



Teachers' motivating style, students' basic psychological needs, academic reading motivation, and engagement

Martin Dammert^a , Lennia Matos^a , Rafael Gargurevich^a , Maarten Vansteenkiste^b  and Leen Haerens^c 

^aDepartment of Psychology, Pontifical Catholic University of Peru, Lima, Peru; ^bDepartment of Developmental, Personality and Social Psychology, Ghent University, Ghent, Belgium; ^cDepartment of Movement and Sports Sciences, Ghent University, Ghent, Belgium

ABSTRACT

Students display different amounts and types of motivation for academic reading. Drawing upon self-determination theory, we examined the relationship between perceived teachers' motivating style and students' basic psychological needs, regulatory styles, and engagement around academic reading. Participants were 235 Peruvian fourth-fifth graders who completed questionnaires regarding their experiences of motivation and their teachers' perceived motivating style during visits to the school library. Students' engagement was rated by their teachers. Perceived teachers' autonomy support had a positive direct relationship with intrinsic regulation. Perceived teacher control displayed a positive indirect relationship with external regulation, mediated by students' basic needs frustration, and a direct relationship to the same outcome. Teacher control also showed a negative direct relationship with teacher-rated behavioral and agentic engagement and intrinsic regulation. Results highlight the importance of teachers' motivating styles in students' motivational experiences.

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Introduction

Reading competencies are crucial for individuals' optimal functioning in today's society (Becker et al., 2010; De Naeghel, Van Keer, et al., 2014; Netten et al., 2011) as it facilitates access to information and learning (Solé, 2012). Developing reading competencies is, therefore, one of the main goals of the primary education system (Solé, 1992; Van Keer, 2004). Reading competence refers to "the ability to modulate and tune the interaction of one's reading knowledge, beliefs, abilities, and processes appropriately given the sociocontextual conditions confronted, along with one's own intentions" (Alexander & Disciplined Reading and Learning Research Laboratory, 2012, p. 263). Its consolidation facilitates people's construction of meaning, learning, and participation in society (Mullis & Martin, 2019). The acquirement of reading competencies is influenced by cognitive, motivational, and sociocontextual elements (Alexander & Disciplined Reading and Learning Research Laboratory, 2012). Motivational elements influence the intentionality and motives behind reading and interact with other factors including readers' knowledge and competencies, and the learning and social context where the activity occurs (Alexander & Fox, 2019; Ruddell et al., 2019). As reading motivation at school predicts students' reading in their free time and reading achievement (De Naeghel et al., 2012), we sought to shed light on the factors that promote greater academic reading motivation. Drawing upon self-determination theory (SDT), a prominent motivational theory in education,

we examined how students' perceived teaching style (i.e., a sociocontextual factor) at the school library relates to their basic psychological needs, reading motivation, and teacher-rated engagement in a sample of Peruvian fourth and fifth graders. In Peru, early childhood, primary, and secondary education (up to 16 years) is mandatory, and the main challenges still revolve around increasing educational quality while reducing inequality and learning gaps (Cueto, 2022). Library visits were chosen as the context to study teachers' motivating style and its influence in primary school students' experiences as school libraries represent a key setting to foster students' need satisfactions and reading motivation. Especially, given that at libraries, in comparison to other contexts where reading instruction occurs, students can explore and choose books that fit their personal preferences. This would allow teachers to more easily motivate students to engage in reading activities to support their reading competencies.

Reading motivation and engagement

Academic reading involves reading performed inside the school or implemented to fulfill activities from the school domain (De Naeghel et al., 2012; De Naeghel & Van Keer, 2013). Despite its importance, students display different amounts and types of motivation for their academic reading (De Naeghel & Van Keer, 2013). Some are intrinsically motivated, meaning that they find reading inherently satisfying

and enjoyable (Ryan & Deci, 2017). Others read for extrinsic or instrumental reasons, that is, to obtain an outcome separable from the reading itself (Ryan & Deci, 2017). When externally regulated, students feel that they have no other choice but to read to obtain contingent rewards or avoid threatening punishments. For example, students may read to obtain stickers for their reading charts or because they will not be allowed to play video games if they do not do so. Although beyond the scope of this study, other types of extrinsic regulation include introjected regulation, which refers to contingencies pressuring students from within; identified regulation, which denotes students who consciously identify the relevance of the behavior; and integrated regulation, which refers to behaviors in which students identify with the value of the task and consider it consistent with their interests and personal values (Vansteenkiste et al., in press). External and introjected regulation are considered controlled forms of motivation while identified, integrated, and intrinsic regulatory styles represent autonomous forms of motivation where people's behaviors would be volitional (Ryan & Deci, 2020). Past work has shown that these distinct motivation types differentially predict a host of relevant reading outcomes and that intrinsic motivation and external regulation are the most salient and prominent reading motivation types in children.

Although reading motivation facilitates an array of positive school outcomes (Cox & Guthrie, 2001; Davis et al., 2018; Guthrie et al., 2006) a decrease in intrinsic motivation has been reported toward the end of primary education jeopardizing students' reading comprehension (Guthrie & Wigfield, 2000), reading success, and knowledge of the world (Wigfield & Guthrie, 1997). It is no surprise, consequently, that school libraries aim to promote learning by providing diverse reading resources and adequate physical environments (International Federation of Library Associations and Institutions, 2015). Motivational dynamics experienced in this environment will, nevertheless, fluctuate depending on the contextual differences offered by the teacher (or in some cases, school librarian).

While reading motivation has been generally overlooked, some studies have explored this phenomenon mainly using student self-report measures. To illustrate, in a sample of 1,260 fifth-grade students from Flemish elementary schools, De Naeghel et al. (2012) found that academic autonomous reading motivation was associated with reading frequency. Meanwhile, students' recreational autonomous reading motivation (compared to controlled reading motivation) positively correlated with reading frequency, reading engagement, and reading comprehension. In Latin America, Orellana García and Baldwin Lind (2018) explored primary students' reading achievement and motivation (comprised by readers' self-concept and reading value) at the start and end of a school year. In a sample of 1,290 third, fourth, and fifth-grade students from public and private schools in Chile, researchers found that only students' self-concept predicted reading achievement at the end of the year. Since studies have shown that autonomous reading motivation is linked to adaptive student outcomes and that there is a developmental decline in intrinsic reading motivation, an important question is

how teachers can foster volitional types of motivation and what can be done to support intrinsic motivation-based reading and positive educational outcomes.

Among educational outcomes desired, engagement is a key element for students' learning (Reeve, 2012) and even considered "the active verb between the curriculum and actual learning" (Skinner & Pitzer, 2012, p. 23). Engagement refers to the "quality of a student's connection or involvement with the endeavor of schooling" (Skinner et al., 2009, p. 494). This objective and observable construct (Lee & Reeve, 2012; Skinner et al., 2009) is considered a consequence of students' motivational experiences (Reeve, 2012) and a vital academic outcome (Furrer & Skinner, 2003; Ladd & Dinella, 2009). Teachers can promote or hinder student engagement during short activities or throughout longer periods of time by supporting or thwarting students' motivation (Reeve, 2012).

Student engagement is commonly understood as a composite (Lee & Shute, 2010) and as a four-dimensional model comprised by a behavioral, cognitive, emotional, and agentic component (Reeve, 2012). All these components represent different paths toward positive outcomes and academic growth (Reeve, 2013). Behavioral engagement refers to the manifestation of attention, effort, and persistence (Fredricks et al., 2004; Skinner et al., 2009). Cognitive engagement refers to the use of self-regulation strategies in an activity (Fredricks et al., 2004; Reeve, 2012). Emotional engagement denotes the presence of enabling emotions (e.g., interest) and the lack of negative emotions (e.g., anxiety) during task involvement (Reeve, 2012, 2013). Agentic engagement refers to "students' constructive contribution into the flow of the instruction" (Reeve & Tseng, 2011, p. 258). It represents students' proactive involvement to enhance the session by providing input or recommendations, by sharing preferences and dislikes, and by asking questions (Reeve & Jang, 2022; Reeve & Shin, 2020; Reeve & Tseng, 2011). In this study we focused on behavioral and agentic engagement to examine classic and novel conceptions of this educational outcome, which both happen to be the most salient in teachers' observations.

