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Role of social performance in predicting learning problems: Prediction of risk using logistic regression analysis

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Abstract
Social skills are specific behaviors that individuals exhibit in order to successfully complete social tasks whereas social competence represents judgments by significant others that these social tasks have been successfully accomplished. The present investigation identified the best sociobehavioral predictors obtained from different raters (judges) in order to classify children into Learning Problem (LP) and No Learning Problem (NLP) groups. A sample of 119 elementary school students from six Brazilian public state schools participated in this study. The sample consisted of 59 NLP and 60 LP students. A forward stepwise logistic regression analysis showed the peer ratings of collaborativeness was the best predictor of LP and NLP group membership and correctly classified 94% of the LP group and 90% of the NLP group. Self-ratings of compliance and self-ratings of ease of joining a peer group as well as teacher ratings of collaborativeness were added to the model which correctly classified 98% and 98.1% of the LP and NLP groups respectively. These results are discussed in terms of social skills as academic enablers for academic success in the classroom.

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Within the public school system of Brazil, low achievement, retention, and high rates of dropout have historically been prevalent (Wechsler & Oakland, 1990). In 1986 the United Nations Children's Fund (UNICEF) reported that nationally approximately 38% of students who entered school completed 4th grade, and only 5% finish high school in Brazil (IPLA/IPEA, UNICEF, SUDEPE, 1986 as cited in Wechsler & Oakland, 1990). Additionally, Brazilian retention rates in the 1980s were at one point as high as 56% nationally, a number that had been relatively stable for almost 40 years (Brandão, 1982 cited in Wechsler & Oakland, 1990). In response to these failings, a number of political and professional interventions have been put into place, greatly increasing the number of students in school and improving upon adult education. Despite the reduction of serious problems, Brazilian schools consistently fall behind other Latin American and Caribbean countries (EFA Global Monitoring Report, 2010). Currently, approximately 95% of 7-year-old children are enrolled in school (Guzzo, Mitjáns Martínez, & Campos, 2007) but as many as 19% of these students will be retained, making it the highest rate of retention for any Latin American or Caribbean country (EFA Global Monitoring Report, 2010). Given this data and research regarding retention (e.g. Meisels & Liaw, 1993), it is not surprising that as few as 36% of students will graduate from high school and only 11% will attend additional schooling (Guzzo et al., 2007). While this number is an improvement upon prior rates of retention and dropout, this lack of effective education continues to pose major societal problems and a continued cycle of poverty (Oakland & Wechsler, 1990; Wechsler & Gomes, 1986; Wechsler & Oakland, 1990).

Brazilian school psychologists have begun performing research aimed at examining what factors are most likely to lead to eventual achievement and dropout reduction within Brazil (Oakland, Wechsler, Bensusan, & Stafford, 1994; Weschsler & Oakland, 1990). The research would suggest that a number of factors play a part in whether or not a student achieves and continues in school ranging from external sources such as socio-economic status and distance from schools to internal problems such as low-quality teachers, lacking teacher motivation, and too little time in school (Gomes-Neto & Hanushek, 1994).

One line of investigation in Brazil (Del Prette & Del Prette, 1998, 2001, 2003, 2008a; Del Prette, Paiva, & Del Prette, 2005) related to academic success has specifically examined the teacher-student relationship. This relationship has been taken as the core of the teaching-learning process, and considered in its relation to proximal (teachers and students characteristics and behaviors) and distal

factors (school conditions, educational projects and politics, economical factors and so on). Still in its infancy, this research program has investigated the relationship among students' social skills and behavior problems (Del Prette & Del Prette, 2003, 2009; Feitosa, 2007; Molina & Del Prette, 2006) as well as teachers' social educative skills (Del Prette & Del Prette 2008b; Molina, 2007) in their impact on the students' academic achievement and socio-emotional development. While preliminary results would suggest that social skills are important for school success with a Brazilian population, the questions of which specific skills are most important to target for intervention are limited.

Social skills

Research within the United States has shown that children and youth experiencing difficulties in building and maintaining satisfactory interpersonal relationships with peers and adults present substantial challenges to schools, teachers, parents, and peers (Gresham, 1997, 1998; Maag, 2005, 2006; Walker, Ramsay, & Gresham 2004). These social competence deficits have been shown within the US to lead to short-term, intermediate, and long-term difficulties in areas of educational, psychosocial, and vocational domains of functioning (Kupersmidt, Coie, & Dodge, 1990; Newcomb, Bukowski, & Pattee, 1993; Parker & Asher, 1987). These challenges cut across disciplinary, instructional, and interpersonal domains and frequently create chaotic home, school, and classroom environments.

