RESEARCH ARTICLES

Analysis of an Integrative Model of School Commitment: Relationship among Situational, School, Social and Personal Variables in Primary School Students

Análisis de un modelo integrador del compromiso escolar: relaciones entre variables situacionales, escolares, sociales y personales en alumnos de nivel primario de educación

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Summary

The study aims at analyzing the predictive role of students' perception about the class's situational, school, social, and personal variables on the affective, behavioral, and cognitive engagement towards school tasks. The research was developed with 219 students of the primary education level from public schools in Argentina. For data collection, four standardized instruments were used: –Scale of Engagement towards School Tasks in Primary Level Classes; Inventory of the Perception of Educational Context as motivator; Questionnaire of Involvement with the School Center and Intrinsic versus Extrinsic Motivational Orientation Scale in the Classroom- as well as the absence record keeping throughout the school year. Furthermore, informed consent was also requested. The model evaluated through Path Analysis presents a good fit to the data (chi square=20.24, df=7, p=.005, chi square/df=2.89, CFI=.99, GFI=.99, RMSEA=.093–CI 90%=.047/.14-), and confirms the hypothesis, i.e., that the affective, behavioral and cognitive engagement is favored by the configuration of the class and the support from peers and teachers, while personal beliefs mediate absence as school variables that exert a negative influence on every dimension of student involvement.

Keywords: Engagement, Personal Factors, School Context, Social Support, Disengagement.

Resumen

El estudio pretende analizar el rol predictivo de la percepción que los estudiantes tienen acerca de las variables situacionales, escolares, sociales y personales de la clase sobre el compromiso escolar afectivo, conductual y cognitivo hacia las tareas escolares. La investigación se desarrolló con 219 alumnos del nivel primario de educación, de escuelas públicas de Argentina. Para la recolección de datos se utilizaron cuatro instrumentos estandarizados -Escala de Compromiso hacia las Tareas Escolares en las Clases del Nivel Primario; Inventario de Percepción del Contexto Educacional como Motivador; Cuestionario de Implicación con el Centro Escolar y, Escala de Orientación Motivacional Intrínseco versus Extrínseca en el Aula- y el registro de las faltas a lo largo del año lectivo, y se solicitó el asentimiento informado. El modelo evaluado, mediante Path Analysis, presenta un buen ajuste a los datos (X^2=20.24, gl=7, p=.005, X^2/gl=2.89, CFI=.99, GFI=.99, RMSEA=.093–IC 90%=.047/.14-) y confirma la hipótesis, es decir, que el compromiso afectivo, conductual y cognitivo se ve favorecido por la configuración de la clase y los apoyos obtenidos de pares y docentes, mientras que las creencias personales median la inasistencia, como variables escolar, que influye negativamente sobre cada dimensión de la implicación del estudiante.

Palabras clave: Compromiso; Factores personales; Contexto escolar; Apoyo social; Desvinculación.

Introduction

School disengagement has proven to be an educational problem at international level, and at a national level which also causes concern. Recently, a study on endogenous factors associated with school systems related to school disengagement in Latin America and the Caribbean shows that between 30% and 43% of students who dropped out of school indicated reasons such as boredom, lack of interest in school or study, failure, and difficulty in understanding teachers' explanations or school content (CAF, 2018) as behaviors linked to the definition of school commitment. The aforementioned are problems on which various actors and scenarios have some degree of participation in their promotion (Rigo & Donolo, 2018a). The quality of the educational context, the social and school support received, as well as the most intrinsic factors influence the way in which students feel involved with school tasks.

The truth is that international studies have focused on the age range of adolescence, covering the middle and higher levels of education, but not considering the educational scenarios

that cover the primary level of education (NSSE, 2018; OECD, 2017). With the purpose of going deeper into the first stages of schooling, it seems novel and necessary to study the contextual and personal factors that have a predictive role on the continuous school engagement-disengagement in students who attend primary school, in order to develop future educational practices that help to design educational environments that foster *commitment.*

Likewise, the growing interest in recent years to study *commitment* is related to its malleable and modifiable character (Fredricks, Blumenfeld & Paris, 2004), a postulate based on two great theoretical perspectives: the contextual model of Lam, Wong Yang and Liu (2012) and the contextual complexity approach of Shernoff, Ruzek and Sinha (2016). Both postulates consider and ascertain that an important part of school learning takes place around the tasks that students solve in class, as a situation where students manifest a multiplicity of behaviors related to their commitment in function of internal and external variables to such situation.