Basic psychological needs and teachers' motivating style

Given the manifold advantages associated with intrinsic reading motivation and student engagement, a critical question is how these motivational resources can be nurtured. A key role is played by teachers, who can both nurture or hinder students' natural interest and engagement through the support versus thwarting of basic psychological needs (Deci & Ryan, 2000; Vansteenkiste et al., 2020). The satisfaction of the basic psychological needs for autonomy, competence, and relatedness is said to be indispensable for human growth, flourishing, and well-being across ages, cultures, and life domains (Ryan & Deci, 2000b, 2017; Vansteenkiste et al., 2010). The need for autonomy refers to experiences of volition and ownership of one's actions and feelings (Ryan & Deci, 2002; Vansteenkiste et al., 2010). The need for competence denotes experiences of effectiveness (White, 1959) and confidence in one's behavior (Ryan & Deci, 2002). The need

for relatedness refers to experiences of connection and care with others (Baumeister & Leary, 1995). In the context of reading, need satisfaction would play an energizing role in awakening and sustaining individuals' intrinsic motivation and engagement for reading (Deci & Vansteenkiste, 2004; Niemiec & Ryan, 2009).

According to SDT, understanding students' inner experiences of basic psychological need satisfaction and frustration allows teachers to adjust their behavior and motivating style to enhance students' learning and engagement (Deci & Ryan, 2011). Teachers aim to motivate students to enrich their learning and development (Reeve & Cheon, 2014). They influence learning by shaping the way in which students experience activities (Ryan & Niemiec, 2009). Thus, a teacher's motivating style exemplifies the quality of the interpersonal relationship with their students (Reeve, 2009; Reeve et al., 2022). The teaching style adopted, shaped, for example, by teachers' own needs experiences, motivation (Katz & Moè, 2024), beliefs (Katz & Shahar, 2015), emotion regulation (Moè & Katz, 2021), personality (Wang & Liu, 2024), and sense of identity (Vermote et al., 2024), can support or thwart students' basic psychological needs (Niemiec & Ryan, 2009) and influence their motivation and engagement (Reeve, 2012).

Autonomy-supportive teachers motivate students by embracing their perspectives, thoughts, feelings, and actions (Reeve, 2009; Reeve & Cheon, 2021), and facilitate students' growth (Assor et al., 2002; Ryan & Niemiec, 2009). This motivating style is characterized by fostering students' inner motivational resources, providing explanatory rationales, using informational and non-controlling language, displaying patience, and embracing expressions of negative affect (Reeve, 2009, 2011; Reeve et al., 2022). All these co-existing strategies and instructional behaviors aim to identify and cultivate students' personal interests (Reeve, 2009, 2011) and promote high-quality learning and motivation (Ryan & Deci, 2017). This teaching style has been positively associated with basic psychological need satisfaction, autonomous motivation, and adaptive outcomes (e.g., De Meyer et al., 2016; Jang et al., 2009, 2016).

During visits to the school library, autonomy-supportive teachers may support students' basic psychological needs by acknowledging their interests, needs, and preferences regarding types of reading materials (e.g., genre, theme, and reading level); by offering choices regarding which reading material to explore and borrow; by employing informational and invitational language (e.g., "You could try..." or "You can consider...") to guide students' selection of reading materials; by welcoming students' expressions of negative affect surrounding reading activities or materials; by offering explanatory rationales (e.g., when explaining why certain books may not be appropriate); and by being patient while students explore the collection and engage with materials.

Evidence suggests that teachers' motivating style influence students' engagement. For instance, in Korea, Jang et al. (2012) found that early-on perceived autonomy support increased the satisfaction of the need for autonomy midway through the semester, which successively increased middle-school students' engagement at the end of the term.

Meanwhile, Matos et al. (2018) found that autonomy supportive teaching longitudinally predicted variation in Peruvian university students' behavioral, emotional, cognitive, and agentic engagement. Furthermore, teachers' autonomy support has been found to be positively associated with primary (Zhou et al., 2019), secondary (Flunger et al., 2022), high school (Patall et al., 2018), and undergraduate (Núñez & León, 2019) students' motivation and engagement. These relationships have been found in Western (Patall et al., 2018) and non-Western samples (Zhou et al., 2019), and across different school subjects including mathematics, second language lessons (Flunger et al., 2022), and science (Patall et al., 2018).

By contrast, controlling teaching forces students to behave, think, and feel in specific ways according to teachers' own perspectives (Aelterman et al., 2019; Reeve, 2009; Reeve et al., 2022). A controlling teaching style is characterized by the use of punishments, rewards, and threats, the use of pressuring language, and the display of impatience (Reeve, 2009). It also denotes the use of invasive strategies that foster feelings of guilt, humiliation, and expressions of disappointment (Soenens et al., 2012). Controlling teachers thwart students' functioning by frustrating their basic psychological needs (Reeve, 2012; Vansteenkiste & Ryan, 2013). This style has been positively associated with need frustration, controlled motivation, ill-being (Vansteenkiste & Ryan, 2013), and maladaptive outcomes in educational settings (e.g., Bartholomew et al., 2011, 2018; De Meyer et al., 2016; Opdenakker, 2021; Van den Berghe et al., 2016).

In the context of reading motivation, De Naeghel and Van Keer (2013) aimed to identify student and classroom characteristics that related to academic and recreational autonomous reading motivation. In a sample of 1,177 fifth-grade students and their 65 teachers in Flanders (Belgium), researchers found little association between teacher activities and students' autonomous reading motivation. Meanwhile, De Naeghel, Valcke, et al. (2014) aimed to identify teacher behavior that positively associated with intrinsic reading motivation in a sample of 4,269 15-year-olds in Flanders. Researchers found that students who perceived their teachers as more autonomy-supportive, structured, and involved (in line with basic psychological needs) reported higher scores on intrinsic reading motivation. Particularly, perceived teacher involvement evidenced the strongest relationship with students' intrinsic reading motivation. More recently, De Smedt et al. (2020), in a sample of 2,343 students from 127 classes from elementary and secondary schools in Flanders, found a decline of academic and recreational reading motivation in upper elementary grades and in lower secondary grades.

Overall, teachers' motivating style is considered a key contextual element as it fosters or hinders students' inner experiences and motivational outcomes. Yet to the best of our knowledge, no studies so far have focused on teachers' motivating style during visits to the school library. In addition, limited studies have explored primary students' experiences of need satisfaction and frustration or have centered on the consequences of controlling teaching. Evidence grounded in SDT posits that autonomy supportive contexts

support the satisfaction of basic psychological needs and facilitate the bright side of motivation and human functioning. Meanwhile, the dark side of motivation denotes controlling environments that thwart basic psychological needs and promote maladaptive outcomes. Thus, theoretical and empirical evidence emphasize the existence of a dual-process model where social contexts elicit different qualities of motivation and outcomes (Jang et al., 2016). The present study aimed to explore teachers' influence in primary school students' experiences at the school library.

The present study

Grounded in SDT, the goal of our study was to examine the relationship between perceived teachers' motivating style and students' basic psychological needs, reading motivation, and engagement. Our study aimed to test a theory-based model regarding the contextual factors and students' inner experiences and motivational outcomes during teacher-led visits to the school library, where academic reading takes place. In this school, students visit the library once a week with their language teacher, as a class. These visits to the school library usually last half an hour and during this period students can select books to borrow considering their preferences and abilities. With guidance from their language teacher (and school librarian), who help students explore the book collection and ensure that the reading level of chosen books is suitable, students select books to borrow and spend the rest of the time engaging in independent reading. It can be said, hence, that reading carried out in the school library encourages and supports students' choice and represents the prototype of free will and autonomous academic reading. The study of the dynamics surrounding reading activities is especially relevant in Peru as the Ministry of Culture presented a national policy on reading and libraries by 2030 (Ministerio de Cultura, 2022). This policy aims to encourage research in this field to develop strategies to promote reading among children and enhance libraries.

Our study is theoretically and methodologically innovative in diverse ways. It highlights motivational dynamics among primary schoolchildren and constitutes one of the few attempts (to our knowledge) to examine reading motivation in Latin America while shedding light on teacher-student relationships at the school library. Additionally, it employs external ratings of engagement¹ and extends previous research on its most recent component (agentic engagement) while focusing on schoolchildren. Furthermore, it expands prior evidence on the relationship between teachers' motivating styles and adaptive educational variables.

