Student's Engagement in School: Conceptualization and relations with Personal Variables and Academic Performance

Envolvimiento de los estudiantes en la escuela: conceptualización y relaciones con variables personales y rendimiento académico – una revisión de la literatura

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Abstract

This article reviews the literature regarding Student's Engagement in School (SES), its relationship with personal variables, as well as with academic performance. Although SES' conceptualization may vary across studies, there is general agreement concerning the multidimensional nature of this construct, encompassing three dimensions – cognitive, affective and behavioural. It is seen as an antecedent of several required outcomes, at academic level, but also as a valorous construct itself, both as mediator and product. More particularly, this concept has been the focus of debate concerning academic success and school dropout. There can also be found a significant number of studies which suggest that personal (self-efficacy, self-concept), as well as contextual (peers, school, family) factors are related with school engagement; additionally, the lack of engagement is linked with low academic performance, behavioural problems and school dropout. Thus, Student's Engagement in School is perceived as a potentially effective response to the problems affecting schools and their students, and an aspect to be considered in preventing problematic patterns related to scholary contexts.

Keywords: Student's engagement in school, personal variables, academic performance, literature review.

Resumen

Este artículo revisa la literatura sobre el Envolvimiento de los estudiantes en la Escuela (EEE), así como su relación con variables personales y también con los resultados escolares. Aunque su conceptualización varía en los estudios revisados, hay acuerdo general cuanto a su naturaleza multidimensional, incluyendo tres dimensiones – cognitiva, afectiva y comportamental. Es visto como un antecedente de varios productos requeridos en el contexto académico, así como un valioso constructo por sí mismo. Se ha estudiado como mediador y como producto, y se ha colocado en el centro de las discusiones relacionadas con el éxito académico y el abandono escolar. Este estudio revisa la literatura sobre este concepto, y su relación con

variables personales y contextuales, y también con el rendimiento académico. Se verifica la existencia de un número considerable de estudios que apoyan que los factores personales (autoeficacia, auto concepto) y contextuales (colegas, escuela, familia) están asociados con el envolvimiento en la escuela; por otro lado, la falta de envolvimiento se relaciona con la bajo rendimiento académico, problemas de conducta y abandono escolar. El envolvimiento de los estudiantes en la escuela se presenta como una respuesta potencialmente eficaz a los problemas que afectan las escuelas y sus estudiantes; es un aspecto a tener en cuenta en la prevención de los patrones problemáticos relacionados con el contexto escolar.

Palabras clave: Envolvimento de los estudiantes en la escuela, variables personales, resultados académicos, revisión de la literatura.

Resumo

Este artigo faz uma revisão da literatura sobre o Envolvimento dos Alunos na Escola (EAE), bem como das suas relações com variáveis pessoais e, também, com resultados escolares. Embora a sua conceptualização varie nos estudos revistos, existe acordo geral quanto à sua natureza multidimensional, compreendendo três dimensões – cognitiva, afetiva, e comportamental. É entendido como um antecedente de diversos produtos requeridos ao nível académico, bem como um valioso constructo, por si mesmo, sendo abordado, quer como mediador, quer como produto. O EAE tem vindo a ser colocado no cerne das discussões relacionadas com o sucesso académico e abandono escolar. Esse estudo faz uma revisão de literatura acerca deste conceito, e das suas relações com variáveis pessoais e contextuais, e também com o desempenho académico. Verifica-se a existência de um número considerável de estudos que sustentam que tanto fatores pessoais (autoeficácia, autoconceito) como contextuais (pares, escola, família) se encontram associados ao envolvimento na escola; por sua vez a falta de envolvimento está relacionada com o baixo desempenho académico, problemas de comportamento e abandono escolar. O Envolvimento dos Estudantes na Escola apresenta-se como uma resposta potencialmente eficaz para os problemas que afetam as escolas e os seus alunos, e um aspeto a atentar na prevenção de padrões problemáticos associados ao contexto escolar.

