Classroom management and mastery-oriented instruction as mediators of the effects of teacher motivation on student motivation

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HIGHLIGHTS

- Teacher educational interest proved to be a strong predictor of classroom management.
- Classroom management showed strong effects on student motivation.
- Indirect effects of teacher educational interest on student motivation were found.

ARTICLE INFO

ABSTRACT

This study addressed the role of elementary school teachers' classroom management and mastery-oriented instructional practices as mediators of the effects of teacher motivation on student motivation. The sample comprised 110 teacher-class pairs (1731 students). The results from multilevel regression analyses revealed that teacher educational interest contributed to student reports of teachers' instructional practices. These practices, in turn, were significant predictors of students' subject interest and mastery goals at both the student and the class level. Finally, teacher educational interest showed significant and substantial indirect relations to student motivation that were mediated by teachers' instructional practices.

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As part of the increasing research focus on teacher motivation, numerous scientists have recently explored the role of various facets of teacher motivation for the use of instructional practices (e.g., Butler, 2012; Kunter et al., 2008; Pelletier, Séguin-Lévesque, & Legault, 2002; Retelsdorf, Butler, Streblow, & Schiefele, 2010). These research efforts are embedded in different theoretical frameworks such as goal orientation theory (Butler, 2007, 2012), self-determination theory (Fernet, Senécal, Guay, Marsh, & Dowson, 2008; Pelletier et al., 2002), and interest theory (Schiefele, Streblow, & Retelsdorf, 2013; Schiefele & Schaffner, 2015). The present study brought together teacher motivation constructs from different theoretical traditions that have been previously shown to be of particular importance for teachers' instructional behavior (Butler, 2007; Butler & Shibaz, 2014; Schiefele & Schaffner, 2015):

teachers' mastery goals and teachers' didactic and educational interest. In extending prior research, the present study focused on the relation between these constructs and teachers' use of classroom management and mastery-oriented practices. In addition, students' subject interest and mastery goals were included as outcome variables. The results from previous studies suggest that classroom management and mastery-oriented practices play a significant role for students' interest or intrinsic motivation (Kunter, Baumert, & Köller, 2007). Thus, it seemed meaningful to explore whether the assumed effects of teacher motivation on student motivation are substantially mediated by teachers' classroom management and mastery-oriented instruction. This research question is also relevant from the perspective of teacher education. As has been pointed out by Paulick, Retelsdorf, and Möller (2013), there is a scarcity of research directed at the effects of teacher trainees' motivation on the outcomes of teacher training such as instructional behavior or professional knowledge.

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1. The relation between teachers' interests, goals, and instructional practices

1.1. Teacher interests

Schiefele et al. (2013) proposed three dimensions of teacher interest: subject, didactic, and educational interest. Teachers' subject interest refers to their interest in the subject matter they teach in school. Didactic interest involves teachers' interest in teaching methods. This includes, for example, a preference for literature on didactics or placing strong personal value on the issue of effective teaching methods. Teachers' educational interest pertains to their interest in the educational or pedagogical aspect of the teaching profession. More specifically, educational interest concerns the appropriate pedagogical handling of students in general and problem students in particular. Whereas the issue of teaching methods is closely related to the facilitation of students' learning of subject matter, educational or pedagogical activities of the teacher are mostly directed at students' development of efficient work habits, social competencies, and moral values (Van Veen, Sleegers, Bergen, & Klaassen, 2001).

Validity evidence for the three-factor structure of teacher interest was provided by means of confirmatory factor analysis and by examining the contributions of teacher interests to the prediction of teachers' burnout symptoms, quality of experience in class, and instructional practices (Schiefele et al., 2013; Schiefele & Schaffner, 2015). Of particular importance, Schiefele and Schaffner (2015) demonstrated that teacher educational interest significantly predicts both teacher and student reports of mastery-oriented practices (e.g., recognizing students' individual progress), even when controlling for teacher self-efficacy. In contrast, didactic interest contributed only to teacher reports of mastery-oriented practices. Moreover, teacher subject interest was not at all related to instructional practices but proved to be a positive predictor of teachers' emotional experience in the classroom.

The particular role of teacher educational interest for the use of mastery-oriented practices might be explained by the strong focus on the pedagogical handling of students and their individual and academic development that is implied by educational interest. This focus probably facilitates mastery-oriented practices because these are beneficial for students' self-concepts and motivation (e.g., Givens Rolland, 2012; Urdan & Schoenfelder, 2006).