Risk and protective factors in interpersonal relationships

Walker and Severson (2002) suggested that children having difficulties in interpersonal relationships are at-risk for a host of negative developmental outcomes, many of which place children on destructive pathways often leading to unfortunate consequences such as school failure and dropout, alcohol and substance abuse, delinquency, social rejection, and violent and destructive behavior patterns.

More germane to the current article, Walker and Severson (2002) identified a number of risk and protective factors specifically within the realm of social competence that? put children with learning difficulties at risk for poor outcomes. Specifically, poor problem solving, poor social skills, lack of empathy, bullying, and peer rejection represent important risk factors for children who have difficulties in interpersonal relationships. A recent synthesis of the meta-analytic literature of the risk and protective factors also found that controversial, rejected, and neglected sociometric statuses as well as poor social skills were significant risk factors for children in the US with interpersonal relationship difficulties (Crews et al., 2007).

Social skills as academic enablers

Researchers have documented meaningful and predictive relationships between children's social behaviors and their short-term (Molina & Del Prette, 2006) and long-term academic achievement (DiPerna & Elliott, 2002; DiPerna, Volpe, & Elliott, 2002; Malecki, & Elliott, 2002; Wentzel, 1993). The notion of *academic enablers* evolved from the work of researchers who explored the relationship between students' nonacademic behaviors (e.g. social skills and motivation) and their academic achievement (Gresham & Elliott, 1990; Malecki, 1998; Wentzel, 1993; Wigfield & Karpathian, 1991). DiPerna and Elliott (2000) distinguished between academic skills and academic enablers. Academic skills are viewed as the skills that are the primary focus of academic instruction but academic enablers are non-academic skills that encompass attitudes and behaviors that allow a student to participate in and ultimately benefit from academic instruction in the classroom. Research using the Academic Competence Evaluation Scales (DiPerna & Elliott, 2000) showed that academic enablers were moderately related to US students' academic achievement as measured by standardized tests (Mdn $r = 0.50$).

As academic enablers, appropriate social skills contribute to the learning process both by reducing behavior problems (Gresham, 2009) and also improving learning interactions (Del Prette & Del Prette, 2009). In a major longitudinal study, Caprara and colleagues found that social skills of 3rd graders as assessed by teachers were better predictors of 8th grade academic achievement than achievement test results in 3rd grade (Caprara, Barbaranelli, Pastorelli, Bandura, & Zimbardo, 2000). Even stronger findings were reported by Malecki and Elliott (2002) who showed that social skills correlated approximately 0.70 with end of year academic achievement as measured by high stakes tests. It thus appears that social skills are vitally important *academic enablers* for children in schools.

Purpose of the present study

Though there is a plethora or research supporting the importance of social skills in academic achievement for students in the United States, it is not a given that these results will translate to all other populations. There is a whole subsection of research looking at how academic achievement in Brazil is measured, that often shows there can be many differences from norms within the US (i.e. Oakland et al., 1994; Wechsler et al., 2010). The purpose of the present investigation was to identify the best socio-behavioral predictors obtained from different raters (teachers, peers, and child self-report) in order to differentiate Brazilian children with and without learning problems. Given knowledge of what social-behavioral factors are most related to academic achievement, interventions could be put into place to target both academic and socio-behavioral factors as a means of increasing academic performance and reducing school drop outs. Using logistic regression analyses, the goal was to examine socio-behavioral characteristics as a means of finding the ones that

best predicted group membership into Learning Problem (LP) and No Learning Problem (NLP) groups.

Method

Participants

A sample of 119 2nd-grade elementary school students from six Brazilian public state schools from the state of Sao Paulo participated. The sample included 63 males and 56 females who were on average 9-years-old. These students came from 27 classrooms in urban schools. Within each classroom, two students with the highest academic performance (No Learning Problem) and two students with the lowest academic performance (Learning Problem) were selected based on teacher nomination for a total of four students within each classroom. Thus, the sample consisted of 59 No Learning Problem (NLP) students and 60 Learning Problem (LP) students. The No Learning Problem group was made up of 31 males and 29 females, while the Learning Problem group consisted of 31 males and 26 females. Twenty-seven female teachers from each of the 27 classrooms served as informants on the teacher instrument.