Palavras-chave: Envolvimento dos alunos na escola, variáveis pessoais, resultados académicos, revisão de literatura.

Student's Engagement in School: Conceptualization

A considerable amount of literature describes SES as a construct which includes three dynamically related dimensions: cognitions, emotions, and behaviours (Appleton, 2012; Burden, 2005; Fredricks, Blumenfeld, & Paris, 2004; Glanville & Wildhagen, 2007). The cognitive dimension refers to the students' personal investment, as well as to their learning approaches and self-regulatory strategies (Fredricks et al., 2004). The emotional dimension – or psychological, as preferred by some authors such as Glanville and Wildhagen (2007) or Marks (2000) – refers to the sense of identification with school (Voelkl, 2012 in Christenson, 2012) and to the affective reactions aroused by school, colleagues and teachers (Glanville & Wildhagen, 2007; Marks, 2000); to the student's connection to school, namely the extent to which the students feel part of the

school, connected to their colleagues and happy, and also to their sense of belonging to school (Furrer & Skinner, 2003). This dimension can be assessed through the interest, preference, belonging and attitudes toward school, learning, teachers and peers. The behavioural dimension is defined by the actions and practices directed toward school, encompassing several positive conducts, such as homework completion (Reschly & Christenson, 2006), attendance and class-going as well as attention during lessons (Voelkl, 2012 in Christenson, 2012), effort put into school tasks (e.g., concentration), getting good grades (Wang & Holcombe, 2010), participation in extra-curricular activities (Finn, 1993), and the absence of disruptive conducts regarding school norms (Fredricks et al*.,* 2004; Burden, 2005; Appleton, 2012; Veiga et al., 2012). Some authors (Furlong & Christenson, 2008) also include an academic sub-dimension, represented, among other aspects, by actions directed, at home and in school, to doing academic tasks and meant to disaggregate academic actions from other engaging behaviours. Recent studies (Reeve & Tseng, 2011; Veiga, 2013) have been suggesting another component, *personal agency*, conceptualized as the students' constructive contribution to the course of the instruction they receive, that is, the process by which students, intentionally and proactively, adapt and expand what is learned, as well as the conditions under which this happens.

To sum, we can consider that engagement in school corresponds to the feelings, thoughts and behaviours exhibited by students about their experiences in school context. As a result of previous works, Veiga (Veiga et al., 2012; Veiga, 2013) defines SES as the experience of centripetal connection of the student to the school in specific dimensions – cognitive, affective, behavioural and agential. Although general agreement is established with regard to the fact that engagement includes several components (Fredricks et al., 2004; Glanville & Wildhagen 2007), is likely to predict several outcomes, and to be influenced by different variables (both contextual and personal), engagement's conceptualization, as well as its number of components vary cross studies.

Another aspect that is still a matter of extensive debate deals with the relationship between engagement and motivation. In this argument, engagement has been described as energy in action; connection or interaction between a person and an activity (Russell, Ainley & Frydenberg, 2005); and also as a manifestation of ongoing motivational activities (Skinner, Kindermann, Connel, & Wellborn, 2009 in Wentzel & Wigfield, 2009), including, not only the action initiation, but too

its continuity when in the face of obstacles. The concept of motivation has been considered in terms of direction, intensity and quality of the manifested energy (Maehr & Meyer, 1997), relating to underlying psychological processes, such as autonomy (Skinner, Kindermann, Connel, & Wellborn, 2009 in Wentzel & Wigfield, 2009), sense of connection and belonging (Furrer & Skinner, 2003) and competence (Furlong & Christenson, 2008). In the light of these ideas, it is assumed that motivation is necessary but not sufficient for engagement to occur.

The interest in this concept significantly derives from the associations between SES and a number of effects in children and adolescents, namely, positive academic outcomes, such as school achievement (Fredricks et al., 2004; Furrer & Skinner, 2003; Veiga et al., 2012). Still, research has been looking into the identification of engagement predictors, assuming it is responsive to environmental conditions (Fredricks et al., 2004). Accordingly, it is pointed out as a key aspect to consider in preventing negative developmental consequences, such as school dropout (Voelkl, 2012 in Christenson, 2012).

