Students' school performance, task-focus, and situation-specific motivation

Lars-Erik Malmberg [a,*], Eija Pakarinen [b], Kati Vasalampi [b], Jari-Erik Nurmi [b]

[a] University of Oxford, UK
[b] University of Jyväskylä, Finland

ARTICLE INFO

ABSTRACT

Going beyond studies of individual differences in and profiles of students' motivation, we investigated situation-specific (intra-personal) experiences of autonomous (enjoyment, interest, and task choice) and controlled (having to do, and the teacher wanting them to do a task) motivation across learning situations during one week, and how these were related to student characteristics (teacher rated academic performance and task-focus). Three-hundred and fourteen primary school students (Years 5 and 6) completed electronic questionnaires on Personal Digital Assistants, on an average of 11.2 learning episodes during a week. Multilevel Structural Equation Models provided support for a model based in organismic integration theory (OIT). At the situation-level, controlled motivation positively predicted autonomous motivation. At the student-level, students differed in the association between autonomous and controlled motivations, such that lower performers felt more autonomously motivated when controlled motivation was high. Implications for teacher practice are discussed.

© 2015 Elsevier Ltd. All rights reserved.

1. Introduction

Autonomously motivated students experience interest and enjoyment, while students motivated by control experience expectations, values, pressure, and deadlines (Ryan & Deci, 2000). Although conceptually distinct, autonomous and controlled motivation can be experienced at the same time, because working on a task may be both interesting and also help the student to stay connected with the teacher and earn a good grade (Lepper, Corpus, & Iyengar, 2005; Ratelle, Guay, Vallerand, Larose, & Senécal, 2007). While theoretical frameworks pose that motivation is a function of the individual, context (Ratelle et al., 2007) and situation (Ryan & Deci, 2000), it appears that most studies to date have focused on individual differences (i.e., interperson, traits) in motivation (e.g., Ryan & Connell, 1989). There are some studies adopting a person-oriented approach for identifying groups of students with different motivational profiles (e.g., Boiché & Stephan, 2014; Ratelle et al., 2007; Vansteenkiste, Sierens, Soenens, Luyckx, & Lens, 2009), but only few studies have focused on situation-specific (i.e., intra-person, states) aspects of motivation (Tsai, Kunter, Lüdtke, &

Trautwein, 2008). Person-oriented studies have indeed found profiles of students who experience both autonomous and controlled motivation within a cross-section of time, begging the question "are students switching between the two types of motivations at different times?" (Ratelle et al., 2007, p. 744). The first aim of this study was to investigate how students' autonomous and controlled motivation vary from one learning situation to another during one week of school. Doing so enables us to apply a process perspective (Schmitz, 2006) to the study of students' real-time motivation in classrooms: that is we focus on sequences of states of learning experiences. Second, as students' motivations have been shown to be related to their academic performance and task-focused behaviour (Guay, Ratelle, & Chanal, 2008), we additionally investigated these relations in the present study.

1.1. Autonomous and controlled motivation

Over the past 30 years, self-determination theory (SDT; Deci & Ryan, 1985; Ryan & Deci, 2000) has been used for understanding students' optimal functioning in school. According to SDT, there are different types of motivation that vary according to their level of self-determination (i.e., the extent to which a behaviour is freely endorsed by individuals), and this has implications for behavioural outcomes (e.g., Ryan & Connell, 1989; Ryan & Deci, 2000). The most

central distinction in SDT is between autonomous motivation and controlled motivation, which views motivation as a continuum between intrinsic and extrinsic motivation, i.e., between doing something because it is inherently interesting or enjoyable (intrinsic motivation; Ryan & Deci, 2000), and acting with a feeling of being controlled by external contingencies of rewards or punishment (extrinsic motivation; Deci & Ryan, 2008). Autonomous motivation consists of both intrinsic motivation and forms of extrinsic motivation which the person identifies and values (i.e., identified motivation), and has integrated into the self (i.e., integrated motivation). Controlled motivation comprises forms of motivation which are felt to be compelled by internal (i.e., introjected motivation) or external forces or pressures (i.e., extrinsic motivation; Deci & Ryan, 2008; Sheldon & Elliot, 1998). Intrinsically motivated goals give the individual a sense of personal ownership and are pursued through sustained self-regulation of effort. Extrinsically motivated goals are not pursued with sustained energisation and are likely to wane over time as they do not represent the needs of the individual (Sheldon & Elliot, 1998).