1.2. Teacher goals

Based on goal orientation theory (e.g., Elliot, 2005; Grant & Dweck, 2003), Butler (2007) distinguished between teachers' mastery, ability-approach, ability-avoidance, and work-avoidance goals. These goals are conceptualized as cognitively represented strivings toward particular goal states (Elliot, 2005). Mastery-oriented teachers seek to improve their professional competence. They evaluate their competence relative to task demands or prior outcomes. Teachers with ability-approach goals strive to demonstrate superior competence relative to other teachers, whereas teachers with ability-avoidance goals are focused on avoiding the demonstration of inferior competence. Finally, work-avoidant teachers are motivated to reduce work load and effort.

The studies by Butler and her colleagues suggest that only mastery goals exhibit adaptive effects. For example, Butler and Shibaz (2008) found mastery-oriented teachers to be highly supportive of student question-asking and help-seeking (assessed by student reports), whereas other goal orientations showed either nonsignificant or negative effects on teacher support. Of particular relevance in the present context, the findings of Retelsdorf et al. (2010; see also Shim, Cho, & Cassady, 2013) revealed that mastery-oriented teachers, who are themselves oriented to learn and increase their competence, indicate higher levels of mastery-oriented and cognitively activating practices (e.g., providing challenging and stimulating tasks). In contrast, other goal orientations were not positively related to teacher reports of adaptive instructional practices.

Butler (2012) proposed an important extension to her four-factor model of teacher goal orientations by adding relational goals as a fifth factor. Teachers who emphasize relational goals strive "to attain caring personal relationships with students" (Butler, 2012, p. 727). It is important to note that the construct of relational goals seems to share some characteristics with the construct of educational interest. Specifically, educational interest involves a focus on students' personal and academic development and, thus, also implies a caring relationship with students.

Butler (2012) examined the unique contributions of teacher goals to student reports of various instructional practices and found that relational goals but not mastery goals predicted mastery-oriented practices and teachers' social support of students (see also Butler & Shibaz, 2014). The lacking effect of teacher mastery goals on mastery-oriented practices was confirmed by Schiefele and Schaffner (2015). However, as was found by both Butler and Shibaz and Schiefele and Schaffner, student reports of teachers' cognitively activating practices were significantly predicted by teacher mastery goals but not by teacher relational goals or educational interest. To explain these findings, it might be argued that cognitively activating practices are more closely associated with students' cognitive learning processes (Kunter et al., 2013) and therefore depend more strongly on a form of teacher motivation that emphasizes the growth of competence. In contrast, teachers' relational goals and educational interest are more likely to be conducive to the use of practices that involve recognition of students' individual progress and a focus on the strengths of both low- and high-achieving students. As argued earlier, such practices tend to improve students' self-concepts and motivation which seems to coincide with the aims of teachers who endorse relational goals and are high in educational interest.

2. The role of instructional practices as mediators of the effects of teacher motivation on student motivation

Among the processes that possibly mediate the effects of teacher motivation on student motivation, teachers' instructional behaviors are likely to be of particular importance (Fauth, Decristan, Rieser, Klieme, & Büttner, 2014b; Seidel & Shavelson, 2007). This assumption is empirically corroborated by the demonstrated contributions of (1) teacher motivation to the use of instructional practices and of (2) instructional practices to facets of student motivation (e.g., Fauth et al., 2014b; Kunter, Baumert et al., 2007; Urdan & Schoenfelder, 2006; Urdan, 2010). In our view, the relation between teacher motivation and student outcome variables should be only indirect and mainly mediated by instructional practices. In line with this assumption, Schiefele and Schaffner (2015) showed a significant indirect effect of teacher educational interest on students' subject interest and mastery goals. This effect was mediated by student reports of teachers' mastery-oriented practices. Similarly, Butler and Shibaz (2014) reported that teacher relational goals predict student help seeking via the relation with student-perceived teacher social support. Student help seeking, however, has been defined as an adaptive learning strategy (cf. Butler & Shibaz, 2014) and does not represent a component of student motivation. Moreover, Butler and Shibaz obtained a significant contribution of teacher mastery goals to student subject interest that was only partially mediated by student reports of cognitively activating practices. It should be noted that Butler and