# Academic competence and achievement goals: Self-pressure and disruptive behaviors as mediators

Stéphane Duchesne*, Simon Larose

*Département d'études sur l'enseignement et l'apprentissage, Faculté des sciences de l'éducation, Université Laval, Canada*

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## ABSTRACT

Perceived academic competence is viewed as an important antecedent of students' achievement goals. However, knowledge about the longitudinal associations between these two concepts and their potential mechanisms is poorly documented. The goal of this 2-year prospective study was to test a predictive model linking perceived competence to achievement goals through academic self-pressure and disruptive classroom behaviors. The participants recruited were 339 French Canadian early adolescents (mean age = 12.30). They completed questionnaires three times over two school years. Results from structural equation modeling showed that perceived academic competence predicted an increase in both approach goals (mastery and performance) and a decrease in mastery-avoidance goals. These associations were mediated by low levels of academic self-pressure (for performance-approach and mastery-avoidance goals) and disruptive behaviors (for mastery-approach goals). Practical implications of these findings and potential avenues for future research are discussed.

## 1. Introduction

Tendencies to approach success and avoid failure are basic motivational force that plays a predominant role in the activation and persistence of students' behavior in achievement contexts (Atkinson, 1957; Lewin, Dembo, Festinger, & Sears, 1944). These personal motives are well captured by the 2 × 2 achievement goal model (Elliot & McGregor, 2001), which distinguishes between mastery-approach, performance-approach, mastery-avoidance, and performance-avoidance goals. Empirical work has established that students who engage in tasks by focusing on approach goals display a more adaptive educational profile than those who adopt avoidance goals (for reviews, see Anderman & Patrick, 2012, Hulleman, Schrager, Bodmann, & Harackiewicz, 2010, and Senko, 2016). It has been posited that differences in achievement goals are partly grounded in students' perceptions of their competence (Elliot, 2005; Elliot & Church, 1997).

To date, the relationship between perceived competence and achievement goals has been supported by research (e.g., Cury, Elliot, Da Fonseca, & Moller, 2006; Duchesne, Ratelle, & Feng, 2017b; Elliot & Church, 1997). However, few studies appear to have explored the possibility that mediating mechanisms may underlie this association over time. The present longitudinal study was designed to help fill this research gap by examining self-expectations as a source of academic stress (here called academic self-pressure) and disruptive behaviors in the classroom as possible mechanisms of action. In so doing, our attention was focused on early adolescence, a period where marked changes have been reported in achievement goals (e.g., Duchesne, Ratelle, & Feng, 2014). This study will improve our understanding of the personal factors involved in these changes.

### 1.1. Achievement goals: conceptualization, consequences, and changes in early adolescence

Achievement goal theory (Dweck, 1986; Elliot, 2005; Nicholls, 1984) is a social-cognitive framework developed for understanding students' motivation, decision making and behavior in achievement situations. From a conceptual standpoint, achievement goals refer to future-oriented thought patterns that give a purpose or aim for engaging in a task or activity (Elliot, 1999; Senko, 2016). In its very first form, the theory proposed a dichotomous conception that contrasted mastery goals (developing competence) and performance goals (demonstrating competence). The progressive integration of approach/avoidance motivation constructs led to the design of the 2 × 2 achievement goal framework, which is comprised of two approaches (mastery-approach and performance-approach) and two avoidance (mastery-avoidance and performance-avoidance) goals (Elliot, 1999;

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* Corresponding author at: Département d'études sur l'enseignement et l'apprentissage, Faculté des sciences de l'éducation, Université Laval, Québec G1V 0A6, Québec, Canada.
*E-mail address:* Stephane.Duchesne@fse.ulaval.ca (S. Duchesne).

Pintrich, 2000). In this model, the approach goals are mainly oriented towards approaching success or a positive outcome (positive valence). They differ, however, depending on whether their content focuses on the development of competence relative to the self/the absolute demands of the task (mastery-approach goals) or on the demonstration of competence relative to social/normative standards (performance-approach goals). For their part, avoidance goals are guided by fear of failure or a negative outcome (negative valence). They are differentiated according to whether they focus on the avoidance of incompetence relative to past performance/the task-based demands (mastery-avoidance goals) or on the importance of avoiding appearing incompetent relative to interpersonal/normative standards (performance-avoidance goals).

Prospective and correlational studies based on the 2 × 2 model have produced fairly consistent results in terms of the outcomes of achievement goals, especially for mastery-approach, mastery-avoidance, and performance-avoidance goals (e.g., Bong, 2009; Cury et al., 2006; Duchesne, Larose, & Feng, 2017a; Elliot & McGregor, 2001; Howell & Watson, 2007; Liem, 2016; Putwain & Symes, 2012). Mastery-approach goals have, for example, been positively associated with indicators of school functioning such as effort, perseverance, self-regulation, seeking help, peer satisfaction and performance. By contrast, mastery-avoidance and/or performance-avoidance goals have often been negatively related to these same indicators, and have been positively correlated with disorganization in tasks, concerns, evaluative anxiety and loneliness. As for performance-approach goals, the findings have been mixed, producing some positive associations with optimal school-related variables like metacognitive strategies (e.g., Duchesne et al., 2017a; Howell & Watson, 2007) and performance (e.g., Bong, 2009; Cury et al., 2006; Elliot & McGregor, 2001; Liem, 2016), as well as detrimental ones, such as anxiety (Bong, 2009), worry (Putwain & Symes, 2012), and fear of failure (Elliot & McGregor, 2001). Altogether, the current state of knowledge indicates that approach form of goals – mainly mastery goals – manufacture more academic and socio-emotional benefits for students than their avoidance counterparts.

