Student-teacher agreement on classroom goal structures and potential predictors

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HIGHLIGHTS

- Teacher-student agreement varies across mastery goal structures dimensions.
- The extent of observability of dimensions aids in explaining patterns of agreement.
- Agreement is only found for the easily observable dimension grouping.
- Higher class-average achievement reduces differences in perceptions for autonomy and recognition/evaluation.

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ABSTRACT

This study examined whether teachers and students agree in their perceptions of the mastery goal structures dimensions task, autonomy, recognition/evaluation, and grouping. Additionally, potential predictors, namely students' achievement and teachers' basic psychological need satisfaction at work, were investigated. Using a sample of 1099 secondary school students and their 57 teachers, results from multilevel structural equation models revealed moderate agreement for grouping and no agreement for the other dimensions. Higher levels of achievement narrowed the gap between teachers' and students' perceptions of autonomy and recognition/evaluation. No effects of need satisfaction were found for any of the mastery goal structures dimensions.

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Students and teachers work together as stakeholders within the same environment (Könings, Seidel, Brand-Gruwel, & van Merriënboer, 2014). It is the interplay between them that constitutes the prevailing motivational climate in a classroom (Patrick, Kaplan, & Ryan, 2011). A particularly vivid area of research on motivational climate builds on achievement goal theory as a theoretical framework (e.g., Murayama & Elliot, 2009; Urdan, 2004; Wang, Hall, Götz, & Frenzel, 2017). According to achievement goal theory,

classroom goal structures refer to teachers' instructional practices that promote certain motivational orientations in students (Meece, Anderman, & Anderman, 2006; Urdan & Schönfelder, 2006).

The vast majority of studies on classroom goal structures conducted over the last thirty years have relied on student reports to measure classroom experiences (e.g., Anderman & Midgley, 1997; Church, Elliot, & Gable, 2001; Lüftenegger, Tran, Bardach, Schober, & Spiel, 2017). This line of research has yielded an immense body of knowledge on how students' subjective perceptions of classroom goal structures shape their motivation, cognition, and affect (e.g., Meece et al., 2006; Wolters, 2004). Studies on teachers have added another crucial facet to the study of the motivational emphasis in classrooms by focusing on the perspective of those responsible for establishing classroom goal structures (e.g., Wang et al., 2017;

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Wolters & Daugherty, 2007). Even though a number of studies incorporate both sources (e.g., by combining student reports with classroom observations or teacher interviews, Turner et al., 2002; Urdan, 2004), the degree of alignment between teachers' and students' views on classroom goal structures, i.e., student-teacher agreement, has rarely been addressed.

The study of student-teacher agreement is important for several reasons. As classroom goal structures are considered to be shared among teachers and students — with teachers the ones who structure class and convey goal-related messages, and students the ones who receive and interpret these messages — the degree to which these two main actors in the classroom share perceptions is of substantial interest. Exploring the convergence between teachers' and students' views on classroom goal structures allows to gain insights into whether teachers' instructional practices (or at least their reported practices) translate into students' perceptions of these practices (or at least their reports of these practices). Research reveals that teachers tend to report more positive environments than do students (Fisher & Fraser, 1981; Fraser & O'Brien, 1985) and have little awareness of students' views (Watkins, 2004). Differences between perceptions might hamper good fine-tuning of teachers' behavior with students' behavior in the learning environment, thus adversely affecting the effectiveness of teaching and learning (Könings et al., 2014; Vermetten, Vermunt, & Lodewijks, 2002). Accordingly, studies on student-teacher agreement on classroom goal structures would not only advance the current body of scholarship in this area, but also benefit educational practice. For example, the results of student-teacher agreement studies could be used in teacher trainings to make teachers aware of patterns of greater or lesser convergence between their perspectives and those of their students, and relatedly, stimulate reflection on instructional practices (Könings et al., 2014). An intervention study in which teachers received feedback on their divergence with students' perceptions found evidence of some improvement in teachers' practices following the intervention (Babad, 1990), underscoring the practical relevance of the study of student-teacher agreement.