Commitment in the school context

The most visible manifestation of a student involved in and with the learning tasks is recorded when he or she remains attentive, participates and shows interest in what is happening around the development of the class. However, such indicators are not enough to define a construct that exceeds behavioral and affective expressions, including cognitive and self-regulatory strategies as internal processes that are more difficult to recognize with a naked eye.

This inherent complexity of the term and its concept is reflected in the definitions that frame it as a meta-construct, integrated by three dimensions -affective, behavioral and cognitive- that suppose energy in action. This denotes that students are involved, connected and actively committed to learn and accomplish tasks, in contrast to superficial participation, apathy or lack of interest. More specifically, commitment to schoolwork is characterized by the intensity and emotion with which students engage in initiating, carrying out, and completing learning activities (Appleton, Cristenson, Kin & Reschly, 2006; Rigo, 2017). Likewise, more recently, conceptual approaches frame commitment as a behavior that is far from stable, shaped by the actions and decisions that teachers take as part of instructional design planning, and those that students adopt as a way of influencing the definition of that curricular proposal by expressing inclinations and affinities.

Affective manifestations are associated with the interest and attention that students feel and perceive when they develop school activities; while in their most striking contrast, apathy and abhorrence towards tasks developed as vehicles for new learning are found. Behavior is related to those expressions that take place in the classroom during interaction or debates when participation appears as a key indicator, along with active responses to requests from teachers or classmates in order to advance in the resolution of the practice being carried out within the classroom. Finally, the cognitive dimension refers to the use of learning strategies that can be defined in the superficial - deep continuum, as well as those oriented to review, monitor and reflect on how learning takes place (Rigo, 2017; Rigo & Donolo, 2018b). These three dimensions react more to the configuration of the instructional context, as opposed to the recent incorporation of more proactive and transactional behaviors under the denomination of agency, while students orient actions to modify the classroom context as a central axis to connect by making quite explicit their interests preferences and tastes. (Reeve, 2013).

Although empirical studies have advanced considerably, the processes of disengagement still remain as a warning signal that keeps educators and theorists on the lookout for new ways to re-engage students with formal learning processes. In this sense, it is essential to keep on investigating those factors that help predict student commitment in order to define future practices that promote it.

Internal and external factors for *commitment*

The first studies on school involvement were focused on those factors intrinsic to the individual; to date, the results of various studies assert that it is not enough to just look at what takes place in the subjects as active agents of their learning, but that within the definition of the zone of proximal development defined by Vygotsky and hand in hand with socio-cultural postulates, it is recognized that the artifacts of culture mediate, influence and have some degree of interference in how students engage with school tasks (Vigotsky, 1988).

If we start by considering learning as an eminently social process, the support of others and the role they play in the processes of involvement is fundamental. Shernoff (2013) states that factors linked to the subject are the least important to explain learning processes; however, it is the variables of the instructional context that mark the differences in the commitment manifested by students.

Considering the complex conceptual network that implies being involved in the teaching-learning processes, is an invitation to contemplate a multiplicity of factors that have to do with internal and external traits to the student. With this purpose in mind, the present work investigates the predictive role played by personal, school, situation and social variables in the affective, behavioral and cognitive commitment expressed by primary school students.

Currently, two models can be identified that expand the understanding of commitment; on the one hand, the contextual model of Lam et al. (2012) and, on the other, the environmental complexity model of Shernoff et al. (2016). Both emphasize the role of class configuration as an elementary factor of student participation, mediated by dimensions of social support intrinsic to the student, such as motivational beliefs.

Observing the model of Lam et al. (2012), the students' commitment is delimited in a conceptual network that reveals that students become involved in school when they feel that their teachers have adopted motivating instructional practices - challenging, useful, aimed at raising curiosity and promoting autonomy - and also when they receive social-emotional support from their teachers, parents and classmates. Likewise, student participation is higher when they have clear learning objectives, a high sense of self-efficacy, and attributions sustained by effort (Liu et al., 2018). Most importantly, students who participate in schools often experience positive emotions, and their teachers appreciate and acknowledge their behaviors, actions and thoughts.

