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A Contextual Approach to Social Skills Assessment in the Peer Group: Who Is the Best Judge?

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Abstract

Using a contextual approach to social skills assessment in the peer group, this study examined the criterion-related validity of contextually relevant social skills and the incremental validity of peers and teachers as judges of children's social skills. Study participants included 342 (180 male and 162 female) students and their classroom teachers ($N = 22$) from rural communities. As expected, contextually relevant social skills were significantly related to a variety of social status indicators (i.e., likability, peer- and teacher-assessed popularity, reciprocated friendships, clique centrality) and positive school functioning (i.e., school liking and academic competence). Peer-assessed social skills, not teacher-assessed social skills, demonstrated consistent incremental validity in predicting various indicators of social status outcomes; peer- and teacher-assessed social skills alike showed incremental validity in predicting positive school functioning. The relation between contextually relevant social skills and study outcomes did not vary by child gender. Findings are discussed in terms of the significance of peers in the assessment of children's social skills in the peer group as well as the usefulness of a contextual approach to social skills assessment.

Keywords: a contextual approach, social skills assessment, incremental validity

In the past decades, theoretical conceptualizations of children's social skills and competence have been more divergent than convergent. In an effort to integrate theories of social competence, Dirks, Treat, and Weersing (2007) identified four factors involved in defining social competence: child, behavior, situation, and judge. Among the four factors, greatest emphasis has been placed on child and behavior in traditional definitions and assessment of social competence and social skills. That is, some research views children's social skillfulness as a stable and internal disposition that a child may or may not possess, whereas other research views some behaviors as fundamentally adept or inept (see Gresham, 1986; McFall, 1982).

In contrast, less emphasis has been placed on the situation or context in which the behavior takes place or the relevance of the perspectives of those who judge the behavior (Dirks et al., 2007; Dirks, Treat, & Weersing, 2010). The situation and judge are important to consider because individuals' social goals, cognitions, and behaviors are largely shaped by the interpersonal relationships they form in a specific context (Reis, Collins, & Berscheid, 2000; Salmivalli & Peets, 2009). Relatedly, social demands vary across settings and situations; thus, to be socially successful, a person needs to be able to understand the demands in the context accurately and behave accordingly (Sheridan, Hungelmann, & Maughan, 1999). Thus, determining an individual's social skillfulness or deficits might be neither conclusive nor maximally informative without understanding the context where the behaviors occur and how they are perceived by the people in that context.

A contextual approach to the assessment of social skills (Sheridan et al., 1999; Warnes, Sheridan, Geske, & Warnes, 2005) appears useful to fill this gap. Conceptually, a contextual approach to the assessment of social skills recognizes that the demands, goals, and rules of social behaviors differ across situations and participants, and, thus, a child's social skills need to be assessed in a context-specific manner. Further, contextually relevant social skills should not only be relevant and meaningful to others in that context but also predict socially important outcomes for children; that is, they should be socially valid (Gresham, 1986). In this study, we focused on contextually relevant social skills in the peer group that have been deemed meaningful and important by children, parents, and teachers (Warnes et al., 2005). Our first goal was to demonstrate the criterion-related validity of contextually relevant social skills in the peer group by examining their predictability of children's social status in the peer group and positive school functioning. The second goal was to examine the incremental validity of peers and teachers as judges of children's social skills in the peer group (i.e., how peers' and teachers' social skills assessment adds to the prediction of outcomes over and above what is predicted by the other source).

A Contextual Approach to Social Skills Assessment in the Peer Group

Among the contexts within which children are a part, the peer group becomes an increasingly important social context as children move through elementary school (Rubin, Bukowski, & Parker, 2006). To be successful in the peer group, children need to understand and behave consistently with the implicit and explicit social demands in that context. When their behaviors are consistent with the peer group demands, such as prosocial behaviors, children are likely to be well accepted by and popular among peers, whereas they are likely to be rejected if their behaviors are contradictory to the peer groups' social rules and expectations (Hymel, Vaillancourt, McDougall, & Renshaw, 2002). Indeed, children who display poor social skills tend to be actively rejected, which leads to further long-term poor outcomes (Burt, Obradović, Long, & Masten, 2008; Ladd & Troop-Gordon, 2003).