Another body of research has also highlighted the unstable nature of these goals in early adolescence (Anderman & Midgley, 1997; Bong, 2009; Duchesne et al., 2014; Middleton, Kaplan, & Midgley, 2004; Paulick, Watermann, & Nückles, 2013; Shim, Ryan, & Anderson, 2008). The general picture that has emerged is that achievement goals were only moderately correlated from year to year, with correlation coefficients ranging from 0.43 to 0.59 between sixth and seven grades (Duchesne et al., 2014; Middleton et al., 2004). Moreover, the level of mastery-approach, mastery-avoidance, and performance-avoidance goals tend to decrease over time. Only the performance-approach goals were the exception, their intensity either increased, decreased, or remained the same over time. Collectively, these findings suggest that many students revise and change their achievement goals in early adolescence. Given the consequences of achievement goals, a better understanding of the factors contributing to these changes is essential.

### 1.2. Perceived academic competence as a potential antecedent

One of the postulates of achievement goal theory is that achievement goals are influenced by multiple personal and environmental factors (Anderman & Patrick, 2012). Among these factors, perceived competence or efficacy has been proposed as one of the most prominent antecedent (Elliot, 2005; Elliot & Hulleman, 2017; Middleton et al., 2004; Nicholls, 1984). Perceived competence typically refers to beliefs that students have about their abilities to organize and effectively perform the actions required to produce the desired results for a given task or activity (Bandura, 1997; Niemiec & Ryan, 2009; Pajares & Schunk, 2001). This subjective judgment about the self is based on information from current performance, peer comparison, verbal feedback from others and emotional reactions during learning activities. Students with a high level of perceived academic competence would be

more likely to approach difficult learning situations as a challenge, by making an effort and by being perseverant, while those with low perceived competence would be more inclined to assess the situation as being more difficult than it really is, to feel stressed, to avoid it or disengage (e.g., Schunk & DiBenedetto, 2016).

Prior studies carried out with samples of secondary and post-secondary students highlighted both cross-sectional and longitudinal associations between perceived academic competence (or competence-based variables) and achievement goals. On one hand, cross-sectional findings showed that perceived academic competence and competence expectancies have been positively correlated with mastery-approach and/or performance-approach goals and inversely with performance-avoidance and/or mastery-avoidance goals (Anderman & Midgley, 1997; Bong, 2009; Bong, Hwang, Noh, & Kim, 2014; Cury et al., 2006; Da Fonseca, Cury, Bailly, & Rufo, 2004; Elliot & Church, 1997; Liem, Lau, & Nie, 2008; Maltais, Duchesne, Ratelle, & Feng, 2015). Longitudinal results, on the other hand, are scarce. For instance, Middleton et al. (2004) found that the predictive association between perceived academic competence in sixth grade and mastery-approach goals in seventh grade was lower for students with higher performance-avoidance goals. Recently, Duchesne and colleagues (2017b) have also shown that students' need for competence prior to the transition to secondary school predicted mastery-approach goals in the first year of secondary school through their academic adaptation.

By and large, the extant data tend to support the idea that positive perceived competence in school promotes approach goals, while negative perceived competence leads to avoidance goals (Elliot, 2005). However, three significant gaps are still present in the research literature. First, the evidence for the competence-achievement goals link is mainly based on cross-sectional data, which limits our understanding of the contribution of perceived academic competence to the adoption of achievement goals beyond a single school year. Given that the early adolescent period is accompanied by changes in achievement goals (e.g., Duchesne et al., 2014), it is imperative to clarify the role of perceived competence in explaining these changes. Second, although the 2 × 2 framework was proposed 20 years ago, none of the studies reviewed have applied it to verify the longitudinal relationship between perceived competence and achievement goals among students in early adolescence. Thus, the predictive value of academic competence on mastery-avoidance goals in this population remains largely unknown. Third, the identification of indirect mechanisms by which perceived competence predicts change in the achievement goals of the 2 × 2 framework is still an open question. In our study, we have examined perceived academic self-pressure and disruptive classroom behaviors as potential mediators.

### 1.3. Academic self-pressure and disruptive behaviors as underlying mechanisms

The experience of competence is viewed as a basic psychological need (Ryan & Deci, 2017). The perceived satisfaction of this need, which would be relatively high in early adolescence (Ratelle & Duchesne, 2014), provides a sense of efficiency and control that energizes goal-directed actions. However, perceived competence can be altered in contexts that expose adolescents to challenges that are too difficult, negative feedback and social comparisons (Ryan & Deci, 2017). The active thwarting of competence – and other basic needs (i.e., autonomy and relatedness) – would then promote the development of compensatory mechanisms to cope with need frustration (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011; Vansteenkiste & Ryan, 2013). Two of these mechanisms, *rigid behavioral patterns* and *oppositional defiance*, have led us to propose academic self-pressure and disruptive classroom behaviors as processes involved in the longitudinal association linking perceived competence to achievement goals.