Abstract Title Page

Title: The impact of Project REAL on students' peer context

Author(s): Matthew J. Irvin – mirvin@email.unc.edu

Background / Context:

The stage-environment fit and SEALS intervention models indicate that in order to be academically successful, adolescents need schooling experiences that promote learning and positive adjustment (Eccles & Gootman, 2002; Eccles & Midgley, 1989; Hamm et al., 2010). Across early adolescents, students encounter increasingly unsupportive schooling contexts, especially in terms of perceived peer norms for effort and achievement and emotional risk for participation (Hamm, Schmid, Farmer, & Locke, in press; Hamm & Faircloth, 2005). Students' sense of valuing of, and belonging to school also decline during early adolescence (Eccles & Midgley, 1989; Fredericks, Blumenfeld, & Paris, 2004). Boys may be especially vulnerable to less supportive school contexts; compared to early adolescent girls, boys at this age report lower school valuing and belonging, have lower academic performance, and lower rates of school completion (Goodenow & Grady, 1993; Kenney-Benson, Pomerantz, Ryan, & Patrick, 2006; Meece & Scantlebury, 2006; Voelkl, 1996). Interventions to improve schooling experiences have been less effective for boys (Maddox & Prinz, 2003). Thus, the current study sought to determine ways in which the SEALS intervention had a differential impact by gender on early adolescents' experiences of the school social-affective context.

Research also indicates that risk within groups of individuals (e.g., boys, minority youth) is variable (Farmer et al., 2004). During early adolescence, students encounter many challenges at school (e.g., greater academic demands, less adult supervision, maturation) and have a growing need for independence and positive peer relations (Eccles & Midgley, 1989). Thus, during early adolescence, particular students become increasingly vulnerable to academic, social, and behavioral difficulties that put them at risk for developing more serious and long-lasting academic problems (e.g., academic failure, school dropout). Unique combinations of variables tend to cluster in individuals as correlated configurations of multiple risks rather than occur in isolation (Cairns & Cairns, 1994; Farmer et al., 2004). Person-oriented analyses have shown that multiple risk configurations (e.g., academic, behavioral, and social difficulties) are more predictive of outcomes than single problems (e.g., Farmer et al., 2004; Mahoney & Cairns, 1997). Previous research has consistently identified risk configurations, including *Multi-risk* (i.e., high aggression, low academics, and low popularity) and *Tough* (i.e., high aggression and high popularity), that predict problematic outcomes including low achievement, school dropout, and social difficulties (e.g., Estell, Cairns, Farmer, & Cairns, 2002; Estell, Farmer, Cairns, & Cairns, 2002; Estell, Farmer, Cairns, & Clemmer, 2003; Farmer, Estell, Bishop, O'Neal, & Cairns, 2003; Farmer, Leung, Pearl, Rodkin, Cadwallader, & Van Acker, 2002). Risk configurations often vary by gender, given that aggression, popularity, and academics serve different functions for girls and boys (e.g., Estell, Cairns et al., 2002; Estell, Farmer, et al., 2002; Estell et al., 2003; Farmer et al., 2002; 2003). Accordingly, the current study undertook cluster analyses separately by gender in order to identify girls and boys with risk configurations across academic, behavioral, and social adjustment.

As a universal model, the SEALS program was designed to target youth in general, as well as those at-risk for school success (Farmer, Hamm et al., under review). Thus, the current study examines the impact of the SEALS program on experiences of the school social-affective context, for youth of different risk configurations.

Purpose / Objective / Research Question / Focus of Study:

The general purpose of this study was to investigate the extent to which and ways in which SEALS program effects differ for early adolescent boys and girls. The first aim was to

examine differential effects of SEALS by gender, for students' perceptions of the social-affective context of school The second aim was to determine the extent to which the SEALS program offered promotive effects on experiences of the social-affective context, for boys and girls at particular types of risk for positive adjustment.

Setting:

Project REAL took place in public schools serving sixth graders; schools were configured as either middle (grades 6-8) or k8/k12 schools. Schools were located in the Appalachian, Deep South, Southwest, Pacific Northwest, Far West, Southeast, Northern Plains, and Midwest regions of the United States. Participating schools were located in low-wealth communities designated as rural by the National Center for Education Statistics (NCES).