Social skillfulness and competence in the peer group appears also to have significant implications for school outcomes. Intuitively, learning in school takes place in a highly social environment in which peers and teachers exchange constant social interactions (Elliott, Malecki, & Demaray, 2001). Children who are engaged in aversive social interactions such as aggression have poor academic outcomes (Perdue, Manzeske, & Estell, 2009; Stipek & Miles, 2008). In contrast, children who display social competence, broadly defined, are more engaged in school cognitively, affectively, and behaviorally (Perdue et al., 2009) and have higher achievement (Jennings & DiPrete, 2010; Wentzel, 1991). It is likely that social skills or lack thereof might facilitate or inhibit the processes of learning (Elliott et al., 2001).

Empirical investigations of a contextual approach to social skills assessment in the peer group have been sparse. One exception is research conducted by Warnes et al. (2005) in which the researchers asked children, parents, and teachers what social skills they deemed important in the peer group. Findings suggested that, despite some intriguing differences among reporters, they also identified many overlapping behaviors. However, the manner in which those contextually relevant social skills are related to children's adjustment has not been examined.

Peers and Teachers as Judges of Children's Social Skills

Peers and teachers have many opportunities to "judge" or evaluate children's social skills in the peer group. Given that both peers and teachers share some common environments in which they observe a target child's behavior (e.g., classroom, lunchroom), they might show some agreement in their perceptions of the child's behaviors. In fact, research has shown moderate consensus between peers and teachers in their evaluations of children's social status (Landau, Milich, & Whitten, 1984; Wu, Hart, Draper, & Olsen, 2001) and academic skills (Gest, Domitrovich, & Welsh, 2005). However, different perceptions between teachers and peers might also be important to consider given their distinct social experiences with children. Relative to peers, teachers interact with students in a limited context (e.g., instructional settings) and are

often indirectly involved in children's peer interactions. In contrast, peers have more direct contacts and interactions with other children across multiple situations and settings; thus, they likely have opportunities to observe other children that are not necessarily available to teachers. Indeed, there is a long tradition of involving peers in the assessment of children's personal and interpersonal functioning. Specifically, sociometric assessment, a method of measuring interpersonal dynamics in a social group, was developed as early as in the 1930s (Moreno, 1934). A variant of sociometric assessment in which children's sociometric status is determined based on "like-most" and "like-least" nominations (Coie, Dodge, & Coppotelli, 1982) has also been widely used in the past decades. Peers also serve as valuable informants in the assessment of children's positive and negative social characteristics (Masten, Morison, & Pellegrini, 1985).

Given the meaningful differences in the experiences and perceptions between peers and teachers, it is important to understand the incremental validity of each as evaluators on children's social skills. Incremental validity broadly concerns the added prediction of different measures, methods, constructs, and informants (Johnston & Murray, 2003). In terms of the predictability of different informants of social behaviors, findings have been mixed. For example, a study that involved preschool children showed that teacher-rated, as opposed to peer-nominated, popularity was more strongly related to children's social competence (Connolly & Doyle, 1981). In contrast, another study that involved kindergarten children showed that peer-nominated popularity and rejection status were more strongly related to children's solitary play and negative interactions than did teacher-rated popularity (Landau et al., 1984). In regard to adolescents' disruptive behaviors, parent and teacher reports were more strongly related to later behavioral outcomes than were self-reports (Loeber, Green, Lahey, & Stouthamer-Loeber, 1991). These findings together suggest that teachers and peers might provide neither redundant nor incorrect information; rather, their incremental validity might differ, depending on many factors, including the type of behaviors assessed, outcome criteria, and the child's developmental stage.

This Study

This study builds on a previous study that identified contextually relevant social behaviors in the peer group (Warnes et al., 2005). First, we demonstrated the criterion-related validity of contextually relevant social skills by examining their predictability of children's social status among peers and their positive school functioning. Traditionally, peer acceptance or sociometric popularity has been considered among the major criteria to define and assess social skills (Gresham, 1986). However, research has shown other related but distinct aspects of social success, including perceived popularity, dyadic friendships, and clique centrality (Gest, Graham-Bermann, & Hartup, 2001; Parkhurst & Hopmeyer, 1998). In particular, a number of studies have shown that perceived popularity, albeit related, is meaningfully distinct from sociometric popularity (see Mayeux, Houser, & Dyches, 2011). Thus, in addition to peer acceptance, we examined whether socially skilled children also are perceived as being popular, have more reciprocated friendships, and enjoy high centrality in a smaller unit of an affiliation-based peer group (i.e., clique). In regard to school functioning, we examined the predictability of social skills for academic competence and positive attitude toward school.