Instrumentation

A Social Skills Protocol for Self-Evaluation (SSP-S) and three forms of a Social Competence Protocol for peers (SCP-P), teachers (SCP-T), and self-report (SCP-S) were used as the instrumentation in the current study.

The SSP-S was a 30-item measure of social skills based on the Matson Evaluation of Social Skills for Youngsters (Matson, Rotatori, & Helsel, 1983) as well as on items proposed by McGinnis, Goldstein, Sprafkin, & Gershaw (1984). All items on these scales were translated into Portuguese by the first author and submitted to a native English speaker for final adjustment. Prior to application, this translation was examined in reference to a back translation of the MESSY conducted by Teodoro, Käppler, Rodrigues, Freitas, and Haase (2005) as part of a Brazilian validation study and was found to be equivalent.

The three forms of the Social Competence Protocol were created specifically for this study and reliability estimates were based on the participants in this investigation. The common items of the SCP forms consisted of a list of bipolar adjectives generally used in the literature to describe differences among children with and without learning problems (liked—disliked by peers; calm/tranquil—restless; cheerful/sad; asks many questions—does not ask questions; collaborative—non-collaborative; has good manners—has bad manners; talkative—quiet; compliant—noncompliant). Additionally for the SCP for peers, an additional item was added (likes peers–dislikes peers). For the SCP-T, two items were added (liked—disliked by teachers; inhibited—uninhibited). Finally, for the SCP-S form, three items were added (liked—disliked by teachers; smart—not

smart; beautiful—not beautiful). All items were evaluated on a three-point scale (positive, negative, or neutral).

The SSP-S was completed by students using a five-point Likert scale. Students rated individual items on difficulty (ranging from very easy to very difficult). Internal consistency estimates of this scale using coefficient alpha were 0.78.

Reliability estimates of the three forms of the SCP (based on the eight common items and for the complete scale) ranged from 0.47 to 0.79 (Mdn = 0.63) based on the total sample. Overall, the student self-report form produced the lowest internal consistency reliability estimates.

Procedure

According to Brazilian requirements, the project was approved by the ethics committee for research with human subjects at the Federal University of Sao Carlos. All ethical concerns were attended to and all student participants were authorized by parents or tutors to take part in this research.

Data collection started with the SCP-P in the classroom. Classmates evaluated LP and NLP students in a structured activity announced by research assistants as a 'game' in the classroom. The research assistants began by asking students if they were able to keep secrets. To exemplify the 'game', the research assistant indicated a particular child and asks the child's peers: 'Is this a tall or short girl?' Is this boy good or not so good in math?' The children in the class were instructed that to participate in the game, they would have to mark their answers on a piece of paper and they could not say anything aloud.

Next, the research assistant gave each child a piece of paper (SCP-P) and explained how to complete it and simulated drawing one child to come in front of the classroom. One by one, the four selected NLP and LP were 'drawn' from the class list. It was not uncommon for other children to ask to be chosen as well and this was allowed, however only the data from the four chosen children were used in this investigation. As soon as the classmates evaluated a particular child, the research assistant praised the class for completing the task and gave a brief explanation about the individual differences among children and the importance of these differences in peer relationships. The nominal points of each scale were transformed into numbers in order to compute scores. For the SCP-P, the score of a given item was computed as the percentage of peers that classified the child as a *positive* point of the scale.

Teachers subsequently asked all teachers to complete their SCP-T scale for each of the four children selected in their classrooms. The SCP-S and SSP-S was administered separately with each LP and NLP student with the research assistant reading the items and recording the students' answers. At the end, the research assistant asked the child about the experience of participating in the 'game' and the reactions of their peers. This procedure confirmed that no undesirable effect of the game occurred with the evaluated children and some children reported an unexpected and momentary increase of social status among their peers.