It was hypothesized that perceived teachers' autonomy support at the library would positively relate to students' behavioral and agentic engagement and intrinsic regulation toward reading. Meanwhile, perceived teacher control would negatively relate to these components of engagement and correlate positively with an external regulation toward reading. These scenarios would be mediated by the satisfaction and frustration of basic psychological needs, respectively. These indirect relationships would suggest that teachers may

support or thwart students' inner motivational experiences promoting or hindering students' reading behavior, positive functioning, and adaptive educational outcomes. Findings would be coherent with previous educational research outside the context of reading, showing that autonomy support promotes the satisfaction of basic psychological needs and facilitates optimum outcomes (e.g., De Meyer et al., 2016; Jang et al., 2016) while controlling teaching relates to students' need frustration and maladaptive outcomes (e.g., Bartholomew et al., 2018; Haerens et al., 2015).

Methods

Participants and procedure

Participants were 235 (112 girls, 123 boys) primary students from a private school in Lima, Peru who completed a set of questionnaires regarding their inner experiences of motivation and their language teachers' perceived motivating style during teacher-led class visits to the school library. Peruvian primary education consists of six years starting from the age of five and is equivalent to ISCED level 1. Participants were enrolled in 12 different fourth (48.09%) or fifth grade (51.91%) classes and were on average 10.35 years old ($SD=0.71$ years). Most students had Peruvian nationality (80%) and almost all of them (91.91%) had Spanish as their first language.²

Before the study, participants' parents received a written document in which they had the opportunity to deny their child's participation. After receiving their parents' approval, students were informed about the study's objective and their right to opt out. Participation was voluntary and students were assured that all information collected was confidential and not part of a school evaluation. Students assented to participate before administration of the questionnaires. The research protocol was reviewed by a group of psychology professors and researchers from a research-intensive university in Lima who provided ethical guidance before data collection. It was also informed by local legislation and institutional requirements. This survey was completed at the beginning of one tutor period³ during the end of the school's academic year and took ~25 min to complete. At this stage, participating students had visited the school library with their language teachers on multiple occasions and were, therefore, able to reflect about their ongoing visits to the library while completing the measures.

Students' language teachers ($N=8$) also participated in the study as raters assessing students' engagement during library visits.⁴ Most teachers had Peruvian nationality and spoke Spanish as their first language (62.50%). The mean years of experience as language teachers was 22.44 years ($SD=14.21$ years) while the mean years of experience as language teachers at this school was 15.42 years ($SD=13.53$ years). All teachers voluntarily accepted to participate.

Measures

Student questionnaires were administered in Spanish. Students answered every item on a 4-point Likert scale ranging from 1 (*Never*) to 4 (*Always*). All questionnaires were

slightly adjusted by adding the stem “While being at the library with my class” to ensure that only students’ experiences at the school library were registered.

Teachers’ motivating style

Students’ perceptions of teachers’ autonomy support and control were assessed with the short version of the Learning Climate Questionnaire (LCQ; Williams & Deci, 1996) and the Teacher Control Questionnaire (TCQ; Jang et al., 2009), respectively. These measures have been widely used in the assessment of teachers’ motivating style and correlate with classroom observers’ ratings (Reeve & Cheon, 2021). The LCQ consists of six items which measure perceived teachers’ autonomy support and includes items, such as “I feel that my teacher provides me with choices and options.” The TCQ consists of four items which measure perceived teacher control and includes items, such as “My teacher tries to control everything I do.” The adapted version of these instruments was previously administered to Peruvian university students finding adequate internal consistencies (Matos et al., 2018). In our study, both scales were slightly adjusted linguistically and tested in a pilot study before administration. Each student was presented with the stem “When I’m at the library with my class...” followed by the items depicting teachers’ motivating styles. In the present sample, the two-factor solution showed good psychometric properties: $SB-\chi^2(25)=41.42$, $RMSEA=.056$, $SRMR=.066$, $CFI=.96$, $AIC=81.42$, and the LCQ and the TCQ showed adequate reliability (Cronbach’s $\alpha=.79$ and $.71$, respectively).

Basic psychological need satisfaction and frustration

Students’ experiences of basic psychological need satisfaction and frustration were measured with an adapted version of the Basic Psychological Need Scale and Need Frustration Scale (BPNSNF; Chen et al., 2015). This 24-item scale was validated in four samples of adolescent students from various cultures (China, United States of America, Belgium, and Peru). Four items measure the satisfaction of each need (e.g., “I feel a sense of choice and freedom in the things I undertake,” regarding autonomy satisfaction) while four items measure the frustration of each need (e.g., “I feel forced to do many things I wouldn’t choose to do,” for autonomy frustration). Although previously administered to university students, this scale was linguistically adapted for the target sample and reviewed by expert judges. It was initially translated into Spanish by a researcher proficient in both languages. Bilingual psychologists and teachers then compared the items to determine their resemblance. Each student was presented with the stem “When I’m at the library with my class...” followed by the items reflecting basic psychological need satisfaction and frustration. In the present study, confirmatory factor analysis showed good psychometric properties for a two-factor solution $SB-\chi^2(241)=310.87$, $RMSEA=.037$, $SRMR=.082$, $CFI=.98$. Internal consistency for need satisfaction (Cronbach’s $\alpha=.77$) and need frustration (Cronbach’s $\alpha=.75$) were adequate.

Reading motivation

Students’ intrinsic and external regulation toward academic reading was measured with the SRQ-Reading Motivation

(De Naeghel et al., 2012). Five items from this 17-item scale were used to capture students’ intrinsic reasons for reading (e.g., “I read because I enjoy reading”) while four items were used to capture their external reasons for reading (e.g., “I read because others oblige me to do so”). This scale was translated into Spanish, linguistically adapted for the sample, and reviewed by expert judges. All items focused on students’ reading motivation at the school library. In the present study, the two-factor scale obtained good psychometric properties: $SB-\chi^2(115)=265.48$, $RMSEA=.075$, $SRMR=.082$, $CFI=.95$. The internal consistency obtained good to acceptable reliability for the intrinsic and the external regulation scales (Cronbach’s $\alpha=.93$ and $.70$, respectively).

Engagement

Students’ behavioral engagement was measured with the Engagement versus Disaffection with Learning Measure (Skinner et al., 2009). This 5-item scale was used by teachers to rate students’ attention, persistence, and effort at the school library and includes items, such as “he/she pays attention.” In our study, the scale obtained good psychometric properties [$SB-\chi^2(3)=2.21$, $RMSEA=.00$; $SRMR=.0089$, $CFI=1$, Cronbach’s $\alpha=.92$]. Meanwhile, students’ agentic engagement was measured with the Agentic Engagement Scale (Reeve, 2013). This 5-item scale was used by teachers to rate students’ intentional involvement in their learning at the library and includes items, such as “he/she lets me know what he/she needs and wants.” Both scales assessed perceived students’ engagement when visiting the library. An adapted version of these instruments has been previously administered to Peruvian university students finding adequate internal consistencies (Matos et al., 2018). In the present study, the scale obtained good psychometric properties [$SB-\chi^2(4)=2.08$, $RMSEA=.00$; $SRMR=.009$, $CFI=1$; Cronbach’s $\alpha=.92$].

Data analysis

Preliminary descriptive analyses were conducted with the collected data. To examine relationships between study variables, Pearson’s bivariate correlations were calculated using SPSS Statistics 24.0. Main analyses involved path analyses (scales’ mean scores were used as manifest variables) using Lisrel 8.70 (Jöreskog & Sörbom, 1996). Lisrel (Linear Structural Relationships) was used to ensure a robust analysis of direct and indirect effects since it has been widely used in studying covariance-based models (Bollen et al., 2022). In the present study, confirmatory factor analyses of the scales and path analyses were performed using WLSMV (Weighted Least Squares Mean and Variance Adjusted) estimation given the ordinal nature of the data (Jöreskog & Sörbom, 1996; Li, 2016). Hence, the Satorra-Bentler chi-square ($SB-\chi^2$) indicator was reported for each analysis (Satorra & Bentler, 2001). To evaluate the model fit, recommendations of Hu and Bentler (1999) were followed. According to these authors, the combination of the standardized root mean square residual (SRMR) and the root mean square error of approximation (RMSEA) is particularly essential. Combined values close to .09 for SRMR and .06

for RMSEA indicate a good model fit. Additionally, the comparative fit index (CFI) was examined. CFI values of .95 or above indicate a good fit while values close to .90 indicate an acceptable fit (Kline, 2000). To estimate indirect effects the procedure proposed by Preacher and Hayes (2008) was used. Therefore, a Bootstrap analysis based on 1000 samples to estimate bias-corrected standard errors and 95% (BCa 95%) confidence intervals (CIs) for the indirect effect was performed. If zero is not included in the 95% CI for an indirect effect, this is then significant at $p < .05$.