The relationship between the students' characteristics, such as sex or grade level, and engagement in school, has been the focus of a few studies. Authors such as Finn and Rock (1997) found that students with similarly high levels of background demographic risk vary in outcomes as a function of engaging behaviours; further studies (Byrnes, 2003) have been suggesting that when students are motivated, hold appropriate abilities and perceive themselves in an environment that might promote opportunities to succeed, variables such as sex and race/ethnicity, explain little or zero of the variance encountered in achievement tests. Additionally, some aspects, such as intrinsic motivation (Deci & Ryan, 2000) or self-efficacy (Yusuf, 2011), besides influencing engagement, are assumed as flexible, making them amenable for intervention, raising the interest of educators and researchers in this matter. Also, academic performance, perceived as achievement and behaviour, has been related with the level of students' engagement in school (Li & Lerner, 2011), in different age groups (Deci & Ryan, 2000; Finn & Rock, 1997). However, literature shows that each dimension of engagement doesn't necessarily lead to the same outcomes. Therefore, there is still an ongoing debate on whether engagement's dimensions should be investigated simultaneously (Fredricks et al., 2004) or if some would be more relevant to be investigated in relation to certain results (Glanville & Wildhagen, 2007). Globally, engagement has been correlated with

improvements in academic performance (Appleton, 2012; Burden, 2005; Li, Bebiroglu, Phelps, Lerner, & Lerner, 2008; Marks, 2000) and learning (Yusuf, 2011), higher grades and better scores in standardized tests (Finn & Rock, 1997), and also with higher rates of school completion (Reschly & Christenson, 2006).

Students' Engagement and Personal Variables

This section reviews principal studies on the relation between students' engagement in school and personal variables, specifically, sex, self-concept, age/grade level, and goal orientations.

Students' Engagement in School and Sex

The relationship between students' engagement in school and sex has been insufficiently studied, with emphasis on the studies carried out by Lam et al. (2012). These authors studied the differences in engagement, according to sex, in 3420 students from 12 countries, including Portugal, and found that girls, compared with boys, have significantly higher levels of engagement and are pointed out by teachers as having better academic performance. According to these authors, engagement as a factor of motivation and personality, may explain some of the differences found in academic achievement, when sexes are compared.

The literature on the relation between academic performance and engagement, by sex, reveals inconsistent results; for instance, Ruban and McCoach (2005) found no significant differences between boys and girls, when relating the two constructs, while Freudenthaler et al. (2008) noted differences in favour of girls. Marks (2000) also found superior engagement in girls, from elementary to high school. Lam et al. (2012) came across an association between engagement and academic performance, but no differences by sex, suggesting that engagement is only a partial mediator between gender and academic performance.

Other studies have found differences in the sense of belonging (Furrer & Skinner, 2003) and satisfaction with school, in favour of girls (Smith, Ito, Gruenewald & Yeh, 2010). These differences are, however, imputed to schools and teachers' characteristics (degree of structure and a higher prevalence of female teachers). Ghazvini and Khajehpour (2011) also concluded that boys use fewer learning strategies, and that girls assume more responsibilities for their academic flaws. These authors also admit, similarly to Smith, Ito, Gruenewald, and Yeh (2010), the impact of contextual variables in these results.

Studies also suggest that boys are less motivated to study, and dedicate less time to the accomplishment of homework, presenting lower educational expectations (Gil-Flores, Padilla-Carmona, & Suárez-Ortega, 2011; Veiga, Moura, Sá, & Rodrigues, 2006). Girls, in turn, show higher aspirations and are more proficient in achieving their academic goals, when compared to boys (Veiga et al., 2006). Considering the cognitive dimension of engagement in school, Kenney-Benson, Pomerantz, Ryan, and Patrick (2006) argue that girls tend to stand out regarding to planning, regulating and monitoring academic activities.