Table 1. Variables in the equation

		B	SE	Wald	df.	Sig.	Odds Ratio	95% Confidence Intervals for EXP(B) Lower	Upper
Step 1	Peer rating of collaborativeness	.131	0.026	25.272	1	0.001	1.140	1.083	1.199
	Constant	−5.955	1.197	24.763	1	0.001	0.003		
Step 2	Self rating of compliance	−2.393	0.917	6.814	1	0.009	0.091	0.015	0.551
	Peer rating of collaborativeness	0.195	0.046	17.964	1	0.001	1.215	1.111	1.330
	Constant	−2.518	1.603	2.467	1	0.116	0.081		
Step 3	Self rating of compliance	−3.632	1.439	6.370	1	0.012	0.026	0.002	0.444
	Self rating of ease in joining a play group	−1.779	0.781	5.192	1	0.023	0.169	0.037	0.780
	Peer rating of collaborativeness	0.289	0.081	12.695	1	0.001	1.335	1.139	1.565
	Constant	1.040	2.540	0.168	1	0.682	2.828		
Step 4	Self rating of compliance	−5.491	2.256	5.926	1	0.015	0.004	0.000	0.343
	Self rating of ease in joining a play group	−2.284	0.983	5.404	1	0.020	0.102	0.015	0.699
	Teacher rating of collaborativeness	2.433	1.153	4.452	1	0.035	11.387	1.189	109.085
	Peer rating of collaborativeness	0.339	0.113	8.985	1	0.003	1.403	1.124	1.751
	Constant	1.327	2.592	0.262	1	0.609	3.771		

Table 2. Percentage of individuals correctly identified by model

		Predicted		
		Group		
				Percentage
Observed		LP	NP	Correct
Step 1	LP	47	3	94.0
	NLP	5	47	90.4
	Overall			92.2
Step 2	LP	47	3	94.0
	NLP	3	49	94.2
	Overall			94.1
Step 3	LP	48	2	96.0
	NLP	2	50	96.2
	Overall			96.1
Step 4	LP	49	1	98.0
	NLP	1	51	98.1
	Overall			98.0

Table 3. Variance accounted for by model

Step	−2 Log likelihood	Cox & Snell R^2	Nagelkerke R^2
1	45.843(a)	0.608	0.811
2	35.684(b)	0.645	0.860
3	27.720(c)	0.672	0.896
4	20.248(d)	0.695	0.927

Results

A forward stepwise likelihood-ratio logistic regression was calculated to identify predictors of teacher ratings of student learning problems from a series of four separate previously unpublished scales. Given the exploratory nature of this study, individual items ($n = 62$) from each of the scales were entered in a stepwise method rather than composite scores from each of the scales. The model created included one dependent or criterion variable of Learning Problem (LP) or No Learning Problem (NLP) groups and four independent or predictor variables (self-rating of compliance, self-rating of ease in joining a group, teacher rating of student

Table 4. Correlation matrix of predictor variables

	Group	Self rating of compliance	Self rating of ease in joining a play group	Teacher rating of collaborativeness	Peer rating of collaborativeness
Group	I				
Self rating of compliance	0.126	I			
Self rating of ease in joining a play group	0.050	−0.078	I		
Teacher rating of collaborativeness	0.633(**)	0.137	0.148	I	
Peer rating of collaborativeness	0.823(**)	0.273(**)	0.142	0.634(**)	I

**Correlation is significant at the 0.01 level (2-tailed).

Table 5. Homer-Lemeshow Test

Step	Chi-square	df	Sig.
I	17.530	8	0.025
2	31.106	8	0.000
3	23.983	8	0.002
4	8.966	8	0.345

collaboration, and peer rating of student collaboration) that were significant (see Table 1). After these variables were entered, none of the remaining variables reached significance without over fitting the model. Of the 50 students rated by their teacher as having a learning problem, 49 of them (98%) were correctly identified (Table 2). Of the 52 students who were rated by their teachers as not having a learning problem, 51 (98.1%) were correctly identified using the four-step model (see Table 2). Together these four variables accounted for 92.7% (Nagelkerke R^2) of the variance in LP/NLP group membership (Table 3).

To examine the multicollinearity of these identified variables, a correlation matrix was created (see Table 4). Group membership was significantly correlated with teacher ratings of student collaboration (r (114) = 0.633, $p < 0.005$) and with peer ratings of student collaboration (r (112) = 0.823, $p < 0.005$). In addition student self-rating of compliance was significantly correlated with peer ratings of collaboration (r (104) = 0.273, $p < 0.005$), and teacher ratings of collaboration were significantly correlated with peer ratings of collaboration (r (112) = 0.634, $p < 0.005$. Most of these inter-correlations were relatively low and passed the

tolerance test calculated from the reciprocal of the Variance Inflation Factor or VIF (Cohen, Cohen, West, & Aiken, 2003).

A Homer-Lemeshow test was calculated to examine the goodness of fit of the logistic model against actual outcomes. The Homer-Lemeshow test yielded a $\chi^2(8)$ of 8.966 and was not significant ($p > 0.05$) suggesting the data provided adequate overall fit of the model (see Table 5).

