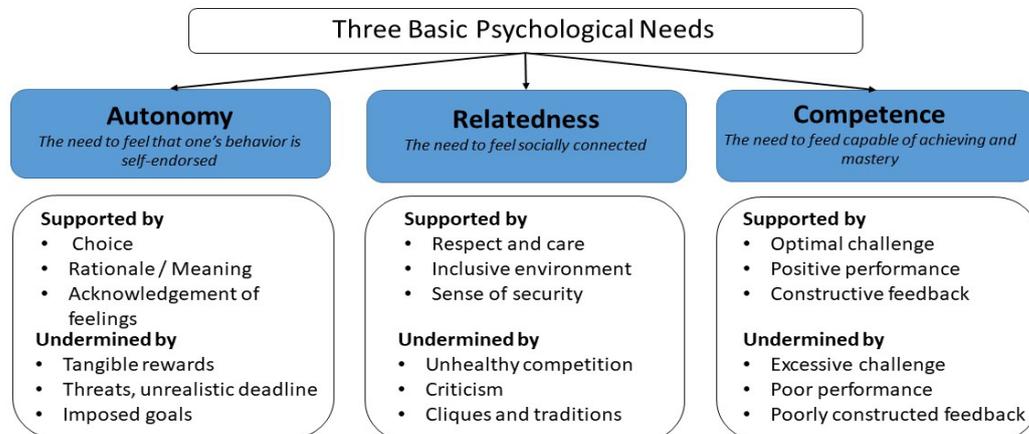


The first line of research builds on the Self-Determination Theory (SDT), a macro-theory of human motivation. The theory proposes that there are three basic human psychological needs: the need to feel competent, autonomous, and related to others (Deci & Ryan, 2008). Figure 1 illustrates the conditions that support or undermine the three basic psychological needs. The extent to which these needs are supported or undermined within the social contexts influences the extent of internalization of external regulation, and in turn, the quality of motivation. Accordingly, when students feel that their needs are being supported by the learning context, they are more likely to internalize external regulation of their behavior and become more autonomously engaged in their learning (Niemic & Ryan, 2009). SDT makes a distinction between autonomous and controlled motivation that direct and energize behavior, as opposed to amotivation that refers to a lack of motivation to act. Enhancing motivation is key to the PRIME project. Therefore, we aim to use SDT as a starting point to examine student motivation and to develop interventions to enhance student motivation.

Figure 1

Three basic psychological needs from the framework of Ryan and Deci's self-determination theory adapted from Cook and Artino (2016)



Two studies are currently proposed in the first line of research. Figure 2 provides a summary of the research questions in the two proposed studies. In Study 1, a cross-sectional research design will be used to investigate the relationships between students' perceptions of teacher support, their satisfaction and frustration in their needs for relatedness, competence, and autonomy, and academic performance. It is hypothesized that higher perceptions of teacher support will be positively related to needs satisfaction and negatively related to needs frustration. We also hypothesize that autonomous motivation is positively related to academic achievement whereas controlled motivation is negatively linked to academic achievement.

The aim of the Study 1 is twofold: to examine the relationship among the measured variables using statistical modelling and to examine whether there are gender differences in the measured variables. Results of the study will be used to inform the design of subsequent studies (e.g., Study 2) where interventions will be developed to promote sense of belonging and feelings of competence.

Figure 2

Summary of research questions in first line of research

First Line of Research: Enhance Motivation
<p>Study 1. Using concepts in self-determination theory to examine student motivation in PRIME</p> <p>Research Question 1a: What are the relationships between student perceptions of teacher cues in monitoring and scaffolding, satisfaction and frustration of needs for relatedness, autonomy and competence, motivation, and academic performance?</p> <p>Research Question 1b: Are there gender differences in the relationship examined in 1a?</p>
<p>Study 2. Interventions to enhance sense of belonging and competence</p> <p>To design and implement interventions to promote sense of belonging and feelings of competence.</p> <p>To take differences in student characteristics into account and examine whether the intervention(s) have differential effect on different groups of students.</p>