Second, we examined the incremental validity of peer- and teacher-assessment of children's social skills in predicting the study outcomes. Whereas teachers, parents, and the self have often served as informants of social skills (Gresham & Elliott, 1990; Matson, Rotatori, & Helsel, 1983; Merrell, 1993), peers have been relatively underused in the social skills assessment, per se. As discussed previously, given the frequency, proximity, and scope of interactions, peers might be a particularly critical source of information in understanding the association between children's social skills and their status in the peer group. We speculated that, although both teacher- and peer-assessed social skills predict the outcomes of interest, the incremental validity of peer assessment of social skills might be particularly pronounced for social status. Findings of incremental validity are believed to shed light on a more sensitive source of information in children's social skills assessment (Hunsley & Meyer, 2003; Johnston & Murray, 2003).

Finally, as a secondary goal, we explored gender as a moderator of the effect of social skills on social status and school functioning outcomes. Research suggests that, as compared with boys, girls display higher levels of social skills (Gresham & Elliott, 1990; Zakriski, Wright, & Underwood, 2005). However, it is not clear whether the association between social skills and child outcomes is moderated by gender. That is, are social skills more important for girls than for boys, or vice versa, to enjoy high social status and positive school functioning? Results would add to the literature on gender effects on children's social behaviors.

Method

Participants

Participants were 342 (180 male and 162 female) students and their classroom teachers ($N = 22$) from three elementary schools in Midwestern rural communities. Child participants were students in Grades 3 ($n = 112$), 4 ($n = 142$), and 5 ($n = 88$), with a mean age of 9.7 ($SD = .9$) years. According to school records, 94% of students were White. For the 22 classroom teachers, all were White and 19 were female. Their average years of teaching was 17.82 ($SD = 10.66$).

Procedures

Consent forms with a brief written study description were sent home for parents and were also distributed to teachers. Active parental consent was required for a child to participate in the study. The participating schools were in rural communities, and the principals noted that students knew one another in and out of school through the elementary years and there were many opportunities for them to interact across classrooms. Thus, we decided to use grade-based as opposed to classroom-based peer nominations. Accordingly, the consent rate was determined across classrooms in a grade level. There were two to five classrooms per grade, and at least 75% of students in a grade in each school had to give consent for the grade to participate in this study (Hamilton, Fuchs, Fuchs, & Roberts, 2000). Among the 11 units of third through fifth grades initially recruited, six units met the required consent rate, which ranged from 77% to 91%.

Child assent was obtained and students were told they were allowed to decline participation in the study at any time. Confidentiality was discussed before the survey administration, and participants were provided with an index card to cover their answers. The questionnaires were group administered for approximately an hour with one research team member reading aloud the instructions and items and the other member circulating in the classroom to provide individual assistance. The grade level roster for peer nominations included only the names of students whose parents gave consent, and children were instructed to nominate only those students who appeared on the roster. Each participating student had a number linked to his or her name, and students were asked to write the number identifier on any nomination measure. Students were allowed time to review the rosters prior to completing the nomination measures. Students whose parents dissented or failed to return the form were asked to read or draw quietly at their desks. Teachers completed the rating forms at their convenience, and the forms were collected within a week after distribution. A monetary honorarium was provided for teachers, and stationary incentives were given to all students in a participating grade.

Study Constructs and Measures

Three broad constructs were of interest in this study: contextually relevant social skills in the peer group, social status, and positive school functioning. Study constructs, measures, and reporters are summarized in Table 1.

Contextually relevant social skills in the peer group. A total of 25 items (see the Appendix) were adapted from a previous qualitative study of a contextual approach to the assessment of children's social skills (Warnes et al., 2005). In turn, children's social skills were assessed by peer nominations and teacher ratings. Children nominated up to three peers who fit each of the social skills descriptions (e.g., "This person shows other kids that he or she cares when they are sad," "This person keeps other kids' secrets"). For each child, the number of nominations he or she received was summed and standardized ($M = 0$, $SD = 1$) by grade level. Standardization at the grade level controls for the different number of students who give and receive nominations across the grade levels. The number