Discussion

The results of the current investigation indicate that ratings of socio-behavioral attributes, as measured by peer, self, and teacher-report are strong predictors of group membership into LP and NLP groups. Using a four-variable logistic regression model, peer ratings of collaboration, self-rating of compliance, self-rating of ease in joining a group, and teacher ratings of collaboration accurately classified 98% of children in the LP group and 98.1% of children in the NLP group. The best overall predictor of group membership into LP and NLP groups was *peer ratings of collaboration* which accurately predicted 94% of children into the LP group and 90% of children in the NLP group.

These data speak to the importance of social skills as 'academic enablers' for children in classroom settings (DiPerna & Elliott, 2002; Malecki & Elliott, 2002). The notion of *academic enablers* evolved from the work of researchers who explored the relationship between students' nonacademic behaviors (e.g. social skills and motivation) and their academic achievement (Gresham & Elliott, 1990; Malecki, 1998; Wentzel, 1993; Wigfield & Karpathian, 1991).

While researchers in the US have widely documented meaningful and predictive relationships between children's pro-social behaviors and long-term academic achievement, the current article has found similar results with Brazilian students.

As mentioned earlier, the best predictor of membership into LP and NLP groups was peer ratings of collaboration. Also, the fourth best predictor of LP and NLP group membership was a teacher rating of collaboration. This finding is consistent with previous literature investigating the correspondence between peer relationships and collaborative learning (Wentzel & Watkins, 2002). This literature suggests that peer relationships provide students with a sense of social relatedness and belongingness which can motivate engagement in academic activities. It is thought that peer collaboration assists students in the development of problem-solving skills and strategies that can facilitate academic performance in the classroom (Ladd, 1990; Wentzel, 1993; Wentzel & Caldwell, 1997). Given the endemic problems related to school dropout within Brazil (EFA Global Monitoring Report, 2010; Guzzo et al., 2007; Wechsler & Oakland, 1990), the current project would suggest that increasing a feeling of social belongingness could increase academic achievement and thus reduce school dropout. Additionally given the rampant numbers associated school retention, students may not feel particularly related to other students in their classroom, a phenomenon that may lead to low levels of peer collaboration and lead to low academic achievement.

One potential limitation of the current study is that assignment of children into LP and NLP groups was based on teacher judgment rather than standardized tests of academic performance. There is a pervasive yet inaccurate belief among many school professionals that teachers are poor judges of their students' academic and social behavior attributes (Gerber & Semmel, 1984; Gresham, Reschly, & Carey, 1987; Hoge, 1983). Teacher judgments are often viewed as fallible indicators of the presence of learning difficulties. This logic probably stems from the conceptualization of teacher judgments as dubious predictors that are validated or invalidated by psychometric test criteria.

Comparing the teachers' rating with a direct psychometric measure of children's academic and behavioral performance, Feitosa, Del Prette, and Loureiro (2007) found that the two methods were highly correlated. An investigation by Gresham, McMillan, and Bocian (1997) also demonstrated the accuracy of teacher judgments in differentiating various groups of students who were at-risk for learning difficulties. Specifically, groups were contrasted based on their status as being learning disabled, low intelligence (Low IQ), or low achievement (LA) compared to a group of normally achieving controls. The results indicated that teachers distinguished LD, Low IQ, and LA from Controls with an average 95% accuracy (Range = 91% to 100%) resulting in a 5% false negative rate (Gresham et al., 1997). Conversely, teachers could, on average, distinguish Controls from the three at-risk groups with approximately 89% accuracy yielding an 11% false positive rate. When combining all at-risk groups and contrasting them with the Controls, 97% of the at-risk groups and 90% of the Controls were correctly classified with 3% and 10% false negative and false positive rates, respectively. These results support the accuracy of teacher judgments in classifying various groups of students who are at-risk for achievement difficulties.

This high level of correlation can be seen as an advantage for educators outside of the US where a majority of rating scales are derived.

The results of this study have some practical implications, at least in the context of teacher-student relationships. The evaluation of teachers and peers concerning collaboration suggests interdependence between social skills and academic learning in a way that seems highly favorable to NLP but highly detrimental to LP children. Two approaches might be taken to assist teachers with children with achievement difficulties. One approach would be to establish socio-emotional programs in the school curricula, which directly facilitate collaboration, compliance, and socialization skills (Del Prette & Del Prette, 2003; Elliott, & Gresham, 2007, 2008; Maag, 2006; McGinnis et al., 1984).