Results

Means, standard deviations, and correlations between study variables are shown in Table 1. As anticipated, teachers' autonomy support associated positively with students' engagement (behavioral and agentic components) and intrinsic regulation toward reading. Likewise, teachers' autonomy support correlated positively with students' basic psychological need satisfaction. Also consistent with our hypothesis, teacher control yielded a negative association with students' engagement (both behavioral and agentic components) and intrinsic regulation toward academic reading. This motivating style was also positively associated with students' basic psychological need frustration at the school's library and external reading motivation.

Moreover, possible associations between students' gender and age (point-biserial correlation) were considered. Age associated positively with intrinsic and external regulations while gender associated positively with perceived teacher control and external regulation, and negatively with teacher-rated behavioral engagement. Students' class was considered as a control variable given that ANOVA analyses demonstrated significant differences in a few classes with regard to perceived teacher's autonomy support ($F=4.44$ [11, 223], $p < .001$, $\eta^2 = .18$); perceived teacher control ($F=9.06$ [11, 223], $p < .001$, $\eta^2 = .31$); teacher-rated agentic engagement

($F=11.69$ [11, 223], $p < .001$, $\eta^2 = .36$); teacher-rated behavioral engagement ($F=6.52$ [11, 223] $p < .001$, $\eta^2 = .24$); and intrinsic regulation ($F=2.41$ [11, 223] $p < .01$, $\eta^2 = .11$). Hence, class, age and gender were entered as statistical control variables in succeeding analyses.

Results from path analyses were consistent with the theoretical model hypothesized. However, not all hypothesized relations were found to be significant. As part of the main analyses, two models were performed. The first model (Model 1) refers to the hypothesized theoretical model (a full mediation model). In this full mediation model, the predictors (perception of teachers' motivating styles) explained the outcome variables (teacher reports of students' engagement and students' regulatory styles) fully mediated by students' basic psychological needs (satisfaction and frustration). The second model (Model 2) denotes a partial mediation. Along with the mediation paths, this model also considered the main relationships from the independent variables toward the outcome variables (controlling for age and gender in both models).

The hypothesized full mediation model (Model 1) did not yield acceptable fit indices given that the RMSEA and CFI values were not close to the acceptable range proposed by Hu and Bentler (1999): $SB-\chi^2(26)=84.85$, $p < .001$, RMSEA=.099, SRMR=.13, CFI=.92. However, Model 2 obtained acceptable to good fit indices: $SB-\chi^2(24)=52.77$, $p < .001$, RMSEA=.074, SRMR=.077, CFI=.96. The graphical representation of this partial mediation model can be seen in Figure 1 which shows significant paths only and the amount of variance explained (R^2) for the mediators and the outcome variables.

Figure 1 shows the significant direct association between perceived teacher autonomy support and intrinsic regulation. It also shows the indirect association between perceived teachers' autonomy and teacher-rated behavioral engagement (mediated by basic psychological need satisfaction) which was not significant ($\beta = .02$, 95% CI = $-.01$ – $.06$).

Table 1. Descriptive statistics and correlations between study variables ($N=235$).

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Age			—								
2. Gender			.12	—							
3. Perceived teacher autonomy support	2.91	.59	.09	-.11	—						
4. Perceived teacher control	2.04	.62	.01	.29**	-.43***	—					
5. Basic psychological need satisfaction	3.28	.39	.04	.07	.24***	.08	—				
6. Basic psychological need frustration	1.83	.41	-.05	.09	-.11	.23***	-.29***	—			
7. Teacher-rated behavioral engagement	3.10	.71	.06	-.15*	.17**	-.16*	.23***	-.14*	—		
8. Teacher-rated agentic engagement	2.84	.75	-.01	-.09	.14*	-.19**	.12	-.07	.70***	—	
9. Intrinsic regulation	2.62	.80	.15*	-.10	.38***	-.28***	.19**	-.18**	.36***	.22**	—
10. External regulation	1.56	.58	.18**	.13*	-.13	.20**	.00	.41***	-.09	-.04	-.15*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Perceived teacher control also showed negative direct associations with teacher-rated behavioral and agentic engagement as well as with intrinsic regulation. It also showed a significant positive direct association with external regulation. A significant ($\beta = .12$, 95%CI: .03–.17) indirect positive association between perceived teacher control and external regulation (mediated by basic psychological need frustration) was also found.

Discussion

Supporting students' reading competencies is essential for their schooling and future lives (Alexander & Disciplined Reading and Learning Research Laboratory, 2012). Despite its importance, to the best of our knowledge, the role of teachers' behaviors on students' experiences at the school library has not been thoroughly examined. This has overlooked the influence of contextual differences offered by teachers (and possibly school librarians) on students' motivation for academic reading and has also disregarded the importance of autonomous reading motivation when aiming to support an array of adaptive outcomes.

Theoretical and empirical evidence support how socio-contextual factors, such as teachers' motivating style, influence students' motivation and outcomes across educational settings (Ryan & Deci, 2017), including in language learning (e.g., Liu et al., 2025), science and mathematics (e.g., Soe et al., 2025), and music (Bonneville-Roussy & Evans, 2024).

Even in informal learning settings, such as during visits to school libraries, teachers can support or thwart students' motivational experiences (i.e., basic psychological needs satisfaction or frustration) and outcomes (i.e., reading motivation and engagement) by shaping the way students experience reading materials and immerse in this activity. The instructional behaviors and strategies displayed by teachers (Reeve, 2009, 2011; Reeve et al., 2022) when aiming to foster reading will ultimately influence students' experiences at the library. Therefore, these practices will support or hinder students' reading competencies, achievement, functioning in society (Becker et al., 2010; De Naeghel, Van Keer, et al., 2014; De Naeghel et al., 2012), and the fulfillment of one of the main goals for a universal quality education (United Nations, 2015).

Grounded in SDT, the present study aimed to explore the relationship between teachers' motivating style and students' basic psychological needs, reading motivation, and engagement in the context of academic reading. This was achieved by examining teachers' influence in students' reading experiences and by testing a theory-based model exploring how Peruvian fourth and fifth graders' perceived teaching style related to their reading motivation and teacher-rated engagement at the school library. Given the developmental decline in intrinsic reading motivation (Guthrie & Wigfield, 2000) and that intrinsic motivation and external regulation are the most prominent reading motivation types in children, we focused on these regulatory styles. Furthermore, despite

