Avoidance goal orientation has been found to undermine students' academic motivation and achievement. Especially for students in the lowest level of secondary education this can bring along an unfavorable school career, as they show more avoidance-oriented motivation than students in higher levels of secondary school. Recognizing groups of students with different levels and developments of their performance-avoidance goal orientation makes it possible to try to intervene early in their school career. Being one of the important school subjects, we focus on math in this study. 1168 students, 12-13 year old, attending the first and second year of pre-vocational education in the Netherlands, participated in this study. Questionnaires on goal orientations, self-efficacy, investment for math and well-being at school were administered four times during a year. Report marks were collected at school. Using Growth Mixture Modeling, three groups of students were distinguished: a group low in performance-avoidance orientation at the start which increased over the year, a group with a low performanceavoidance orientation at the start which decreased over the year, and a third small group with a rather strong performance-avoidance orientation at the start which decreased over the year. The developments in motivation for math, self-regulated learning, academic achievement and well-being at school of the groups were compared. Indeed, we found a decreasing self-efficacy, mastery approach orientation, achievement for math and well-being at school for the first group.

**Keywords:** Performance-avoidance orientation, motivation for math, secon-dary education, longitudinal research

## Why Grades Engender Performance Avoidance Goals: The Mediating Role of Autonomous Motivation

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Evaluation is an inescapable feature of academic life with regular grading and performance appraisals at school and at university. Whilst previous research has indicated that evaluation and grading in particular is likely to have a substantial impact on motivational processes, little attention has been paid to the relationship between grading and approach versus avoidance achievement goals, two fundamental concerns whenever evaluation is at stake. Three experiments, carried out in professional schools, revealed that expectation of a grade for a task, compared to no grade, consistently induced greater adoption of performance-avoidance, but not performance-approach, goals.

Experiments 2 and 3 revealed that expectation of a grade, compared to no grade, consistently induced greater adoption of performance-avoidance goals even when grading was accompanied by a formative comment. Furthermore, experiment 3 showed that reduced autonomous motivation measured after having completed a task for a grade versus no grade mediated the relationship between grading and adoption of performance avoidance goals in a subsequent task. Results are discussed in the light of achievement goal and self-determination theory.

Keywords: Grading, performance-avoidance goals, autonomous motivation

## The prevalence of competitive and validation concerns underlying the performance goals of students in 2nd and 3rd cycles.

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This study was developed within the framework of the Achievement Goal Theory, trying to contribute to a clear operational definition of performance goals, through identifying the dimensions underlying performance goals. Moreover, the study examined the incidence of different performance-related dimensions within students' achievement goal patterns. To this end the authors developed a scale assessing diverse types of achievement-related goals, each representing specific dimensions of performance goals, and mastery goals. The analysis of the dimensionality of the scale on a study with 2<sup>nd</sup> cycle (5<sup>th</sup> and 6th grade students) revealed three types of performance-related goals: outcome goals, validation goals, and competitive goals. The same analysis with a sample of 3<sup>rd</sup> cycle (7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> grade students) revealed outcome goals, competitive goals, and the emergence of an avoidant goals dimension. Results show that in general mastery and outcome goals are the predominant goals of the students. Moreover, results support the view that competition is a specific, low incidence, separate dimension of achievement-related goals, and suggest that only by the 3<sup>rd</sup> cycle an avoidance goals emerge as a distinct motivational orientation. The findings of this study are discussed in relation to the current debates concerning the nature and dimensions of achievement goals.

**Keywords:** dimensions of achievement goals, competitive goals, validation goals, outcome goals