Students' Engagement in School and Self-concept

Self-concept, understood as the perception one has of oneself, is a multidimensional construct assumed to be a significant element in personality development (Appleton, 2012; Burden, 2005; Veiga, 2012). Despite the terminological indefiniteness, being frequently mistaken with others, there have been noteworthy progresses regarding its conceptualization and assessment (Marsh & Yeung, 1997). Concerning school context, academic self-concept may be defined as the perception students have regarding their own academic performance (Reyes, 1984), encompassing two features of self-perception, a descriptive and an evaluative one. Another definition was proposed by Veiga (2012), Veiga et al. (2012): the perception a student has of himself/herself as a person, including the relation with others, within school context.

Studies on the relationship between self-concept and school achievement may be found in the literature (Marsh & O'Mara, 2008), although the magnitude of these relations are, frequently, low. Ghazvini (2011) found that self-concept predicts global achievement in literature and mathematics. Veiga (1996) registered a relation between self-concept and achievement in sciences and mathematics, with the best students presenting a higher global self-concept; the most significant differences were found in the contrast between extreme groups. Machargo (1991) describes self-concept as the best predictor of school achievement. Other authors present school achievement as a determinant of self-concept (Marsh & Parker, 1984); whereas others suggest that self-concept determines school achievement. Nevertheless, most authors consider the mutual influence of self-concept and school achievement (Appleton, 2012; Burden, 2005; Marsh & Yeung, 1997; Veiga, 1996; Veiga, 2012; Veiga et al., 2012).

Students' Engagement in School

and Age/Grade Level

The literature suggests that student's engagement changes as they progress in schooling (Finn, 1989; Marks, 2000). There may be found some studies on younger ages (Furrer & Skinner; 2003; Ladd & Dinnella, 2009), however, most research studies on the patterns of students' engagement over time include middle and secondary school (Janosz et al., 2008; Marks, 2000; Wylie & Hodgen, 2011).

Several studies have been suggesting a decrease in students' engagement throughout the years of schooling (Klem & Connell, 2004; Liu & Lu, 2010; Wylie & Hodgen, 2011). This decrease seems to relate with various variables, namely, the change that occurs in peer influence, which significantly increases, contrary to what happens with family (Furrer & Skinner, 2003; Janosz, Archambauld, Morizot & Pagani, 2008; Li et al., 2011). A number of authors also underline the importance of grade level transitions on engagement (Anderman & Midgley, 1997; Urdan & Midgley, 2003; Liu & Lu, 2010; Wylie & Hodgen, 2011); Reschly and Christenson (2006), for instance, argue that grade level transitions are expected to have impact on students' engagement in school and learning, as they are encountering circumstances likely to encompass challenges and risks. An increase

in substance use (Henry, Knight & Thornberry, 2012; Li & Lerner, 2011) and a decline in mental health (Li & Lerner, 2011) and school attendance (Anderson & Havsy, 2001), have been found over the years of schooling. Also, an increase in competition and in the emphasis placed on assessment are reported, between middle and secondary school (Gottfried, Fleming, & Gottfried, 2001), which, together with personal-type characteristics, seem to contribute to the decline in intrinsic motivation and students' engagement in school (Liu & Lu, 2010; Wylie & Hodgen, 2011), and are likely to underlie dropping out from school (Mahatmya, Lohman, & Farb, 2012).

However, some studies have also contradicted the idea of a decrease in motivation and engagement, particularly during adolescence; for most students, adolescence appears to be a regular developmental period, which does not necessarily have an effect on students' motivation and performance (Janosz, Archambauld, Morizot, & Pagani, 2008; Vasalampi, Salmela-Aro, & Nurmi, 2009; Veiga, 2012). Longitudinal studies have, too, called attention to the existence of specific trajectories, related to different contextual (school subject, academic experience, peer, parents and teachers support) and personal (sex, socioeconomic status, race/ethnicity, personal goals) variables.