Table 1. *Study Constructs, Measures, and Sources of Information*

Construct	Measure	Reporter
Contextually relevant social skills	25-item social skills adapted from Warnes et al. (2005)	Peer nomination Teacher rating
Social status	Peer-assessed *likeability*: "Who do you like to play with the most?"	Peer nomination
	Peer-assessed *perceived popularity*: "Who are most popular?"	
	Reciprocated friendships: "Who are your closest friends?"	
	Clique centrality: "Who play, work, or hang out together a lot?" (Cairns et al., 1985)	
	Teacher-assessed *popularity*: The Interpersonal Competence Scale–Teacher (ICS-T; Cairns et al., 1995): Popularity subscale	Teacher rating
Positive school functioning	*School liking*: The School Sentiment Inventory (Ladd & Price, 1987)	Self-report
	Academic competence: ICS-T (Cairns et al., 1995): Academics subscale	Teacher rating

of nominations was not standardized by gender because we were interested in testing gender effects, and standardization by gender disallows it: The number of nominations standardized by grade level and gender was highly correlated with that standardized by grade level only (rs = .90s). A child's level of social skills was determined based on the average of the standardized scores across the 25 items. The internal consistency of the peer-assessed social skills was .96.

Teachers rated participating children's social skills based on the same set of 25 questions used for peer nominations above. Teachers rated the degree to which each item describes participating children on a 4-point scale, ranging from 1 (*not at all*) to 4 (*a lot*). The internal consistency of the teacher-rated social skills was .96.

Social status. Five social status indicators were of interest in this study: *likability*, *peer-assessed perceived popularity*, *reciprocated friendships*, *clique centrality*, and *teacher-assessed popularity*. For likability and peer-assessed perceived popularity, children nominated up to three peers with whom they "liked to play with the most" and whom they perceived as "most popular" in their grade (Parkhurst & Hopmeyer, 1998), respectively. A child's likability and perceived popularity were determined based on the total number of nominations he or she received, which were standardized by grade level (M = 0, SD = 1). Likability and

perceived popularity were moderately correlated in the current sample (r = .56, p < .01).

To assess reciprocated friendships, children nominated their three closest friends in their grade. Children's reciprocated friendship was present when Child A nominated Child B as his or her close friend and Child B also nominated Child A as his or her close friend. For each child, the number of reciprocated nominations was counted, and the number of reciprocated friendships was standardized by grade level (M = 0, SD = 1). Overall, 75% of children had at least one reciprocated friend.

Finally, children were asked to report groups of children "who hang out together and just do a lot together" (Cairns, Perrin, & Cairns, 1985). Children's reports of peer affiliations were aggregated to identify non-overlapping cliques, following a procedure delineated in previous studies (Estell, Farmer, Pearl, Van Acker, & Rodkin, 2008; Kwon, Lease, & Hoffman, 2012). As the focus of this study, a child's within clique centrality, or visibility within the clique, was determined in two steps (Estell et al., 2008). First, the overall clique centrality index was determined based on the average number of nominations of two children who received most nominations to belong to a given clique. Next, for each child, the number of nominations he or she received to belong to the clique was compared against his or her overall clique centrality index; a child was classified as a central member in the clique if his or her number

of nominations was greater than or equal to .7 of the overall clique centrality index. A child was classified as a noncentral member if his or her number was less than .7 of the overall clique centrality index. In obtaining clique centrality, children were not included if they had multiple clique memberships (*n* = 31) or if they did not belong to any clique (*n* = 10). Among those who had a unique clique membership, 65% were identified to be central members.

Teacher-assessed *popularity* was measured by the Popularity subscale in the Interpersonal Competence Scale–Teacher report (ICS-T, Cairns, Leung, Gest, & Cairns, 1995). The Popularity subscale consists of three items ("popular with boys," "popular with girls," "lots of friends"), and teachers rated children's characteristics on a 7-point scale, ranging from 1 (*never*) to 7 (*always*). Internal consistency of the Popularity subscale was .88.

Positive school functioning. Children's school liking was measured by a modified version of the School Sentiment Inventory (Ladd & Price, 1987). It consisted of 16 items that tapped into children's feelings of enjoyment, loneliness, and dislike toward school (e.g., "Do you like being in school?" "Is school a lonely place for you?" "Do you hate school?"). Children rated their feelings on a 4-point scale, ranging from 1 (*almost never*) to 4 (*a lot*), and negatively worded items were reverse coded to obtain a total score. The internal consistency of the scale was .92.

