TSE to be a relatively stable, almost trait-like teacher characteristic which, at best, may fluctuate across various teaching tasks and domains (Raudenbusch, Rowan, & Cheong, 1992; Tschannen-Moran & Woolfolk Hoy, 2001). Apart from its static aspects, however, TSE has also been perceived as an inherently mutable state within teachers, which largely depends on challenges presented by different types of students in class (Raudenbusch et al., 1992; Ross,

* Corresponding author at: Research Institute of Child Development and Education, University of Amsterdam, P.O. Box 15776, NL-1001 NG Amsterdam, The Netherlands. Tel.: +31 20 525 1250.

E-mail address: M.Zee@uva.nl (M. Zee).

Action Editor: Kathy Moritz Rudasill

Cousins, & Gadalla, 1996; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). Unfortunately, though, the examination of intra-individual variability in teachers' self-efficacy has largely gone unheeded by educational research, as its measurement and analysis have generally been presumed to be relatively complex. In the present study, therefore, we aimed to advance understanding of the multifaceted nature of teachers' sense of self-efficacy by exploring this construct across various domains of teaching and learning and particular students. Distinguishing inter- and intra-individual differences in TSE may be important for determining how these capability beliefs are shaped and what their effects are on individual students' academic adjustment in the classroom.

1. A social cognitive perspective on teacher self-efficacy

Empirical research on TSE has predominantly been grounded in Bandura's (1977, 1986, 1997) social cognitive framework. Central to this framework is the idea that people are not merely nudged by the whims of their environment or biological make-up, but rather operate within a system of triadic reciprocal causation. This complex system indicates that environmental constraints or resources are likely to operate through such important personal cognitions as self-efficacy, which organize and produce actions for given purposes (Bandura, 1997, 2006; Pajares, 1997). According to Bandura (1997), these capability beliefs provide the power to act differently from what specific contextual forces dictate, by activating and sustaining the skills, motivation, and effort required for desired achievements to be realized. Educational researchers have, for instance, highlighted the importance of TSE for teachers' ability to manage and motivate difficult students, and their level of effort and persistence in getting these students to study (e.g., Almog & Shechtman, 2007; Bandura, 1997; Lambert, McCarthy, O'Donnell, & Wang, 2009; Tschannen-Moran & Woolfolk Hoy, 2001). Accordingly, teachers' self-efficacy has generally been considered a vital predictor of behavior and action in the domain of teaching and learning.

The basic tenets of the social cognitive paradigm have offered some useful insights into how self-efficacy could be best approached. Among those guiding principles is the recognition of the "person-in-context" in capturing the construct of self-efficacy. For the domain of teaching and learning, this emphasis on environment implies that the degree of specificity of teaching tasks and domains has to be adequately identified (Bandura, 1997, 2006; Tschannen-Moran & Woolfolk Hoy, 2001). Moreover, it underscores the importance of considering environmental obstacles that embody gradations of challenge to which teachers can adjudge their sense of self-efficacy.

2. Degree of domain specificity of TSE

Teachers' sense of self-efficacy has been generally conceptualized at various levels of specificity. As such, this construct can be perceived to reside along a continuum from domain generality at one end to increasingly advanced specificity levels at the other (Lent & Brown, 2006). At the most universal level, TSE has been regarded as a single-level, trait-like construct, reflecting generalized capability beliefs that fluctuate between teachers (e.g., Schwarzer, 1992; Schwarzer & Jerusalem, 1995). Investigators taking such a theoretical stance habitually decontextualize TSE from a wider scope of tasks and domains in the classroom, resulting in one-dimensional, all-purpose measures that are widely applicable to a range of outcomes (e.g., Bandura, 1997; Pajares, 1996). Moreover, they commonly treat within-teacher variations in TSE as error variance, as these variations only represent deviations from teachers' baseline level of self-efficacy.

Generalized measures that capture between-teacher differences in TSE appear, by far, to be the most frequently used in studies conducted from 1998 to 2009 (Klassen et al., 2011). Indicative of such between-teacher tests are the oft-cited Teacher Efficacy Scale (TES; Gibson & Dembo, 1984) and Schwarzer and Jerusalem's (1995) General Efficacy Scale (GES). Despite their popularity, however, these measures have been criticized for being invalid and lacking predictive relevance (Bandura, 1997, 2006; Kagan, 1990; Pajares, 1996). For instance, domain-general scales have been suggested to be problematically ambiguous in the sense that teachers are forced to guess what the unspecified contextual details of individual items might be (Bandura, 1997; Wheatley, 2005). Items such as "I know that I can motivate my students to participate in innovative projects" (Schwarzer, Schmitz, & Daytner, 1999) may place a burden on teachers to comprehend what is being asked of them, as it leaves unspecified what "innovative projects" are. Moreover, it is likely that global measures fail to adequately match with the particular outcomes in the classroom that are of interest to the researcher (Bandura, 1997, 2006). Those potential misalliances between predictor and outcome may come at the expense of the explanatory and predictive merit of general TSE measures (Pajares, 1996).

Recognizing that further specification of TSE is required to elucidate the self-efficacy regulation of teachers' behaviors in the classroom, more recent scholars have shifted focus to subject-, task-, or domain-specific conceptualizations of TSE (Brouwers & Tomic, 2000; Dellinger, Bobbett, Olivier, & Ellett, 2008; Friedman & Kass, 2002; Riggs & Enochs, 1990; Siwatu, 2007, 2011; Tschannen-Moran & Woolfolk Hoy, 2001; Tschannen-Moran & Johnson, 2011; Tsouloupas, Carson, Matthews, Grawitch, & Barber, 2010). One of the most celebrated attempts at this domain-level of specificity comes from Tschannen-Moran and Woolfolk Hoy (2001). In a seminar on efficacy in teaching and learning, these researchers pooled and discussed both new and existing items to construct a TSE scale that assumedly considers the full range of teaching tasks and responsibilities. This measure, which is generally known as the Teachers' Sense of Self-Efficacy Scale (TSES), holds promise as a flexible research tool that can be used across grades (Tschannen-Moran & Woolfolk Hoy, 2001), subjects (Tschannen-Moran & Woolfolk Hoy, 2007), and teaching contexts (Klassen et al., 2009; Woolfolk Hoy & Burke-Spero, 2005). Moreover, its factorial, convergent, and concurrent validity has been demonstrated in several empirical studies (e.g., Heneman, Kimball, & Milanowski, 2006; Klassen et al., 2009; Tschannen-Moran & Woolfolk Hoy, 2001; Wolters & Daugherty, 2007).

Download English Version:

<https://daneshyari.com/en/article/363478>

Download Persian Version:

<https://daneshyari.com/article/363478>

[Daneshyari.com](https://daneshyari.com)