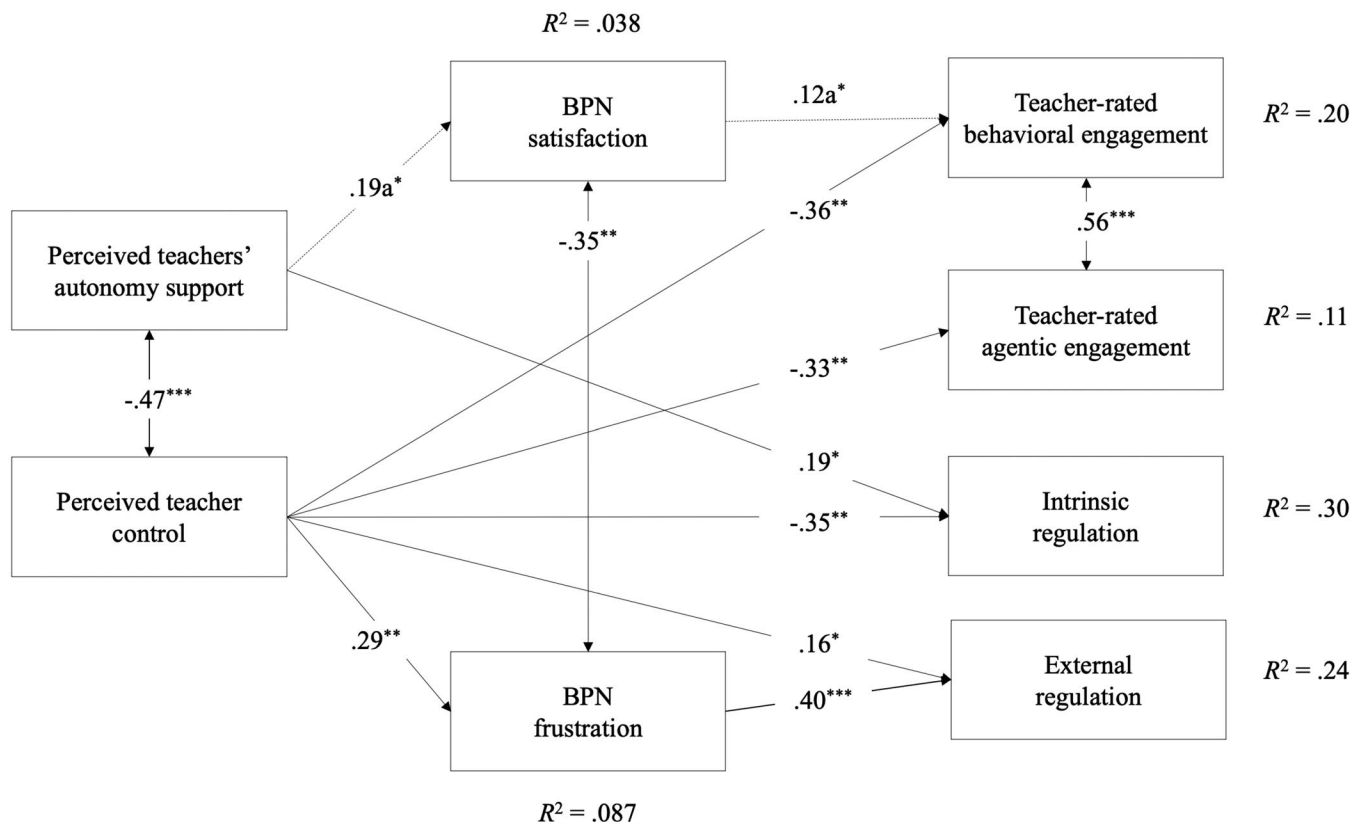


Figure 1. Graphical representation of path analysis from perceived teachers' motivating style to students' engagement and regulatory styles; BPN= basic psychological needs; R^2 =variance explained; a=Dash lines show a non-significant indirect effect, despite having significant main effects.

Note. $^*p < .05$, $^{**}p < .01$, $^{***}p < .001$.

student engagement being usually studied as a composite (Lee & Shute, 2010), we focused on behavioral and agentic engagement to assess students' attention, effort, and persistence (Fredricks et al., 2004; Skinner et al., 2009) and their proactive involvement during library visits (Reeve & Shin, 2020; Reeve & Tseng, 2011), respectively.

In line with previous research, results from the path analyses were consistent with the theoretical model hypothesized and the bright and dark side of motivation (Ryan & Deci, 2000a). The model depicting a partial mediation considering the main relationships from the independent variables toward the outcome variables (while controlling for class, age, and gender) obtained acceptable fit indices. Perceived teachers' autonomy support had a positive direct relationship with intrinsic regulation. Additionally, perceived teacher control had a positive indirect relationship with external regulation, mediated by students' basic needs frustration, as well as a direct relationship with the same outcome. Perceived teacher control also showed a negative direct relationship with teacher-rated behavioral and agentic engagement, and intrinsic regulation (see Figure 1). These findings highlight the significance of socializing agents' behaviors in students' motivational experiences and academic outcomes. Despite students being able to experience teaching practices in unique ways, results suggest that the motivating style adopted by teachers will affect students' type and quality of motivation and varied academic outcomes. Overall, results emphasize teachers' influence on students' learning, growth, and development.

In practice, during visits to school libraries or during reading activities, autonomy-supportive teachers may support students' motivational experiences and outcomes by shaping the way they experience this activity. For instance, they may acknowledge students' reading preferences and opinions regarding book characteristics (e.g., genres and themes), types of reading materials, or even reading areas in the school library. Teachers may also provide students opportunities to choose between fictional stories, informational books, comics, cookbooks, and humorous texts from recommended reading lists. Additionally, they may use informational language while guiding students' choices according to their reading competence and acknowledge expressions of negative affect some may display when visiting the library or participating in reading activities which they may not find inherently enjoyable or interesting. All this while displaying patience and recognizing that students will need time and space to engage with the reading materials. These autonomy-supportive strategies and instructional behaviors would help foster students' interests and facilitate high-quality learning and motivation (Reeve, 2009, 2011; Ryan & Deci, 2017).

It would also be fundamental for teachers to refrain from employing controlling strategies and behaviors when aiming to support students' immersion in reading activities. For example, avoiding offering rewards (e.g., diplomas or certificates for most books read) or using punishments (e.g., withholding fun and exciting activities if not meeting reading objectives); forcing students to read specific materials (e.g., only fiction); and using pressuring language while

trying to encourage reading (e.g., using directives, such as "You must/should read more challenging books" or asking controlling questions, such as "Are we coming all the way to the library to borrow a cookbook?"). Participation in teacher-focused interventions, such as autonomy-supportive intervention programs (ASIP), could help teachers become more autonomy-supportive and less controlling and catalyze important motivational and educational outcomes (Reeve & Cheon, 2021) at the school library and beyond.

Educational implications: contributions, limitations, and future research

Given the advantages linked to autonomous reading motivation, it becomes essential for teachers (and school librarians) to nurture students' inner motivational resources, interest, and engagement when participating in reading activities. In relation to practical implications, it becomes key for schools and teachers to continue shedding light on the importance of supporting the development of reading competencies across all students, both inside and outside the classroom. Although access to adequate school libraries and reading resources can facilitate this learning process, it is also essential for schools to support socializing agents' (e.g., teachers) motivating styles. For instance, offering professional development opportunities for teachers to become more autonomy-supportive and less controlling when aiming to foster students' reading motivation. Therefore, it is key to invest resources in training and professional development while recognizing that teachers are a key sociocontextual factor that will influence students' quality and quantity of reading motivation.

Our study highlights the role of teachers' motivating style in a learning scenario (i.e., school libraries), which has often been overlooked and even disregarded as key for students' learning. It also explored needs experiences in a sample of Peruvian primary students and therefore, contributes to the limited studies centering around children's needs and to SDT's universality of effects of basic psychological needs satisfaction and frustration across cultural contexts, developmental stages, and socioeconomic status (Vansteenkiste et al., 2020). By including external ratings (i.e., teachers' ratings) of students' engagement, we attempted to have somewhat more objective indicators of students' motivational outcomes and behavior and hence, prevent social desirability bias and students' underreporting of undesirable responses.

Nevertheless, our research included elements that may have limited the conclusions of our study. Despite intrinsic motivation and external regulation being the most prominent reading types in children, future research should entail a more extensive assessment of all extrinsic types of reading motivation to better characterize students' reading motives. In line with previous studies (e.g., De Naeghel et al., 2012; Guthrie et al., 2006), more in-depth research is also needed to further explore the effects of teachers' motivating styles and behaviors (including the importance of structure) in students' reading experiences, for instance, examining

reading performance, frequency, self-concept, and interest, and even its relationship with recreational reading motivation. Additionally, despite including external ratings of engagement, relying on additional non-self-report measures when assessing students' motivational experiences would also be noteworthy. Given that validity evidence of the instruments used was originally examined in a sample with older students, further research should be conducted and examined with the current population.

Moreover, exploring teachers' motivating style, and individual acts of instruction, during library visits and when actively participating in reading activities could be relevant to capture nuances surrounding the influence of teachers' behaviors and strategies. Collecting data from students from other grades and school contexts (including secondary, and private and public schools) would also help assess the universality of effects of basic needs and increase the generalizability of findings. Conducting multilevel analyses could also be beneficial to test the relationships between teachers' motivating styles and students' outcomes. Despite the value of cross-sectional studies, it would also be useful to examine students' experiences longitudinally during library visits to potentially distinguish between short and long-term effects on reading. Herein, ASIP could provide opportunities to study the effects of teachers' professional development workshops for students and teachers.