In the short term, some such programs have been carried in Brazil, adopting experiential activities (Del Prette & Del Prette, 2009; Molina & Del Prette, 2006) and multimedia resources (Lopes, 2009), producing positive impact on academic achievement. The results of these studies suggest more emphasis should be given to these critical social skills to turn the LP children status from non collaborative to collaborative and eventually academically successful.

The second approach, derived from the first one, would be to improve the teachers' repertoire, chiefly their social educative skills (Del Prette & Del Prette, 2008a, 2008b, 2009) in order to lead and to mediate educative interactions with the students, aimed to concomitant social and academic goals.

These two approaches, in isolation, will not solve the critical conditions of a large contingent of Brazilian students with low achievement, especially those from low income backgrounds. Additionally, neither approach will reduce the need of larger structural and political changes in the educational system. We suggest that, considering the pedagogical and psychological factors related to low achievement, the improvement of students' social skills repertoire and teachers' social educative skills, as advocated elsewhere (eg. Del Prette et al., 2005, Del Prette & Del Prette, 2008a) could contribute to this process.

References

Caprara, G. V., Barbaranelli, C., Pastorelli, C., Bandura, A., & Zimbardo, P. G. (2000). Prosocial foundations of children's academic achievement. *Psychological Science*, *11*, 302–306.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple correlation/regression analysis for the behavioral sciences*. Mahwah, NJ: Lawrence Erlbaum Associates.

Crews, S., Bender, H., Vanderwood, M., Cook, C., Gresham, F., & Kern, L. (2007). Risk and protective factors of emotional and/or behavioral disorders in children and adolescents: A mega-analytic synthesis. *Behavioral Disorders*, *32*(2), 64–77.

Del Prette, A., & Del Prette, Z. A. P. (1998). Desenvolvimento interpessoal e educação escolar: Oenfoque das habilidades sociais [Socio-emotional development and school education: The Social Skills approach]. *Temas em Psicologia*, *6*, 205–215.

Del Prette, A., & Del Prette, Z. A. P. (2001). *Psicologia das relações interpessoais: Vivências para o trabalho em grupo*, 1st edn. [*Psychology of interpersonal relationships: Experiential strategies for working in group settings*]. Petrópolis, Rio de Jinareo: Vozes.

Del Prette, Z. A. P., & Del Prette, A. (2003). Habilidades sociais e dificuldades de aprendizagem: Teoria e pesquisa sob um enfoque multimodal [Social skills and learning difficulties: Theory and research from a multimodal perspective]. In A. Del Prette, & A. Del Prette (Eds.), *Habilidades sociais, desenvolvimento e aprendizagem: Questões conceituais, avaliação e intervenção* (pp. 167–206). Campinas: Alínea.

Del Prette, Z. A. P., & Del Prette, A. (2008a). Habilidades sociais e educação: Pesquisa e atuação em psicologia escolar educacional [Social skills and education: Research and practice in school educational psychology]. In Z. A. P. Del Prette, & A. Del Prette (Eds.), *Psicologia escolar, saúde e qualidade de vida: Explorando fronteiras,* (3rd edn, pp. 113–141) [*School Psychology, health and life quality: Exploring bounderies*]. Campinas: Alínea.

Del Prette, Z. A. P., & Del Prette, A. (2008b). Um sistema de categorias de habilidades sociais educativas [A classes system of educative social skills]. *Paidéia; Cadernos de Psicologia e Educação*, *18*(41), 517–530.

Del Prette, Z. A. P., & Del Prette, A. (2009). *Psicologia das habilidades sociais na infância: Teoria e Prática,* 4th edn. [*Psychology of social skills in childhood: Theory and practice*]. Petrópolis, Rio de Janeiro: Vozes.

Del Prette, Z. A. P., Paiva, M. L. M., & Del Prette, A. (2005). Contribuições do referencial das habilidades sociais para uma abordagem sistêmica na compreensão do processo de ensino-aprendizagem [Contributions of the social skills approach to a systemic understanding of the teaching-learning approach]. *Interações*, *X*(20), 57–72.

DiPerna, J. C., & Elliott, S. N. (2002). Promoting academic enablers to improve student achievement: An Introduction to the Miniseries. *School Psychology Review*, *31*, 293–297.

DiPerna, J. C., Volpe, R. J., & Elliott, S. N. (2002). A model of academic enablers and elementary reading/language arts achievement. *School Psychology Review*, *31*, 298–312.