Returning to the contributions of Shernoff et al. (2016), the contextual complexity model recognizes that the quality of the learning environment is conceptualized in terms of environmental complexity, or the simultaneous presence of challenges and contextual supports. Environmental challenge refers to the challenges, tasks, activities, goals, structures, and expectations intended to guide students' action or thinking; while environmental support refers to the instrumental, social, and emotional resources available to help students meet the formulated challenges.

In none of the above mentioned models, school attendance is seen as a variable that may possibly mediate in students' commitment. Most research is conducted primarily at the higher level of education, showing still ambivalent evidence. The review conducted by Stoner and Fincham (2012) shows that, while the trend is to assume that absenteeism translates into diminished educational outcomes, some studies associate it with a decrease in students' expectations towards teachers or the students' greater access to information through technological advances. What is certain is that these results are relative to the university environment and, with regard specifically to the primary level of education, the CAF report (2018) reveals that absences correlate with school disengagement.

Based on the models presented and adding the first evidences on the importance of paying attention to absences, the present research is oriented to define an explanatory model of school commitment oriented toward the learning tasks carried out by students at the primary level of education, based on the analysis of variables that refer both to competent situations as well as the configuration of the class perceived by the students. These variables include: social factors, such as the perception of support received by peers and teachers; the frequency of absences during the school year; and personal factors, circumscribed by the motivational beliefs developed by children with respect to goals, attributions, and sense of self-efficacy.

Specifically, the work evaluates dimensions of class configuration perceived by students (challenge, curiosity, utility value, autonomy, recognition and evaluation); aspects of students' motivational beliefs as personal traits (attributions, sense of self-efficacy and orientation to goals); components of perceived social support (peers and teachers); absence as a school variable; and three components of commitment (affective, behavioral and cognitive).

Based on the revised bibliography, it is expected that support will be found for the following hypothesized model of relationships between variables (Figure 1), i.e., (a) that the perception of class configuration and social support positively predict students' engagement, and (b) that students' motivational beliefs and perceived social-aulic supports have a negative mediating effect on each dimension of engagement through non-attendance.
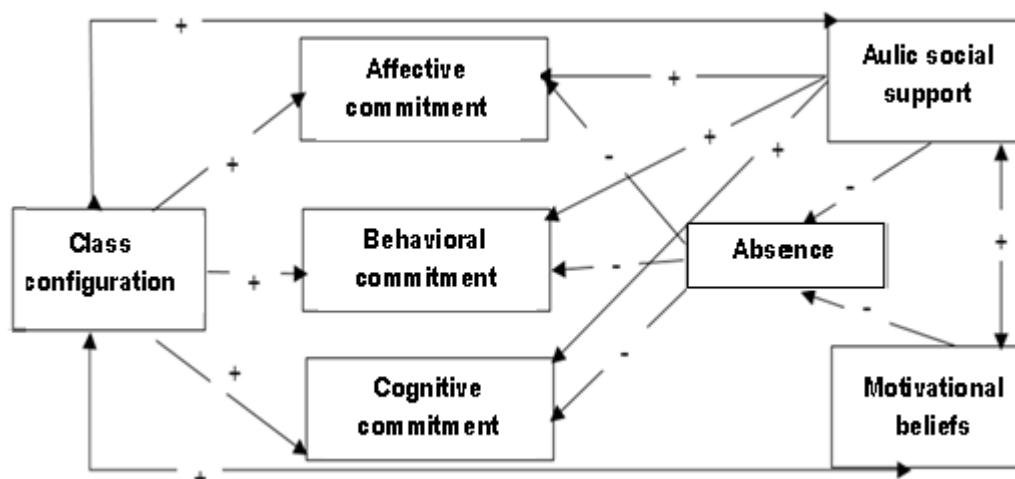

Figure 1. Hypothesized Explanatory Model of School Commitment

This research presents novel contributions not contemplated by literature or previous studies; it analyzes in conjunction variables that define the situational, social and personal context of the class in students of primary level of education in order to predict their school commitment. Likewise, this investigation examines absence to classes, a school variable not often studied, but which is decisive to understand the school commitment of the students towards the schoolwork, and to plan actions tending to promote it.

The objective of the study was to identify the role played by some situational, social, personal and school variables on the affective, behavioral and cognitive commitment of students to learning tasks. Thus, a cross-sectional, correlational and explanatory study was developed (Sampieri, Collado & Lucio, 2010).