In conclusion, our study extends the literature on the role of teachers' motivating style (as a collection of behaviors rather than individual acts of instruction) in predicting primary school students' reading motivation and engagement at the school library. Ultimately, it highlights the importance of teachers' behaviors in students' motivational experiences and outcomes.

Notes

1. Teacher rating scales have been previously used to measure student engagement (Fredricks & McColskey, 2012) and have shown strong correlations with students' self-report measures (e.g., Skinner et al., 2008, 2009).
2. Students with a different first language were also fluent in Spanish.
3. At the present school, the tutor period (known in other schools as "homeroom" or "advisory") is the first period of the day. Daily registration and announcements take place during this time.
4. At participants' school, language teachers teach more than one class. This is common practice in most private primary schools in Lima.

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ORCID

Martin Dammert  <http://orcid.org/0000-0002-9405-5963>

Lennia Matos  <http://orcid.org/0000-0003-2271-4816>

Rafael Gargurevich  <http://orcid.org/0000-0001-6346-4134>

Maarten Vansteenkiste  <http://orcid.org/0000-0001-6983-3607>

Leen Haerens  <http://orcid.org/0000-0001-9459-3019>

References

- Aelterman, N., Vansteenkiste, M., Haerens, L., Soenens, B., Fontaine, J. R. J., & Reeve, J. (2019). Toward an integrative and fine-grained insight in motivating and demotivating teaching styles: The merits of a circumplex approach. *Journal of Educational Psychology*, 111(3), 497–521. <https://doi.org/10.1037/edu0000293>
- Alexander, P. A., & Disciplined Reading and Learning Research Laboratory (2012). Reading into the future: Competence for the 21st century. *Educational Psychologist*, 47(4), 259–280. <https://doi.org/10.1080/00461520.2012.722511>
- Alexander, P. A., & Fox, E. (2019). Reading research and practice over the decades. In D. E. Alvermann, N. J. Unrau, M. Sailors, & R. B. Ruddell (Eds.), *Theoretical models and processes of literacy* (7th ed., pp. 35–64). Routledge. <https://doi.org/10.4324/9781315110592-3>
- Assor, A., Kaplan, H., & Roth, G. (2002). Choice is good, but relevance is excellent: Autonomy-enhancing and suppressing teacher behaviours predicting students' engagement in schoolwork. *The British Journal of Educational Psychology*, 72(Pt 2), 261–278. <https://doi.org/10.1348/000709902158883>
- Bartholomew, K. J., Ntoumanis, N., Mouratidis, A., Katartzi, E., Thøgersen-Ntoumani, C., & Vlachopoulos, S. (2018). Beware of your teaching style: A school-year investigation of controlling teaching and student motivational experiences. *Learning and Instruction*, 53, 50–63. <https://doi.org/10.1016/j.learninstruc.2017.07.006>
- Bartholomew, K. J., Ntoumanis, N., Ryan, R. M., Bosch, J. A., & Thøgersen-Ntoumani, C. (2011). Self-determination theory and diminished functioning: The role of interpersonal control and psychological need thwarting. *Personality & Social Psychology Bulletin*, 37(11), 1459–1473. <https://doi.org/10.1177/0146167211413125>
- Baumeister, R. Y., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529. <https://doi.org/10.1037/0033-2909.117.3.497>
- Becker, M., McElvany, N., & Kortenbruck, M. (2010). Intrinsic and extrinsic reading motivation as predictors of reading literacy: A longitudinal study. *Journal of Educational Psychology*, 102(4), 773–785. <https://doi.org/10.1037/a0020084>
- Bollen, K. A., Fisher, Z., Lilly, A., Brehm, C., Luo, L., Martinez, A., & Ye, A. (2022). Fifty years of structural equation modeling: A history of generalization, unification, and diffusion. *Social Science Research*, 107, 102769. <https://doi.org/10.1016/j.ssresearch.2022.102769>
- Bonneville-Roussy, A., & Evans, P. (2024). The support of autonomy, motivation, and music practice in university music students: A self-determination theory perspective. *Psychology of Music*, 1–20. <https://doi.org/10.1177/03057356241296109>
- Chen, B., Vansteenkiste, M., Beyers, W., Boone, L., Deci, E. L., van der Kaap-Deeder, J., Duriez, B., Lens, W., Matos, L., Mouratidis, A., Ryan, R. M., Sheldon, K. M., Soenens, B., Van Petegem, S., & Verstuyf, J. (2015). Basic psychological need satisfaction, need frustration, and need strength across four cultures. *Motivation and Emotion*, 39(2), 216–236. <https://doi.org/10.1007/s11031-014-9450-1>
- Cox, K. E., & Guthrie, J. T. (2001). Motivational and cognitive contributions to students' amount of reading. *Contemporary Educational Psychology*, 26(1), 116–131. <https://doi.org/10.1006/ceps.1999.1044>
- Cueto, S. (2022). Anotaciones sobre el derecho a la educación en el Perú, hoy: La urgencia por la indignación. In M. Balarín, S. Cueto, & R. Fort (Eds.), *El Perú Pendiente: Ensayos Para Un Desarrollo Con Bienestar* (pp. 27–45). GRADE.
- Davis, M. H., Tonks, S. M., Hock, M., Wang, W., & Rodriguez, A. (2018). A review of reading motivation scales. *Reading Psychology*, 39(2), 121–187. <https://doi.org/10.1080/02702711.2017.1400482>
- De Meyer, J., Soenens, B., Aelterman, N., De Bourdeaudhuij, I., & Haerens, L. (2016). The different faces of controlling teaching: Implications of a distinction between externally and internally controlling teaching for students' motivation in physical education. *Physical Education and Sport Pedagogy*, 21(6), 632–652. <https://doi.org/10.1080/17408989.2015.1112777>
- De Naeghel, J., & Van Keer, H. (2013). The relation of student and class-level characteristics to primary school students' autonomous