Children's academic competence was assessed by the Academics subscale in the ICS-T (Cairns et al., 1995). Teachers rated children's basic academic skills (i.e., "good at math," "good at spelling") on a 7-point scale, ranging from 1 (*never*) to 7 (*always*). Internal consistency of the two-item Academics subscale was .84.

Results

Descriptive Analyses of Peer- and Teacher-Assessed Social Skills

Means and standard deviations of and correlations among study variables are presented in Table 2. Girls scored higher than did boys on both teacher-assessed social skills, $t(338) = -2.89$, $p < .01$, and peer-assessed social skills, $t(340) = -4.24$, $p < .01$. The means and standard deviations of teacher-assessed social skills were $M = 2.97$ ($SD = 0.59$) for boys and $M = 3.15$ ($SD = 0.58$) for girls. Those of peer-assessed social skills (*z* scores) were $M = -0.15$ ($SD = 0.67$) and $M = 0.17$ ($SD = 0.71$) for boys and girls, respectively. Teacher- and peer-assessed social skills were moderately correlated with each other, $r = .51$, $p < .01$.

Predictability for Social Status and Positive School Functioning

We examined the degree to which contextually relevant social skills predict children's social status and positive school functioning. As presented

Table 2. Descriptive Statistics of Study Variables

Variable	1	2	3	4	5	6	7	8	9
1. Social skills: Teacher	—								
2. Social skills: Peer	.51**	—							
3. Likeability	.33**	.63**	—						
4. Popularity: Peer	.23**	.54**	.59**	—					
5. Popularity: Teacher	.67**	.51**	.42**	.45**	—				
6. Reciprocated friends	.32**	.46**	.59**	.29**	.29**	—			
7. Centrality[a]	.08	.32**	.42**	.31**	.21**	.36**	—		
8. School liking	.36**	.30**	.20**	.17**	.37**	.13*	−.01	—	
9. Academic competence	.42**	.43**	.23**	.26**	.46**	.19**	.13*	.28**	—
M	3.05	0.00	0.00	0.00	4.67	0.00	0.65	2.92	4.65
SD	0.59	0.71	0.99	0.99	1.45	0.99	0.48	0.68	1.90

a. 1 = central member, 0 = noncentral member.

* *p* < .05 ; ** *p* < .01

in Table 2, both peer- and teacher-assessed social skills were positively and significantly associated with a range of social status indicators (i.e., likability, peer- and teacher-assessed popularity, reciprocated friendships, and clique centrality) as well as positive school functioning (i.e., school liking and academic competence). As an exception, teacher-rated social skills were not associated with clique centrality ($r = .08$, *ns*). Overall, children who were regarded by peers and teachers as highly socially skilled were well-liked by and popular among peers, had more reciprocated friendships, and had a central position in their clique. They also reported more positive feelings toward school, and teachers rated them as more academically competent.

Incremental Validity of Peer- and Teacher-Assessment

In this set of analyses, we examined the incremental validity of peer- and teacher-assessment of children's social skills in predicting social status and positive school functioning. For continuous outcome variables, a series of multiple regression analyses were conducted with each of the indicators of social status and school functioning as a dependent variable and peer- and teacher-assessed social skills as predictors. For the outcome of clique centrality, a logistic regression analysis was conducted because of the binary nature of the variable (i.e., 0 = noncentral member, 1 = central member).

Preliminary data screening detected nonnormality of residuals with some variables being moderately skewed, which violates an assumption of multiple regression with ordinary least square estimation. Thus, regression analyses were conducted in M*plus* Version 6.1 with maximum likelihood estimation with robust standard errors (Muthén &

Muthén, 1998-2010). We also conducted collinearity diagnostics to ensure that the moderate correlations between the two predictors (i.e., peer- and teacher-assessed social skills, $r = .51$, $p < .01$) do not adversely affect the coefficient estimates. A general guideline of collinearity diagnostics suggests that tolerance of less than .10 and the variance inflation factor (VIF) of greater than 10 may indicate extreme collinearity (Kline, 2011). Results did not suggest a collinearity problem: the tolerance and the VIF of the two predictors were 0.73 and 1.37, respectively. Finally, we examined whether multilevel analyses should be conducted given the nested structure of the data (i.e., children nested in the classroom). The intraclass correlations (ICC) were smaller than .05 across the dependent variables with an exception for teacher-rated popularity (ICC = .08). This indicates that the amount of variance attributed to between classroom differences was small, and the result was identical for teacher-rated popularity when a multilevel analysis was conducted. Thus, the results below are based on single-level data analyses.