Method

Participants

The sample consisted of 219 students (49% female; M=10.41 years old, DE=1.29) who were in the second cycle of primary education (4th-31%-, 5th-33%- or 6th-36%- grade) from public schools in a province located in central Argentina. A convenience sampling was chosen, for the accessed whose principals and their receptive inspection organism authorized entrance. The proposed research is part of a larger school project for the improvement and commitment of students to their school results.

Instruments

For data collection, different instruments were used to address each of the variables under study. They are described below in detail.

Commitment to schoolwork. Student perceptions of the affective, behavioral, and cognitive dimensions of involvement were evaluated through the Commitment to Homework Scale in Primary Level Classes. Students scored the presence of each behavior using a 5-point Likert scale. The scale presents adequate psychometric properties, indicating a three-dimensional factorial structure -affective, behavioral and cognitive- and an acceptable internal consistency (Rigo & Donolo, 2018b).

Class configuration as a situational variable. The Educational Context Perception Inventory was used as a Motivator of 24 items (Lam, Pak & Ma, 2007) adapted for use with the population under study. The instrument assesses 6 dimensions of the instructional context, namely: challenge, utility value, curiosity, autonomy, recognition and evaluation. The students scored the occurrence of each behavior using a 5-point scale. For the present research, the internal structure was analyzed through confirmatory factorial analysis and Cronbach alpha coefficient, finding acceptable results for a one-dimensional structure (X^2=21.89, p=.0009, X^2/gl=2.43, CFI=.97, GFI=.98, RMSEA=.079 –IC 90%=.037/.12-, □=.86).

Social support perceived as a social variable. The Questionnaire of Involvement with the School developed by Ros (2009) was used to investigate the support received from peers and teachers, through 12 items. The students used a 5-point scale to assess the relationships established with each agent consulted. A confirmatory factor analysis for this research revealed optimal results for a one-dimensional structure (X^2=97.3, p=.0001, X^2/gl=1.8, CFI=.88, GFI=.94, RMSE=.057 –IC 90%=.038/.074-). The internal consistency analysis revealed an adequate value of □=.80.

Motivational beliefs as a personal variable. The *Scale* of *Intrinsic versus Extrinsic Orientation* in the Classroom, Harter (1980), adapted to Spanish by González-Torres y Tourón (1994). Eighteen items were considered to value motivational beliefs, which referred to Preference for challenge vs. Preference for easy work; Curiosity and interest vs. Pleasing the teacher and obtaining grades; Criteria for success and internal failure vs External Criteria. Students estimated them by considering a scale with values ranging from 1 to 4. For the present investigation, the AFC revealed a one-dimensional structure (X^2=363.7, p=.000, X^2/gl=2.68, CFI=.87, GFI=.89, RMSE=.089 –IC 90%=.078/.100-), with adequate internal consistency □=.78.

Non-attendance as a school variable. Teachers were asked for the total absences that students had throughout the school year, as a result of the sum of the accumulated absences during the three semesters, as reported in the report cards at the end of the school year.

Procedure

First, the directors of the public schools were contacted to inform them about the research objectives, and then authorization was requested to the inspection organism of primary schools in the Province of Córdoba-Argentina, in order to enter educational institutions. Secondly, the parents of the students and the teachers were respectively asked to give their approval and informed consent to access the classrooms, safeguarding the identity and anonymity of the given answers.

The scales were administered during school hours in the presence of the teacher in charge of the class, during four meetings of one hour each. From the direction of each school access was authorized access to the absences of each student throughout the school year.

Data analysis

For the scales, the total scores were calculated by adding the answers given for each item. A *path analysis* was carried out, following the criteria and stages established by Pérez, Medrano and Sanchéz Rosas (2013) to evaluate the fit of the proposed theoretical model, the direct and indirect effects, as well as the significant *path* coefficients and the percentage of the explained variance. Several adjustment indices were considered, namely; X^2y X^2/gl, CFI -compared adjustment index-, GFI - goodness-of-fit index and RMSEA -mean quadratic approximation error-, taking as reference the values and interpretation guidelines of Pérez et al. (2013) and, Rigo and Donolo (2019). The data were loaded and processed with IBM SPSS and AMOS 16.