Students' Engagement in School and Goal Orientation

The relationship between motivation and the goal orientation adopted by the students has drawn the attention of a few authors, and several taxonomies may be found in literature; assuming Elliot's (1999) theoretical line, the reasons for student's to engage in tasks may be of two general orientation: mastery/learning goals, or performance goals. The adopted orientation will impact engagement level, since goals influence the cognitive and self-regulatory strategies used in learning situations (Anderman & Patrick, 2012 in Christenson, Reschly, & Wylie, 2012), which occurs through two important elements: the perceptions of skills (self-efficacy) and the perceptions of instrumentality. Roeser, Midgley and Urdan, (1996) have suggested that mastery goals are related to positive affect toward school, intrinsic motivation and self-concept. A mastery orientation also appears related to several positive academic behaviours, such as asking for help (Ryan & Pintrich, 1997) or the absence of disruptive behaviours within classroom (Ryan, & Patrick, 2001; Veiga, 2012).

A variety of studies has suggested (Appleton, 2012; Burden, 2005; Church, Elliot, & Gable, 2001; Roeser, Midgley, & Urdan, 1996) that students perceive their classroom structure as mastery or performance oriented, with their personal goals positively associated with the corresponding structure. For example, performance oriented structures affect engagement because they influence the student's trust in ones capacity to be successful in school-related tasks (Roeser, Eccles, & Sameroff, 2000), by encouraging social comparison within classroom; on the other hand, a mastery orientation will allow the student to experience the feeling of success (Linnenbrink & Pintrich, 2002), by promoting the use of self-regulation and students' confidence (Pintrich, 2000).

Studies in the context of future oriented motivation also indicate that those students who relate school subjects with the occupation they aspire to have in the future, show better cognitive abilities and are more engaged in tasks and learning (Shell & Husman, 2001). Thus, the subjective value assigned to the tasks influences the goal orientation adopted (Miller and Brickman, 2004) and, therefore, students' engagement.

Students' Engagement and Academic Outcomes

Students' engagement has also been related to both positive and negative academic outcomes; some studies on the relation between the core

construct and academic achievement, school dropout, and risk behaviours are presented.

Students' Engagement and School Achievement

Finn (1993) used data from the *National Educational Longitudinal Survey (*NELS,1988), with the purpose to study the relationship between engagement (participation) and school performance, having found a strong association between the two constructs, regardless of sex and socioeconomic levels. Furrer and Skinner (2003) observed the role of students' sense of belonging on school engagement and later academic performance; results suggest that students and teachers report levels of behavioural and emotional engagement which mediate the relationship between the combined bond toward parents, peers and teachers, and students' grades. The relationship reported by students to parents, peers and teacher significantly predicted engagement.

Wang and Holcombe (2010) studied the relationship between the perceptions of school environment, engagement and performance, in students from middle school, concluding that the perceptions evidenced in 7th grade differentially contribute to the three types of engagement in the 8th grade. They also found that perceptions of the

environment directly and indirectly influence academic achievement, through the impact on the three types of engagement. Other studies show, however, less consistent results on this relationship; Goodenow (1993) found lower correlations between sense of belonging and school grades, than with academic success expectations; longitudinal studies (from 4th to 8th grade, Voelkl, 1997) sustain the relationship between participation, identification with school and academic performance, however, the correlation between identification and participation was stronger than the correlation between participation and school grades.

Students' Engagement and School Dropout

Finn (1989) argues that early social and educational experiences (such as retentions) may relate with school dropout in later years, by initiating a process of disengagement from school, thus underscoring the importance of the study of engagement in elementary years, as well as addressing engagement in a developmental perspective (Perdue, Manzeske, & Estell, 2009). Some other authors found that the relationship between engagement and performance may be found in early schooling years (Alexander, Entwisle, & Horsey, 1997) with the consequences of disengagement manifested in

later years (Finn, 1989). Disaffection from school is seen, by Marks (2000), as an essential process that underlies failure and school dropout.