- reading motivation: A multi-level approach. *Journal of Research in Reading*, 36(4), 351–370. <https://doi.org/10.1111/jrir.12000>
- De Naeghel, J., Valcke, M., De Meyer, I., Warlop, N., van Braak, J., & Van Keer, H. (2014). The role of teacher behavior in adolescents' intrinsic reading motivation. *Reading and Writing*, 27(9), 1547–1565. <https://doi.org/10.1007/s11145-014-9506-3>
- De Naeghel, J., Van Keer, H., & Vanderlinde, R. (2014). Strategies for promoting autonomous reading motivation: A multiple case study research in primary education. *Frontline Learning Research*, 2(1), 83–102. <https://doi.org/10.14786/flr.v2i1.84>
- De Naeghel, J., Van Keer, H., Vansteenkiste, M., & Rosseel, Y. (2012). The relation between elementary students' recreational and academic reading motivation, reading frequency, engagement, and comprehension: A self-determination theory perspective. *Journal of Educational Psychology*, 104(4), 1006–1021. <https://doi.org/10.1037/a0027800>
- De Smedt, F., Rogiers, A., Heirweg, S., Merchie, E., & Van Keer, H. (2020). Assessing and mapping reading and writing motivation in third to eighth graders: A self-determination theory perspective. *Frontiers in Psychology*, 11, 1678. <https://doi.org/10.3389/fpsyg.2020.01678>
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
- Deci, E. L., & Ryan, R. M. (2011). Levels of analysis, regnant causes of behavior and well-being: The role of psychological needs. *Psychological Inquiry*, 22(1), 17–22. <https://doi.org/10.1080/1047840X.2011.545978>
- Deci, E. L., & Vansteenkiste, M. (2004). Self-determination theory and basic need satisfaction: Understanding human development in positive psychology. *Ricerche di Psicologia*, 27(1), 23–40.
- Flunger, B., Hollmann, L., Hornstra, L., & Murayama, K. (2022). It's more about a lesson than a domain: Lesson-specific autonomy support, motivation, and engagement in math and a second language. *Learning and Instruction*, 77, 101500. <https://doi.org/10.1016/j.learn-instruc.2021.101500>
- Fredricks, J. A., & McColskey, W. (2012). The measurement of student engagement: A comparative analysis of various methods and student self-report instruments. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 763–782). Springer. https://doi.org/10.1007/978-1-4614-2018-7_37
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59–109. <https://doi.org/10.3102/00346543074001059>
- Furrer, C., & Skinner, E. (2003). Sense of relatedness as a factor in children's academic engagement and performance. *Journal of Educational Psychology*, 95(1), 148–162. <https://doi.org/10.1037/0022-0663.95.1.148>
- Guthrie, J. T., & Wigfield, A. (2000). Engagement and motivation in reading. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 403–422). Lawrence Erlbaum Associates.
- Guthrie, J. T., Wigfield, A., Humenick, N. M., Perencevich, K. C., Taboada, A., & Barbosa, P. (2006). Influences of stimulating tasks on reading motivation and comprehension. *The Journal of Educational Research*, 99(4), 232–246. <https://doi.org/10.3200/JOER.99.4.232-246>
- Haerens, L., Aelterman, N., Vansteenkiste, M., Soenens, B., & Van Petegem, S. (2015). Do perceived autonomy-supportive and controlling teaching relate to physical education students' motivational experiences through unique pathways? Distinguishing between the bright and dark side of motivation. *Psychology of Sport and Exercise*, 16, 26–36. <https://doi.org/10.1016/j.psychsport.2014.08.013>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- International Federation of Library Associations and Institutions (2015). IFLA school library guidelines. <https://www.ifla.org/files/assets/school-libraries-resource-centers/publications/ifla-school-library-guidelines.pdf>
- Jang, H., Kim, E. J., & Reeve, J. (2012). Longitudinal test of self-determination theory's motivation mediation model in a naturally occurring classroom context. *Journal of Educational Psychology*, 104(4), 1175–1188. <https://doi.org/10.1037/a0028089>
- Jang, H., Kim, E. J., & Reeve, J. (2016). Why students become more engaged or more disengaged during the semester: A self-determination theory dual-process model. *Learning and Instruction*, 43, 27–38. <https://doi.org/10.1016/j.learninstruc.2016.01.002>
- Jang, H., Reeve, J., Ryan, R. M., & Kim, A. (2009). Can self-determination theory explain what underlies the productive, satisfying learning experiences of collectivistically oriented Korean students? *Journal of Educational Psychology*, 101(3), 644–661. <https://doi.org/10.1037/a0014241>
- Jöreskog, K. G., & Sörbom, D. (1996). *LISREL 8: User's reference guide*. Scientific Software International.
- Katz, I., & Moè, A. (2024). Exploring teachers' psychological needs, motivating styles, emotion regulation and self-compassion: A comparative study before and during the COVID-19 lockdown. *Teaching and Teacher Education*, 148, 104706. <https://doi.org/10.1016/j.tate.2024.104706>
- Katz, I., & Shahar, B.-H. (2015). What makes a motivating teacher? Teachers' motivation and beliefs as predictors of their autonomy-supportive style. *School Psychology International*, 36(6), 575–588. <https://doi.org/10.1177/0143034315609969>
- Kline, P. (2000). *Handbook of psychological testing* (2nd ed.). Routledge.
- Ladd, G. W., & Dinella, L. M. (2009). Continuity and change in early school engagement: Predictive of children's achievement trajectories from first to eighth grade? *Journal of Educational Psychology*, 101(1), 190–206. <https://doi.org/10.1037/a0013153>
- Lee, J., & Shute, V. L. (2010). Personal and social-contextual factors in K-12 academic performance: An integrative perspective on student learning. *Educational Psychologist*, 45(3), 185–202. <https://doi.org/10.1080/00461520.2010.493471>
- Lee, W., & Reeve, J. (2012). Teachers' estimates of their students' motivation and engagement: Being in synch with students. *Educational Psychology*, 32(6), 727–747. <https://doi.org/10.1080/01443410.2012.732385>
- Li, C. H. (2016). Confirmatory factor analysis with ordinal data: Comparing robust maximum likelihood and diagonally weighted least squares. *Behavior Research Methods*, 48(3), 936–949. <https://doi.org/10.3758/s13428-015-0619-7>
- Liu, H., Wang, Y., & Wang, H. (2025). Exploring the mediating roles of motivation and boredom in basic psychological needs and behavioural engagement in English learning: A self-determination theory perspective. *BMC Psychology*, 13(1), 179. <https://doi.org/10.1186/s40359-025-02524-3>
- Matos, L., Reeve, J., Herrera, D., & Claux, M. (2018). Students' agentic engagement predicts longitudinal increases in perceived autonomy-supportive teaching: The squeaky wheel gets the grease. *The Journal of Experimental Education*, 86(4), 579–596. <https://doi.org/10.1080/00220973.2018.1448746>
- Ministerio de Cultura (2022). Decreto Supremo que aprueba la Política Nacional de la Lectura, el Libro y las Bibliotecas al 2030. Decreto Supremo 007-2022-MC (12 de julio de 2022). <https://www.gob.pe/institucion/cultura/normas-legales/3334944-007-2022-mc>
- Moè, A., & Katz, I. (2021). Emotion regulation and need satisfaction shape a motivating teaching style. *Teachers and Teaching*, 27(5), 370–387. <https://doi.org/10.1080/13540602.2020.1777960>
- Mullis, I. V., & Martin, M. O. (Eds.). (2019). *PIRLS 2021 assessment frameworks*. International Association for the Evaluation of Educational Achievement.
- Netten, A., Droop, M., & Verhoeven, L. (2011). Predictors of reading literacy for first and second language learners. *Reading and Writing*, 24(4), 413–425. <https://doi.org/10.1007/s11145-010-9234-2>
- Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom: Applying self-determination theory to educational practice. *Theory and Research in Education*, 7(2), 133–144. <https://doi.org/10.1177/147787509104318>
- Núñez, J. L., & León, J. (2019). Determinants of classroom engagement: A prospective test based on self-determination theory. *Teachers and Teaching*, 25(2), 147–159. <https://doi.org/10.1080/13540602.2018.1542297>