Results

The fit of the proposed model was evaluated and acceptable values were obtained (X^2=20.24, gl=7, p=.005, X^2/gl=2.89, CFI=.99, GFI=.99, RMSEA=.093–IC 90%=.047/.14-). Likewise, it was found that the variance explained (R^2) has a rich explanatory power, which is reflected in the determination coefficients available in Figure 2; namely, 82% for affective commitment, 79% for the behavioral dimension and 86% for the cognitive one; significant to a p-value<.01, significance that is also presented for each *path* coefficient.
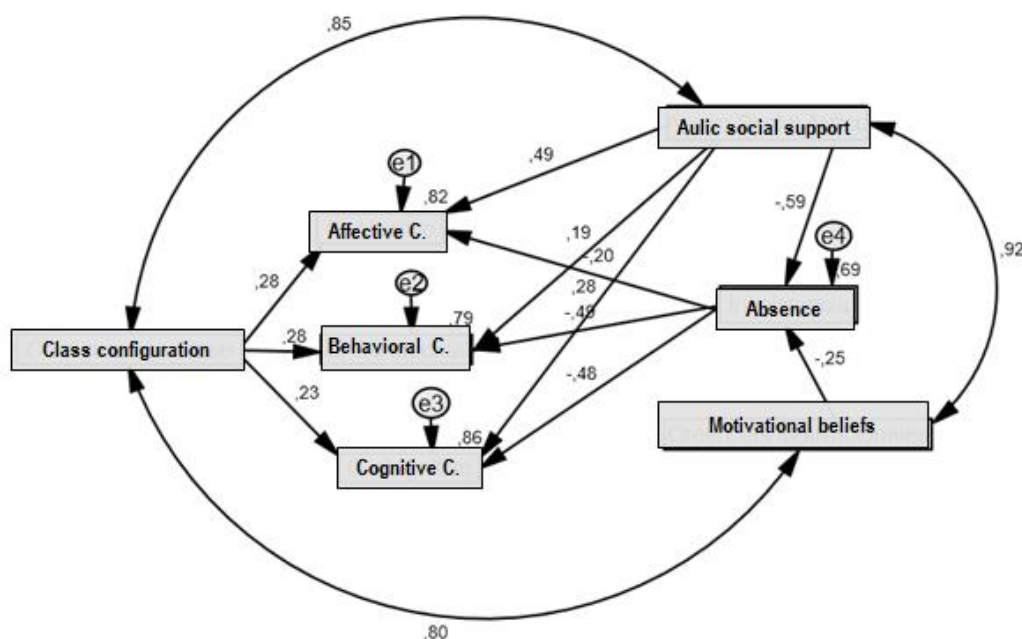

Figure 2. Structural relationships among variables (standardized path coefficients)

In the model it is stated that class configuration positively predicted each dimension of the commitment reported by the students, as well as, the perception of the social-aulic support that, at the same time, negatively influences on the non-attendance. The number of absences from the educational institution is negatively and directly influenced by the social variable of support received in the classroom by teachers and classmates and by the motivational beliefs of students that indirectly and negatively impact the dimensions of affective, behavioral, and cognitive commitment (Table 1).

Table 1
Coeficiente path (β)*, standardized total, direct and indirect effects among variables*

Variables		Total effect	Direct effect	Indirect effect
Non-attendance	- Motivational beliefs	-.249	-.249	
Non-attendance	- Aulic social support	-.593	-.593	
Behavioral C.	- Motivational beliefs	.121		.121
Behavioral C.	- Aulic social support	.479	.191	.288
Behavioral C	- Class configuration	.284	.284	
Behavioral C.	- Absence	-.486	-.486	
Cognitive C.	- Motivational beliefs	.120		.120
Cognitive C.	- Aulic social support	.568	.284	.284
Cognitive C.	- Class configuration	.235	.235	
Cognitive C.	- Absence	-.480	-.197	
Affective C.	- Motivational beliefs	.049		.049
Affective C.	- Aulic social support	.609	.492	.117
Affective C.	- Class configuration	.276	.276	
Affective C	- Absence	-.197	-.197	

Note: all the values are significant (p<.01

Discussion

The present study confirms the authors' results and those of other studies, adding new contributions that help to understand the relationships among the variables under study. In the first place, just as it was expected the configuration of the class positively predicts the students' affective (β=.28), behavioral (β=.28) and cognitive (β=.23) commitment. According to several studies, the interrelationship between class dimensions encourages students to be more involved, be it being interested in the subject matter and school activities, being more participatory in discussions and open to answering questions or consulting, or regulating their learning processes (Ames, 1992; Blumenfeld, Kempler & Krajcik, 2006; Lam et al., 2012; Nichols & Dawson, 2012; Rigo & Donolo, 2014; Shernoff, 2013; Stipek, 1996). Specifically, such investigations indicate that proposing challenging, useful and interesting tasks, together with exchanges aimed at redefining and monitoring classroom work, are dimensions that favor student engagement.