DiPerna, J. C., & Elliott, S. N. (2000). *ACES: The academic competence evaluation scales (K-12)*. San Antonio, TX: The Psychological Corporation.

EFA Global Monitoring Report (2010). *Reaching the marginalized*. Retrieved from United Nations Educational, Scientific and Cultural Organization's website: http://unesdoc.unesco.org/images/0018/001866/186606E.pdf.

Elliott, S. N., & Gresham, F. M. (2007). *Social skills improvement system: Classroom intervention guide*. Bloomington, MN: Pearson Assessments.

Elliott, S. N., & Gresham, F. M. (2008). *Social skills improvement system—intervention guide*. Minneapolis, MN: Pearson Assessments.

Feitosa, F. B. (2007). *Habilidades sociais e desempenho acadêmico: Processos cognitivos como moderadores e mediadores* [Social skills and academic achievement: Cognitive processes as moderators and mediators] (Tese de Doutorado. Programa de Pós Graduação Em Educação Especial). Brasil: Universidade Federal de São Carlos.

Feitosa, F. B., Del Prette, Z. A. P., & Loureiro, S. R. (2007). Acuracidade do professor na identificação de alunos com dificuldade de aprendizagem [Teachers' accuracy in identifying students with learning problems]. *Temas em Psicologia*, *15*(2), 237–247.

Gerber, M., & Semmel, M. I. (1984). Teacher as imperfect test: Reconceptualizing the referral process. *Educational Psychologist*, *19*, 137–148.

Gresham, F. M. (1997). Social skills. In G. Bear, K. Minke, & A. Thomas (Eds.), *Children's needs: Psychological perspectives,* (2nd edn, pp. 515–526). Bethesda, MD: National Association of School Psychologists.

Gresham, F. M. (1998). Social skills training with children: Social learning and applied behavioral analytic approaches. In T. S. Watson, & F. M. Gresham (Eds.), *Handbook of child behavior therapy* (pp. 475–497). New York, NY: Plenum Press.

Gresham, F. M. (2009). Análise do comportamento aplicada às habilidades sociais. In A. Del Prette, & Z. A. P. Del Prette (Eds.), *Psicologia das habilidades sociais: Diversidade teórica e suas implicações* (pp. 17–66). Petrópolis: Vozes.

Gresham, F. M., & Elliott, S. N. (1990). *Social skills rating system*. Circle Pines, MN: American Guidance Service.

Gresham, F. M., MacMillan, D. L., & Bocian, K. (1997). Teachers as 'tests': Differential validity of teacher judgments in identifying students at-risk for learning difficulties. *School Psychology Review*, *26*, 47–60.

Gresham, F. M., Reschly, D. J., & Carey, M. P. (1987). Teachers as 'tests': Classification accuracy and concurrent validation in the identification of learning disabled children. *School Psychology Review*, *16*, 543–553.

Gomes-Neto, J., & Hanushek, E. (1994). Causes and consequences of grade repetition: Evidence from Brazil. *Economic Development & Cultural Change*, *43*(1), 117.

Guzzo, R., Mitjáns Martínez, A., & Campos, H. R. (2007). School Psychology in Brazil. In S. R. Jimerson, T. D. Oakland, & P. T. Farrell (Eds.), *The handbook of international school psychology* (pp. 29–37). Thousand Oaks, CA: Sage.

Hoge, R. D. (1983). Psychometric properties of teacher-judgment measures of pupil aptitudes, classroom behaviors, and achievement levels. *The Journal of Special Education*, *17*, 401–429.

Kupersmidt, J., Coie, J., & Dodge, K. (1990). The role of peer relationships in the development of disorder. In S. Asher, & J. Coie (Eds.), *Peer rejection in childhood* (pp. 274–308). New York, NY: Cambridge University Press.

Ladd, G. W. (1990). Having friends, keeping friends, making friends, and being liked by peers in the classroom: predictors of children's early school adjustment. *Child Development*, *61*, 1081–1100.

Lopes, D. C. (2009). *Recursos multimídia na promoção de habilidades sociais com crianças com dificuldades de aprendizagem* (Programa de Pós Graduação Em Educação Especial). Brasil: Universidade Federal de São Carlos.

Maag, J. (2005). Social skills training for students with emotional and behavioral disorders and learning disabilities: Problems, conclusions, and suggestions. *Exceptionality*, *13*, 155–172.

Maag, J. (2006). Social skills training for students with emotional and behavioral disorders: A review of reviews. *Behavioral Disorders*, *32*, 5–17.