Social status. After controlling for teacher-assessed social skills, peer-assessed social skills uniquely and significantly predicted all indicators of social status, including likability, peer- and teacher-assessed popularity, and reciprocated friendships (see Table 3). Specifically, squared semipartial correlations were examined, which indicate the increment in the proportion of variance in the outcomes accounted for by one source, above and beyond that accounted for by the other source (Pedhazur, 1997). Semipartial correlations (*sr*) between peer-assessed social skills and social status indicators ranged from $sr = .21$ to .52, suggesting that the incremental variance in social status indicators accounted for by peer-assessed social skills ranged from 4% (*teacher-assessed popularity*) to 27% (*peer-assessed*

Table 3. Multiple Regression Predicting Children's Social Status and Reciprocated Friendships From Peer- and Teacher-Assessed Social Skills

Predictor	Likeability β (*sr*)	Popularity: Peer β (*sr*)	Popularity: Teacher β (*sr*)	Reciprocated friends β (*sr*)
Social skills: Peer	.60** (.52)	.58** (.50)	.24** (.21)	.41** (.35)
Social skills: Teacher	.02 (.02)	−.07 (−.06)	.55** (.47)	.10 (.09)
R^2	.38	.30	.49	.22

Maximum likelihood estimation with robust standard errors was used. *sr* = semipartial correlation coefficients.
** $p < .01$

likability). Also, children who were perceived as highly socially skilled by peers were also more likely to be a central member than those who were perceived as less socially skilled (see Table 4). Specifically, after controlling for teacher-assessed social skills, the odds for a child to be a central member increases about five times per unit change in peer-assessed social skills.

In contrast, after controlling for peer-assessed social skills, teacher-assessed social skills did not uniquely and significantly predict social status indicators with a single exception of teacher-assessed popularity (see Table 3). The semipartial correlation between teacher-assessed social skills and teacher-assessed popularity was $sr = .47$, or 22% of incremental variance. Semipartial correlations between teacher-rated social skills and other social status indicators ranged from $sr = -.06$ to .09. After controlling for peer-assessed social skills, teacher-assessed social skills did not uniquely and significantly predict children's clique centrality (see Table 4).

Positive school functioning. Both peer- and teacher-assessed social skills uniquely and significantly predicted children's school liking and academic competence over and above that predicted by the other source (see Table 5). Squared semipartial correlations suggested that, beyond teacher-assessed social skills, peer-assessed social skills accounted for additional 2% ($sr = .13$) of the variance in children's school liking and 7% ($sr = .26$) of the variance in academic competence. Teacher-assessed social skills accounted for an additional 5% ($sr = .23$) of the variance in children's school liking and 5% ($sr = .22$) of the variance in academic competence above and beyond that accounted for by peer-assessed social skills.

Table 5. Multiple Regression Predicting Positive School Functioning From Peer- and Teacher-Assessed Social Skills

Predictor	School liking β (sr)	Academic competence β (sr)
Social skills: Peer	.15** (.13)	.31** (.26)
Social skills: Teacher	.26** (.23)	.25** (.22)
R^2	.14	.24

Maximum likelihood estimation with robust standard errors was used. sr = semipartial correlation coefficients.
** $p < .01$

Gender as a Moderator

Finally, we examined whether the association between social skills and the study outcomes was moderated by gender. For simplicity, we used peer-assessed social skills only as predictors because the results suggested that peer-assessed social skills are as good as or better than teacher-assessed social skills in predicting study outcomes. Again, a series of multiple regression analyses and a logistic regression analysis were conducted. Peer-assessed social skills, gender, and the interaction between the two served as predictors, and social status indicators and school functioning outcomes served as dependent variables. The focus of interest in this set of analyses was the interaction between gender and peer-assessed social skills in predicting outcomes. Results indicated that none of the interactions were statistically significant across the outcomes, suggesting that the positive effects of social skills on social status and school functioning outcomes are similar for boys and girls.