Within classroom goal structures research, however, only a few studies have examined student-teacher agreement (Kaplan, Gheen, & Midgley, 2002; Ryan, Gheen, & Midgley, 1998; Urdan, Midgley, & Anderman, 1998). Furthermore, potential predictors of student-teacher agreement, i.e., student and teacher characteristics that influence the degree of convergence between teachers' and students' views, have not been investigated at all. In the current study, we therefore aim to shed light on student-teacher agreement regarding four dimensions of classroom goal structures, namely the design of tasks, the provision of autonomy, the ways teachers evaluate and recognize students, and the promotion of student cooperation (Ames, 1992; Epstein, 1988; Greene, Miller, Crowson, Duke, & Akey, 2004). In addition, we examine factors on the student and teacher sides that are assumed to predict levels of student-teacher agreement. Drawing on studies on student-teacher agreement conducted in other theoretical frameworks than achievement goal theory, we test whether students' achievement (Desimone, Smith, & Frisvold, 2010; Könings et al., 2014) and teachers' satisfaction of their basic psychological needs at work (Brien et al., 2012; Ryan & Deci, 2015) predict levels of student-teacher agreement. As prior research on student-teacher agreement has exclusively relied on data from students and teachers in Western countries (e.g., Ryan et al., 1998; Urdan et al., 1998) and given the preponderance of studies using Western samples in classroom goal structure research more generally (e.g., Church et al., 2001; Lüftenegger, Van de Schoot, Schober, Finsterwald, & Spiel, 2014), the present study also stands out for using a sample of Iranian secondary school students and their teachers.

1. Classroom goal structures — types and dimensions

Achievement goal theory, one of the most widely adopted motivational frameworks, includes both personal and situational components. Personal achievement goals represent reasons for persisting and engaging in achievement tasks, whereas *classroom goal structures* comprise goal-related messages that are salient in the classroom setting (Elliot & McGregor, 2001; Miller & Murdock, 2007; Pintrich, 2003). Similar to earlier work on personal achievement goals, most researchers pit two types of classroom goal structures against each other (e.g., Ciani, Middleton, Summers, & Sheldon, 2010; Urdan, 2004). A *mastery goal structure* describes an environment that reinforces the importance of learning and deep understanding, and in which students' efforts and their individual development are valued (Miller & Murdock, 2007). Instructional practices and policies in classrooms with a *performance goal structure* emphasize how well one performs in reference to others (Ciani et al., 2010). Other researchers favor a two-dimensional conceptualization of performance goal structures (e.g., Murayama & Elliot, 2009; Schwinger & Stiensmeier-Pelster, 2011). This two-dimensional conceptualization distinguishes between a *performance-approach goal structure* in which the focus lies on engaging in academic work to demonstrate competence, and a *performance-avoidance goal structure* with a focus on avoiding demonstrations of incompetence (Murayama & Elliot, 2009). Researchers working within the theoretical framework of achievement goal theory agree that, among the different types of classroom goal structures, a mastery goal structure most effectively promotes students' motivational, affective, and cognitive development and should therefore be fostered (e.g., Meece et al., 2006; Urdan & Schönfelder, 2006). Correspondingly, in this paper we focus on mastery goal structures.

The scale most frequently used to assess mastery goal structures (and classroom goal structures in general) comes from the Patterns of Adaptive Learning Survey (PALS; Midgley et al., 2000). In the PALS, mastery goal structures are assessed as the overall perceived motivational climate in a classroom. As such, several different aspects that are believed to fall within a mastery goal structure, such as a focus on individual improvement or real understanding of the material, are mixed within one scale. In addition to this holistic conceptualization and measure, other researchers have adopted a multi-dimensional view of mastery goal structures, striving to capture multiple distinct dimensions (e.g., Ames, 1992; Lüftenegger et al., 2017). Multi-dimensional conceptualizations hold the advantage of allowing each dimension of mastery goal structures to be investigated separately (e.g., Bardach, Lüftenegger, Yanagida, Spiel, & Schober, 2017). Therefore, a multi-dimensional conceptualization offers a particularly fruitful framework for researchers interested in a differentiated view of mastery-oriented classroom practices.

A prominent example of a multi-dimensional framework of mastery goal structures was proposed by Carole Ames. In her seminal work, Ames (1992) specified three dimensions of mastery goal structures, namely task, authority, and recognition/evaluation. The *task dimension* describes the design of tasks and aspects inherent to the process of task completion. For instance, teachers can offer students meaningful, challenging tasks that make them curious to learn more about the subject. Moreover, they can encourage students to set learning goals for themselves or monitor their learning (Ames, 1992; Blumenfeld, 1992; Lüftenegger et al., 2017; Patrick et al., 2011). Teachers' attempts to create an environment that supports student autonomy in both organizational and social regards are addressed in the *authority dimension* (also see Lüftenegger et al., 2014; Greene et al., 2004). Teachers can support students' autonomy by allowing them to make their own