Malecki, C. K. (1998). *The influence of elementary students' social behaviors on academic achievement* (Unpublished doctoral dissertation). Wisconsin: University of Wisconsin-Madison.

Malecki, C. K., & Elliott, S. N. (2002). Children's social behaviors as predictors of academic achievement: A longitudinal analysis. *School Psychology Quarterly*, *17*, 1–23.

Matson, J. L., Rotatori, A. F., & Helsel, W. J. (1983). Development of a rating scale to measure social skills in children: The Matson Evaluation of Social Skills with Youngsters (MESSY). *Behaviour Research and Therapy*, *21*, 335–340.

McGinnis, E., Goldstein, A. P., Sprafkin, R. P., & Gershaw, N. J. (1984). *Skillstreaming the elementary school child*. Champaign, IL: Research Press.

Meisels, S., & Liaw, F. (1993). Failure in grade: Do retained students catch up? *Journal of Educational Research*, *87*(2), 69–77.

Molina, R. C. M. (2007). *Capacitação de professores para a promoção do desempenho social e acadêmico de alunos com dificuldades de aprendizagem (Tese de Doutorado. Programa de Pós Graduação Em Educação Especial)*. Brasil: Universidade Federal de São Carlos.

Molina, R. C. M., & Del Prette, Z. A. P. (2006). Funcionalidade da relação entre habilidades sociais e dificuldades de aprendizagem. *Psico-USF*, *11*(1), 53–63.

Newcomb, A., Bukowski, W., & Pattee, L. (1993). Children's peer relations: A meta-analytic review of popular, rejected, neglected, controversial, and average sociometric status. *Psychological Bulletin*, *113*, 306–347.

Oakland, T., & Wechsler, S. (1990). School psychology in Brazil: An examination of its research infrastructure. *School Psychology International*, *11*(4), 287–293.

Oakland, T., Wechsler, S., Bensusan, E., & Stafford, M. (1994). The construct and measurement of achievement among Brazilian children: An exploratory study. *School Psychology International*, *15*(2), 133–143.

Parker, J., & Asher, S. (1987). Peer relations and later personal adjustment: Are low-accepted children at-risk? *Psychological Bulletin*, *102*, 357–389.

Teodoro, M. L. M., Käppler, K. C., Rodrigues, J. L., de Freitas, P. M., & Haase, V. G. (2005). The Matson Evaluation of Social Skills with Youngsters (MESSY) and its adaptation for Brazilian children and adolescents. *Interamerican Journal of Psychology*, *39*(2), 239–246.

Walker, H. M., Ramsay, E., & Gresham, F. M. (2004). *Antisocial behavior at school: Evidence-based practices,* 2nd edn. Belmont, CA: Wadsworth/Thomson Learning.

Walker, H. M., & Severson, H. H. (2002). Developmental prevention of at-risk outcomes for vulnerable antisocial children and youth. In K. L. Lane, F. M. Gresham, & T. E. O'Shaughnessy (Eds.), *Children with or at risk for emotional and behavioral disorders* (pp. 177–194). Boston, MA: Allyn & Bacon.

Wechsler, S., & Gomes, D. C. (1986). School psychology in Brazil. *Journal of School Psychology*, *24*(3), 221–227.

Wechsler, S. M., Nunes, C. S., Schelini, P. W., Pasian, S. R., Homsi, S. V., Moretti, L., & Anache, A. A. (2010). Brazilian adaptation of the Woodcock-Johnson III cognitive tests. *School Psychology International*, *31*, 409–421.

Wechsler, S., & Oakland, T. (1990). Preventive strategies for promoting the education of low-income Brazilian children: Implications for school psychologists from other third world nations. *School Psychology International*, *11*, 83–90.

Wentzel, K. R. (1993). Does being good make the grade? Relations between academic and social competence in early adolescence. *Journal of Educational Psychology*, *85*, 357–364.

Wentzel, K. R., & Caldwell, K. (1997). Friendships, peer acceptance, and group membership: Relations to academic achievement in middle school. *Child Development*, *68*, 1198–1209.

Wentzel, K. R., & Watkins, D. (2002). Peer relationships and collaborative learning as contexts for academic enablers. *School Psychology Review*, *31*, 366–377.

Wigfield, A., & Karpathian, M. (1991). Who am I and what can I do? Children's self-concepts and motivation in achievement situations. *Educational Psychologist*, *26*, 233–261.

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