- Opdenakker, M.-C. (2021). Need-supportive and need-thwarting teacher behavior: Their importance to boys' and girls' academic engagement and procrastination behavior. *Frontiers in Psychology*, 12, 628064. <https://doi.org/10.3389/fpsyg.2021.628064>
- Orellana García, P., & Baldwin Lind, P. (Eds.). (2018). Reading motivation and achievement among Chilean boys and girls in grades 3, 4, and 5: An exploration of results and pedagogical implications. In *Reading achievement and motivation in boys and girls: Field studies and methodological approaches* (Vol. 15, pp. 115–133). Springer. https://doi.org/10.1007/978-3-319-75948-7_7
- Patall, E. A., Steingut, R. R., Vasquez, A. C., Trimble, S. S., Pituch, K. A., & Freeman, J. L. (2018). Daily autonomy supporting or thwarting and students' motivation and engagement in the high school science classroom. *Journal of Educational Psychology*, 110(2), 269–288. <https://doi.org/10.1037/edu0000214>
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling methods for estimating and comparing indirect effects. *Behavior Research Methods*, 40(3), 879–891. <https://doi.org/10.3758/BRM.40.3.879>
- Reeve, J. (2012). A self-determination theory perspective on student engagement. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 149–172). Springer. https://doi.org/10.1007/978-1-4614-2018-7_7
- Reeve, J. (2009). Why teachers adopt a controlling motivating style toward students and how they can become more autonomy supportive. *Educational Psychologist*, 44(3), 159–175. <https://doi.org/10.1080/00461520903028990>
- Reeve, J. (2011). Teaching in ways that support students' autonomy. In D. Mashek & E. Hammer (Eds.), *Empirical research in teaching and learning: Contributions from social psychology* (pp. 90–103). Wiley-Blackwell. <https://doi.org/10.1002/9781444395341.ch5>
- Reeve, J. (2013). How students create motivationally supportive learning environments for themselves: The concept of agentic engagement. *Journal of Educational Psychology*, 105(3), 579–595. <https://doi.org/10.1037/a0032690>
- Reeve, J., & Cheon, S. H. (2014). An intervention-based program of research on teachers' motivating styles. In S. A. Karabenick & T. C. Urdan (Eds.), *Motivational interventions: Advances in motivation and achievement* (Vol. 18, pp. 293–339). Emerald Group Publishing. <https://doi.org/10.1108/S0749-742320140000018008>
- Reeve, J., & Cheon, S. H. (2021). Autonomy-supportive teaching: Its malleability, benefits, and potential to improve educational practice. *Educational Psychologist*, 56(1), 54–77. <https://doi.org/10.1080/00461520.2020.1862657>
- Reeve, J., & Jang, H. (2022). Agentic engagement. In A. L. Reschly & S. L. Christenson (Eds.), *Handbook of research on student engagement* (pp. 95–107). Springer. https://doi.org/10.1007/978-3-031-07853-8_5
- Reeve, J., & Shin, S. H. (2020). How teachers can support students' agentic engagement. *Theory Into Practice*, 59(2), 150–161. <https://doi.org/10.1080/00405841.2019.1702451>
- Reeve, J., & Tseng, C.-M. (2011). Agency as a fourth aspect of students' engagement during learning activities. *Contemporary Educational Psychology*, 36(4), 257–267. <https://doi.org/10.1016/j.cedpsych.2011.05.002>
- Reeve, J., Ryan, R. M., Cheon, S. H., Matos, L., & Kaplan, H. (2022). *Supporting students' motivation: Strategies for success*. Routledge. <https://doi.org/10.4324/9781003091738>
- Ruddell, R. B., Unrau, N. J., & McCormick, S. (2019). A sociocognitive model of meaning-construction. In D. E. Alvermann, N. J. Unrau, M. Sailors, & R. B. Ruddell (Eds.), *Theoretical models and processes of literacy* (7th ed., pp. 204–232). Routledge.
- Ryan, R. M., & Deci, E. L. (2000a). The darker and brighter sides of human existence: Basic psychological needs as a unifying concept. *Psychological Inquiry*, 11(4), 319–338. https://doi.org/10.1207/S15327965PLI1104_03
- Ryan, R. M., & Deci, E. L. (2000b). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54–67. <https://doi.org/10.1006/ceps.1999.1020>
- Ryan, R. M., & Deci, E. L. (2002). Overview of self-determination theory: An organismic dialectical perspective. In E. L. Deci, & R. M. Ryan (Eds.), *The handbook of self-determination research* (pp. 3–33). University of Rochester Press.
- Ryan, R. M., & Deci, E. L. (2017). *Self determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publications. <https://doi.org/10.1521/978.14625/28806>
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 61, 101860. <https://doi.org/10.1016/j.cedpsych.2020.101860>
- Ryan, R. M., & Niemiec, C. P. (2009). Self-determination theory in schools of education: Can an empirically supported framework also be critical and liberating? *Theory and Research in Education*, 7(2), 263–272. <https://doi.org/10.1177/1477878509104331>
- Satorra, A., & Bentler, P. M. (2001). A scaled difference chi-square test statistic for moment structure analysis. *Psychometrika*, 66(4), 507–514. <https://doi.org/10.1007/BF02296192>
- Skinner, E. A., & Pitzer, J. R. (2012). Developmental dynamics of student engagement, coping, and everyday resilience. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 21–44). Springer. https://doi.org/10.1007/978-1-4614-2018-7_2
- Skinner, E. A., Kindermann, T. A., & Furrer, C. J. (2009). A motivational perspective on engagement and disaffection. *Educational and Psychological Measurement*, 69(3), 493–525. <https://doi.org/10.1177/0013164408323233>
- Skinner, E., Marchand, G., Furrer, C., & Kindermann, T. (2008). Engagement and disaffection in the classroom: Part of a larger motivational dynamic? *Journal of Educational Psychology*, 100(4), 765–781. <https://doi.org/10.1037/a0012840>
- Soe, H. Y., Zhang, D., Fu, D., & Cui, Y. (2025). How an autonomy-supportive learning environment influences students' achievements in science and mathematics. *Social Psychology of Education*, 28(1). <https://doi.org/10.1007/s11218-024-09970-8>
- Soenens, B., Sierens, E., Vansteenkiste, M., Dochy, F., & Goossens, L. (2012). Psychologically controlling teaching: Examining outcomes, antecedents, and mediators. *Journal of Educational Psychology*, 104(1), 108–120. <https://doi.org/10.1037/a0025742>
- Solé, I. (1992). *Estrategias de Lectura*. Editorial Graó.
- Solé, I. (2012). Competencia lectora y aprendizaje. *Revista Iberoamericana de Educación*, 59, 43–61. <https://doi.org/10.35362/rie590456>
- United Nations (2015). *Transforming our world: The 2030 agenda for sustainable development*. UN Publishing.
- Van den Berghe, L., Cardon, G., Tallir, I., Kirk, D., & Haerens, L. (2016). Dynamics of need-supportive and need-thwarting teaching behavior: The bidirectional relationship with student engagement and disengagement in the beginning of a lesson. *Physical Education and Sport Pedagogy*, 21(6), 653–670. <https://doi.org/10.1080/17408989.2015.1115008>
- Van Keer, H. (2004). Fostering reading comprehension in fifth grade by explicit instruction in reading strategies and peer tutoring. *The British Journal of Educational Psychology*, 74(Pt 1), 37–70. <https://doi.org/10.1348/000709904322848815>
- Vansteenkiste, M., & Ryan, R. M. (2013). On psychological growth and vulnerability: Basic psychological need satisfaction and need frustration as a unifying principle. *Journal of Psychotherapy Integration*, 23(3), 263–280. <https://doi.org/10.1037/a0032359>
- Vansteenkiste, M., Niemiec, C. P., & Soenens, B. (2010). The development of the five mini-theories of self-determination theory: An historical overview, emerging trends, and future directions. In T. C. Urdan & S. Karabenick (Eds.), *The decade ahead: Theoretical perspectives on motivation and achievement: Advances in motivation and achievement* (Vol. 16Pt. A, pp. 105–165). Emerald Group Publishing Limited. [https://doi.org/10.1108/S0749-7423\(2010\)000016A007](https://doi.org/10.1108/S0749-7423(2010)000016A007)
- Vansteenkiste, M., Ryan, R. M., & Soenens, B. (2020). Basic psychological need theory: Advancements, critical themes, and future directions. *Motivation and Emotion*, 44(1), 1–31. <https://doi.org/10.1007/s11031-019-09818-1>
- Vansteenkiste, M., Soenens, B., & Waterschoot, J. (in press). Catalyzing intrinsic and internalized motivation: The role of basic psychology

- needs and their support. In J. M. Reeve (Ed.), *The Oxford Handbook of Educational Psychology*. Oxford University Press.
- Vermote, B., Vansteenkiste, M., Soenens, B., & Beyers, W. (2024). Which teachers feel good and adopt a motivating teaching style? The role of teaching identity and motivation to teach. *Studies in Higher Education*, 49(11), 2235–2261. <https://doi.org/10.1080/03075079.2023.2296565>
- Wang, X., & Liu, H. (2024). Exploring the moderating roles of emotions, attitudes, environment, and teachers in the impact of motivation on learning behaviours in students' English learning. *Psychological Reports*, 332941241231714. <https://doi.org/10.1177/00332941241231714>
- White, R. W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review*, 66(5), 297–333. <https://doi.org/10.1037/h0040934>
- Wigfield, A., & Guthrie, J. T. (1997). Relations of children's motivation for reading to the amount and breadth of their reading. *Journal of Educational Psychology*, 89(3), 420–432. <https://doi.org/10.1037/0022-0663.89.3.420>
- Williams, G. C., & Deci, E. L. (1996). Internalization of biopsychosocial values by medical students: A test of self-determination theory. *Journal of Personality and Social Psychology*, 70(4), 767–779. <https://doi.org/10.1037//0022-3514.70.4.767>
- Zhou, L.-H., Ntoumanis, N., & Thøgersen-Ntoumani, C. (2019). Effects of perceived autonomy support from social agents on motivation and engagement of Chinese primary school students: Psychological need satisfaction as mediator. *Contemporary Educational Psychology*, 58, 323–330. <https://doi.org/10.1016/j.cedpsych.2019.05.001>