Janosz, Archambauld, Morizot and Pagani (2008) studied different engagement developmental patterns and their relation with school dropout, during the course of life, and found a normative trajectory which includes the majority of students (between 12 and 16 years old), characterized by high levels of engagement and a minimum occurrence of school dropout. They also found six other groups, two of which showing continuous engagement levels (moderate or high), and four other showing changes in engagement over time. From the analysis of these non-normative patterns, the authors suggest that those students who show an accelerated decrease in engagement or report low levels of engagement in early adolescence will be more likely to, drop out from school. The patterns result from a confluence of features associated with peers, family and the student himself.

Vasalampi, Salmela-Aro and Nurmi (2009) sought to determine whether adolescents' self-concordance of achievement-related goals (the presence of goals integrated in the self and guided by internal determinants) was a predictor of students' engagement (vigour, dedication and absorption), and educational trajectories, as well as the absence of burnout in upper secondary school. They found that school engagement, in the end of secondary education, predicts success in later schooling transition, in the case of girls, and concluded about the existence of a cumulative path between academic motivation and subsequent educational trajectories.

Henry et al. (2012) used data from *Rochester Youth Development* with the purpose of assessing the relationship between engagement, school dropout and other problems such as delinquency, offenses and substance use, during early and late adolescence and early adulthood. Results indicate a relationship between engagement, school dropout and also several problematic outcomes, across all developmental phases.

Students' Engagement and Risk Behaviours

Several studies relate school connection with delinquency (Hirschfield & Gasper, 2010), behaviour problems (Fredricks et al., 2004) and substance use (Henry et al., 2012). A low school engagement has been associated with conduct problems, whereas, in contrast, students' with higher levels of engagement show less problems of this kind (Hirschfield & Gasper, 2010; Li & Lerner, 2011).

Borowsky et al. (2002) found that

school retention, the occurrence of academic problems, school achievement, absenteeism and connection to school were predictors of the occurrence of violence, one year after evaluation. Hirschfield and Gasper (2010) sought to understand if engagement could predict behaviour problems in later childhood, early adolescence, and found that emotional and behavioural engagement predicted a decrease in delinquency, in both school context and general settings. The cognitive component, in turn, was related to an increase in delinquency. Li et al. (2011) intended to examine the effects of school engagement (behavioural and emotional) on risk behaviours (delinquency and substances use), using data from the *4-H Study of Positive Youth Development*. These researchers found that higher levels of engagement, both emotional and behavioural, were predictors of a lower risk of involvement in risk behaviours.

Conclusions

Students' engagement in school has been studied as a product, as well as an antecedent of several required results, at the academic level (Appleton, 2012; Burden, 2005; Fredricks et al., 2004; Reeve & Tseng, 2011; Veiga et al., 2013). It also appears as an important mediator between several

variables and different effects, such as self-concept, sex or grade level, which may have impact on students' achievement, behaviour and schooling trajectories. Although taxonomic variations and some debates persist, particularly concerning engagement dimensions and its relation with several variables, both educators and researchers have been highlighting its significance in the context of the discussions about teaching and learning, calling the attention to the presence of variations throughout the years of schooling that shouldn't be disregarded, and relating them with a number of factors, intrinsic to the student and also part of the learning conditions.

Self-determination theory assumes that the student has previous motivation resources which allow him to constructively engage in the learning environment and tasks. Additionally, the learning setting also holds a series of conditions which support or, by contrary, inhibit students' motivation (Appleton, 2012; Burden, 2005; Reeve, 2012; Veiga et al., 2013). Still, if some variables are more difficult to change (particularly of personal type) others are modifiable, such as the teacher's style or the structure of the classroom. In fact, several teaching practices have been related with the increase of mastery goals and self-efficacy within the classroom, for example, effort-focused praise, promotion

of students' autonomy, group tasks, attention for each student's needs, encouragement of students' participation in choices and decision (Veiga, et al., 2012), calling the attention to the importance of further studies on the relation between students' engagement and contextual variables.

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