Table 4. Logistic Regression Predicting Clique Centrality From Peer- and Teacher-Assessed Social Skills

Predictor	B (SE)	Wald χ^2	Odds Ratio	R^2
Social skills: Peer	1.59** (0.30)	28.81	4.92	.18
Social skills: Teacher	−0.48 (0.26)	3.59	0.62	

R^2 = Nagelkerke's R^2.
** $p < .01$

Discussion

This study is grounded in the largely underexamined notion that children's social skills are contextually bound; thus, the assessment of social skills should be context specific and consider the perceptions of the people involved in that context. This study built on previous work that identified important and meaningful social skills in the peer group based on a contextual approach to assessment (Warnes et al., 2005).

Contextually Relevant Social Skills in the Peer Group

As anticipated, contextually relevant social skills were significantly related to a variety of indicators of children's social status in the peer group and positive school functioning. The demonstrated associations between social skills and a broad range of social status indicators uniquely adds to the literature because, unlike peer acceptance, perceived popularity, reciprocated friendships, and clique centrality have rarely been examined as outcome criteria of social skills. As a result, the findings bolster the importance of social skills for children to be successful in a number of peer relationship aspects.

Contextually relevant social skills were generally more predictive of children's social status than of school functioning. The overall variance explained by peer- and teacher-assessed social skills together was greater for social status (18%–49%) than for positive school functioning (14%–24%). This appears consistent with popular conceptualizations of social skills and competence, which define children who are well-liked by peers as socially skilled (Gresham, 1986). In contrast, the relation between social skills and school functioning is relatively weaker possibly because the effect is mediated through other processes, such as an increased sense of relatedness to peers and teachers (Furrer & Skinner, 2003).

The positive effect of social skills on study outcomes might not be surprising given that the association between social skills and competence, broadly defined, and children's peer success and positive academic functioning is well documented (Elliott et al., 2001; Ladd, 1999). Moreover, similar social behaviors appear in other established social skills rating scales (see Caldarella & Merrell, 1997). However, the contextually relevant social skills used in this research, in comparison to other social skills measures, are believed to capture a wider range and more representative sample of social skills in the peer group context (Warnes et al., 2005). The result, we believe, is enhanced ecological validity.

Incremental Validity of Peer- and Teacher-Assessed Social Skills

For social status outcomes, the incremental validity was stronger for peer-assessed social skills in predicting social status outcomes. That is, after teacher-rated social skills were taken into account, children who peers perceived as highly socially skilled were more liked by and popular among peers, had more reciprocated friends, and had a central position in their clique. These children were also rated as more popular by teachers. In contrast, after peer-assessed social skills were taken into account, teacher-assessed social skills did not add unique prediction for social status outcomes with the exception of teacher-assessed popularity. Taken together, it may be that peer evaluations are more effective than teacher evaluations in determining the effectiveness of contextually relevant social skills in earning social success in the peer group.

In contrast, peer- and teacher-assessed social skills each explained unique variance in academic competence and positive attitudes toward school. It is noteworthy, however, that the incremental variance of peer-assessed social skills was as large as that of teacher-assessed social skills in accounting for variance in teacher-rated academic competence. This appears particularly interesting and compelling because the incremental predictability of peer assessment is not outweighed by the potential shared method variance in the teacher-assessed social skills and academic competence. It might be that peer evaluation of social skills is as effective as that of teachers in predicting academic competence as a criterion of social skills.

The findings add to the literature on the incremental validity of different informants. Cumulative evidence suggests that the intercorrelations among raters of social behaviors are modest in magnitude (Renk & Phares, 2004). Consistently, the correlation between peer-assessed and teacher-assessed

social skills was .51 in this study, which suggests 74% of the variance between them is not shared. The differences between raters might not be simply "errors"; rather, they likely reflect unique perceptions that warrant attention. For example, in response to peer provocation, aggression was perceived as more effective by youth than by teachers (Dirks et al., 2010), suggesting that the value and effectiveness of a social behavior might be perceived differently across informants. Increased knowledge in incremental validity also has meaningful implications for identifying the most effective and "accurate" source of information in making diagnoses and predicting adjustment outcomes (Johnston & Murray, 2003).

Gender Effect

Findings did not suggest that gender moderates the effect of social skills on children's social status and positive school functioning. That is, although research has shown gender differences in social skills favoring girls (Gresham & Elliott, 1990; Zakriski et al., 2005), social skills appear to be equally effective for both boys and girls for social and academic adjustment. It should be noted, however, that the measure used in this study tapped heterogeneous facets of social skills that might or might not be gender specific. It would be of interest in future research to examine whether certain social skills in the peer group are particularly predictive of social and academic adjustment for boys versus girls.