Secondly, the collaboration between peers and teachers within the classroom (β=-.59) and the motivational beliefs (β=-.25) developed by the students, as hypothesized, have a predictive and clearly negative role on non-attendance. This would imply that when students have a strong belief in their own abilities to perform the learning tasks, but at the same time receive adequate support from their peers and teachers, there is a lower number of absences. In relation to personal factors, the data found coincide with what was stated in the CAF report (2018), where low personal expectations are associated with low rates of school attendance and disengagement, a trend that is also based on the perception that students construct about the configuration of the class (Rigo, 2017).

Likewise, the results show that social support is key to strengthening students' motivational beliefs; hence the impact on students' accumulated absences during the school year. In this sense, previous studies are clearer regarding the link between commitment and perceived social support (Gutiérrez, Tomás, Romero & Barrica, 2017) than to non-attendance (Stoner & Fincham, 2012; Lukkarinena, Koivukangas & Seppälä, 2016; Miranda-Zapata, Lara, Navarro, Saracostti & de-Toro, 2018). However, the results found show the importance of the social and personal context in promoting student involvement and attendance. In this sense, future studies should investigate in greater depth the role that both variables have on school desertion, being an issue of concern in the current national and international educational agenda. In this regard, Glasman (2000) mentions two types of disengagement, one associated with students who leave school early, and another one related to the students who disconnect without moving from their place, that is to say, without dropping out of their studies, whose motives are linked to not breaking with what, within the near environment, is still expected according to the constructed expectations.

In the third place, the predictive role of non-attendance is confirmed at the primary level of education, and in the expected sense, as the number of absences from classes is a good estimator of the processes of student involvement; in this sense, the results show a negative influence on the three dimensions of commitment to academic task, affective (β=-.20), behavioral (β=-.49) and cognitive (β=-.48). The data coincide with the trends marked by Stoner and Fincham (2012), who identify that the students who attend classes demonstrate a greater implication and desire to pay attention to the explanations of the teachers, insofar as they consider that teachers provide relevant and interesting information and tasks to advance in their studies. Likewise, in the sense of what was found in this study, Van Blerkom (2012) details in his research that absence tends to be one of the most frequent reasons mentioned by students who perceive classes as boring.

In the fourth place, social support also predicted students' affective behaviors (β=.49), conduct behaviors (β=.19) and cognitive behaviors (β=.28), a dimension that would covariate along with class configuration. Previous studies show that the social support perceived by students predict school commitment including the variables of the classroom environment, highlighting that teachers and classmates exert a greater influence on involvement than that of family support. They also show that aspects of teacher support -autonomy and structure- and peer support -academic and emotional- intervene positively on the degree of students participation and involvement (Brewster & Bowen, 2004); Garcia-Reid, Reid & Peterson, 2005; Kiefer, Alley & Ellerbrock, 2005; Strati, Schmidt & Maier, 2017).

Summarizing, the present work attempted to contribute to the definition of student's commitment to schoolwork as a complex, malleable construct, dependent on a multiplicity of factors that exceed personal ones and involve some dimensions associated with the context of the class. Within this framework, an explanatory model was established based on situational, social, school and internal variables of the student, verifying the impact and predictive capacity they have to understand the implication in the primary level of education. The results show being susceptible of attending to practical approaches within school institutions and classrooms, in order to address problems of disengagement that have a strong incidence, from the first years of schooling (Fredricks, Reschly & Christenson, 2019; Rigo & Donolo, 2018). Likewise, what has been found reaffirms the importance of continuing to generate modifications in the ways classes and school tasks are being designed, as a key situational element for more involved students in schooling. Nevertheless, the research also reveals the relevance of paying sustained attention to the interpersonal relationships that strengthen the interest in learning and attending school, which at the same time makes students more motivated, autonomous, and willing to assume educational challenges.

Finally, with respect to limitations, in future research, self-reporting as a central instrument of collection requires complementary measures such as the recording of classroom behaviors, based on structured observations (Fredricks & McColskey, 2012); likewise, it is considered necessary to work with a representative sample in order to be able to extrapolate the

results to the target population, given the richness of the results found and the potential impact on transforming educational practices.

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