Several studies examining the relations between motivation and different student outcomes have shown the importance of promoting autonomous forms of motivation at school. Students characterised by autonomous motivation have shown to receive higher grades, to be more persistent, to learn more, and to feel more satisfaction and positive emotions at school compared to those who are motivated by control (for review see, Guay et al., 2008). Although autonomous motivation is clearly an important form of motivation, most learning situations students encounter and activities they carry out at school are not autonomously motivated but controlled, structured or directed by teachers. In educational research concepts such as teacher-centred instruction (vs. student-centred; Cornelius-White, 2007), direct instruction (vs. indirect instruction; Flanders, 1970), teacher-directed instruction (Connor, Morrison, & Petrella, 2004) and cognitive structuring of contents (vs. chaos; Skinner & Belmont, 1993; Hardy, Jonen, Möller, & Stern, 2006) denote instances in which, using the conceptions of STD, teacher control of instructional contents, materials, strategies and events is relatively high.

However, some forms of controlled motivation such as introjected (e.g., wanting to please the teacher) and extrinsic motivation (e.g., being rewarded by a good grade), can also be instrumental for achieving learning goals (Deci & Ryan, 2008). Behaving only in accordance with intrinsic interest, enjoying a particular task, with no attention to external contingencies and constraints may decrease students' learning outcomes, whereas attending to a task only because of external pressures can substantially undermine inherent pleasure that can come from learning (Lepper et al., 2005). While cross-sectional analysis shows that autonomous motivation is positively, and controlled motivation is negatively related with school achievement (e.g., Lepper et al., 2005), person-oriented studies have shown that students with a motivational profile that combined high levels of both autonomous and controlled motivation, experience positive academic outcomes (Ratelle et al., 2007). Another study showed that students with a profile of high autonomy and low controlled motivation had a higher grade point average than those of high autonomous and high controlled motivation(Vansteenkiste et al., 2009). Motivational profiles relate to different patterns of non-academic outcomes. While Malmberg and Little (2007) found a group of average-performing students called "Strivers" (above average ability beliefs, high effort beliefs and high perceived difficulty) exhibited high levels of both autonomous and controlled motivation, Vansteenkiste et al. (2009) found students with a profile of high autonomous and high controlled motivation expressed relatively high levels of test anxiety and procrastination and lower levels of perceived teacher support.

SDT also argues that autonomous and controlled motivations are not necessarily opposite dimensions but that individuals can report both autonomous and controlled motivations at the same time for a given domain (see Ryan, Plant, & O'Malley, 1995). Consequently, in the present study we examined to what extent controlled motivation contributes to intrinsic motivation. Moreover, as extrinsic and intrinsic motivation have been shown to be weakly or positively associated in between person analysis (Malmberg & Little, 2007; Ryan & Connell, 1989), we in our study explored whether a similar association would be found between our intrapersonal variables, that is autonomous and controlled motivation measured for real-time learning experiences during one week. In addition we explored whether there are individual differences in the associations between intrapersonal autonomous and controlled motivation.

1.2. Organismic integration theory

Within SDT, Deci and Ryan (1985; see also Ryan & Deci, 2000) introduced the organismic integration theory (OIT) to explain different forms of extrinsic motivations and contextual factors that facilitate or prevent internalization or integration of these behaviours. According to OIT, externally motivated demands can be integrated in the individual, when the context is conducive. In other words, students can construe extrinsic goals (as most teaching is) as integrated motivation (i.e., if they subscribe to the goals and accept them as their own) or identified motivation (i.e., if they are convinced of the value of the goal, even though they don't completely subscribe to it), if the context is autonomy supportive, i.e., allowing students to feel competent, related, and autonomous. Stated differently, when the social context is such that students can build their competencies, connect with others, and act in ways that are self-endorsed, they are most inclined to internalize and integrate aspect of their social world, including extrinsic motivations (Ryan & Deci, 2000). In such a context, students would be more likely to engage in a task both because it interests them and because it will enable them to stay connected with the teacher or help them earn a good grade (Lepper et al., 2005; Ratelle et al., 2007). However, the time-perspective within which the integration of extrinsic goals into the self would take place, is not explicitly stated.

Despite the claim that autonomous and controlled motivation are influenced by contextual factors, such as a current situation in a classroom, studies examining whether aspects of motivation vary across lessons are rare (as an exception, Tsai et al., 2008). Thus, it is possible that there is intrapersonal variation in students' autonomous and controlled motivations in day-to-day classroom situations. For example, the study by Tsai et al. (2008) showed that lessons in which students perceived the teacher as taking their perspective and needs into account (i.e., an autonomy supportive climate) were associated with students' higher autonomous motivation to the subject, whereas lessons where teachers disrupted students' natural learning rhythms and did not give time for reflection (i.e., controlling behaviours) were associated with students' lower autonomous experience. In the present study we investigated the extent to which students' autonomous and controlled motivation vary from one learning situation to another during one week of school.

1.3. Task-focus and academic performance

For teachers, students' motivation is typically manifested as their learning-related behaviour in a classroom, such as engagement in learning tasks (Skinner & Pitzer, 2012). Therefore, students' behavioural engagement in learning activities provides a teacher