Implications for Practice and Research

Whereas parents and teachers often serve as evaluators of children's social skills, the results of this study support peers as promising evaluators of social skills. For example, peer-assessed social skills might be useful in identifying children who lack in social skills and might benefit from social skills training. Likewise, one might consider incorporating peer feedback in social skills training programs. Although peers are not regularly involved in clinical or psychoeducational assessment, they might be involved in a screening process. As compared with peer ratings, peer nominations are more efficient and can be completed with minimal intrusion on instructional time.

A contextual approach to the assessment of social skills in the peer group adds to the current assessment practice in a significant manner by addressing ecological and social validity. It might be that some behaviors, such as prosocial behaviors, are effective across situations and contexts. However, a concrete and effective manifestation of prosocial behavior might depend on the specific relational context (Reis et al., 2000). That is, the specific characteristics of what constitutes prosocial behavior might differ between home and peer-group contexts. Also, the nature of peer relationships might pose unique social expectations for children, such as accepting others who are different from them, being fair when playing games, and keeping others' secrets. In turn, those ecologically valid social skills are socially valid as they are not only meaningful to the people involved in the context but also predict important developmental outcomes, including success in the peer group and positive school functioning.

A contextual approach to social skills assessment is believed to have implications for social skills generalization. It is important for children to learn social skills that are applicable in a range of social settings so that the learned social skills are generalizable across settings and situations (Sheridan et al., 1999). A contextual approach, which emphasizes the context specificity of social behaviors and assessment, does not necessarily undermine the importance of social skills generalization. In contrast, it is believed that the development of social skills that are generalizable across settings should begin in a context that is immediate and natural to children such as the peer group (Sheridan et al., 1999). Further, the contextually relevant social skills in this study focused on discrete behaviors as opposed to social competence. This might be particularly useful in intervention programs aimed at building specific skill competencies.

Limitations and Future Directions

Generalizability of the findings should be considered in light of the study participants and setting. Participants of this study were primarily White– non-Hispanic students and teachers from rural communities. Because of the size of rural communities, teachers often serve multiple roles inside and outside of the school. As such, they may have more

opportunities to interact with children and families outside of the classroom, thus, broadening the contexts within which rural teachers observe children's skills. This may in part shape their ratings. Likewise, children growing up in rural areas and attending low enrollment schools may have more extensive interpersonal experiences with each other than children growing up in more densely populated areas. It will be important in future research to investigate how the contextually relevant social skills as well as their relation to outcomes vary as a function of other critical factors such as race and geographic locale.

Because of the concurrent nature of the data utilized in this research, the directional relation between social skills and children's social status and school functioning outcomes is not clear. It may be the case that children who have high social status and school functioning become more socially skillful over time through increased opportunities for positive social interactions. Indeed, evidence suggests that the association between social and academic competence is reciprocal among children in the lower elementary years (Welsh, Parke, Widaman, & O'Neil, 2001). Further research is necessary to understand the nature of this reciprocal relation as children grow older. Also, increased understanding is warranted in terms of personal and contextual factors that moderate, mediate, or both, the relation between social skills and various adjustment outcomes. Together, they are expected to inform the focus of intervention efforts.

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Appendix

Contextually Relevant Social Skills.

This person (child). . .

1. Respects other kids.
2. Shows others kids that he/she cares when they are sad.
3. Says nice things to other kids.
4. Offers to help other kids when they need it.
5. Sticks up for other kids.
6. Starts talking with other kids even if he/ she doesn't know them very well.
7. Does *not* say things that hurt other kids.
8. Is honest and tells the truth to other kids.
9. Is fair when he/she plays games with other kids.
10. Is funny and makes other kids laugh.
11. Invites other kids to do things together.
12. Lets other kids have their way sometimes when they disagree.
13. Talks to other kids when there is a problem between them.
14. Does *not* hit or shove other kids.
15. Includes other kids when they want to join in.
16. Accepts other kids who are different from him/her.
17. Is a leader when he/she is with other kids.
18. Does *not* get upset with other kids when he/she doesn't get his/her way.
19. Hangs out with kids who take schoolwork seriously.
20. Keeps other kids' secrets.
21. Shares with other kids.
22. Says *no* when other kids want him/her to do something bad.
23. Listens to other kids' ideas and thoughts.
24. Forgives other kids when they do something that makes him/her upset.
25. Has good ideas for things to do with other kids.