Population / Participants / Subjects:

The current study included 28 Project REAL schools (14 matched pairs); 57% were middle schools. On average, the percentage of students eligible for free/reduced lunch was 61.52% (SD = 28.91). Schools ranged from 0% to 100% minority (M = 33.80%, SD = 38.99). On average 59% of students were at or above grade level for reading and math standardized test scores. Consent rate averaged 64.7% (SD = 13.69). Teachers in intervention schools took part in the intervention components described below. Teachers in both intervention and control schools participated as research participants. All were sixth grade teachers; 72.6% were female, 47.2% held a graduate degree, 38.4% had done some graduate work, and 14.4% reported their highest degree as a four-year degree. Student participants were the sixth grade students of these teachers in the intervention and control schools. For these students, 53.6% were female and 51.3% were classified as ethnic minority (African American, Latino, or Native American ethnicity).

Intervention / Program / Practice:

The SEALS intervention is a professional development program that trains 6th grade teachers in the use of three complementary intervention components designed to foster supportive school contexts in early adolescence.

Academic Engagement Enhancement (AEE). The focus of this component is on research-based strategies for structuring and organizing the learning environment to maintain the attention and involvement of all students' difficulties (Gut, Farmer, Bishop, Hives, Aaron, & Jackson, 2004; Sutherland & Farmer, 2007).

Competence Enhancement Behavior Management (CEBM). From the *CEBM* component (Farmer, Goforth, Hives, Aaron, Jackson, & Sgammato, 2006; Sutherland & Farmer, 2007), teachers learn to teach and reinforce appropriate classroom behavior while providing constructive consequences to reduce problem behavior. The *CEBM* model was developed from evidenced-based practices for promoting positive classroom behavior (e.g., Johns & Carr, 1995; Lewis, Sugai, & Colvin, 1998; Nelson, 1996; White, Algozzine, Audette, Marr, & Ellis, 2001).

Social Dynamics Management (SDM). *SDM* is an inservice training and directed-consultation model to enhance teachers' awareness of classroom social dynamics and the corresponding impact of such dynamics on students' academic engagement and classroom behavior (Farmer, 2000; Farmer & Xie, 2007; Farmer, Xie, et al., 2007). Teachers learn to identify students' peer groups, social structures, and social roles (e.g., leaders, followers, isolates) in the peer system, as well as how to recognize and prevent bullying and social aggression.

Each intervention component is designed to complement the others, resulting in a collective impact on what teachers do in the classroom (e.g., teacher attunement); how teacher functioning influences student functioning and creates a peer and classroom context that supports and reinforces positive student functioning; and how, in turn, teacher functioning, school and peer context conditions, and student functioning contribute to students' academic outcomes (see Figure 1).

Training. The goal of the SEALS training is to teach teachers specific strategies, and to provide them with a framework for using them in a systematic manner to promote a supportive and engaging school context. SEALS is multicomponential and designed to move teachers' understanding and skill-set from more general to more advanced levels. Training involves 1) a site visit by intervention staff that includes directed observations and consultation with 6th grade teams of teachers and school personnel in the spring semester prior to the intervention year; 2) a 1 ½ day summer institute immediately prior to the beginning of school, that provided teachers with an introduction to the three intervention components and involved direct instruction, group discussion, and hands-on activities, were used to present and discuss the content; 3) teachers' completion of 8 self-guided web-based instructional modules between September and March; and 8 directed consultation sessions corresponding to on-line modules, accomplished through videoconferencing between intervention staff and the 6th grade teacher team at the school. On-line mechanisms are used to respond to issues that arise from geographic isolation in rural school districts.

Research Design:

Project REAL followed a cluster randomized controlled trial (CRCT) design, in which matched pairs of schools were identified and recruited for participation, and one of each pair was randomly assigned to the intervention or control condition. Paired schools were matched on multiple demographic variables (school size, student achievement, percentage minority, student poverty). Intervention schools received a professional development program for all sixth grade teachers (available to control schools following the end of Project REAL). The study followed a longitudinal design; baseline data were collected pre-intervention (spring of 5th grade), and during and post-intervention (fall and spring of sixth grade). Data sources included teacher and student surveys, classroom observations, and school records.

Fidelity of intervention training was documented through logs of teacher participation. Project REAL teachers completed an average of 27.55 (*SD* =3.76) hours of professional development. Fidelity of teacher implementation was determined by classroom observation of intervention and control school teachers by trained observers blind to condition. The instrument used was aligned with the intervention components and had acceptable psychometric properties scale reliability of .831-.929 (Cronbach's alpha, range for subscales) and .92 (overall scale), and interrater reliability of .881 (Kappa). Multilevel analyses for CRCT indicated that the instructional practices and classroom environments were significantly more aligned with the ideals of the intervention in intervention versus control schools (Hamm, Farmer, Dadisman, Murray, & Lambert, under review).

Data Collection and Analysis:

Data collection included gathering information via multi-informant measures to capture students' and teachers' perspectives of student adjustment and related risk factors. Student data were collected on-site in a group administration format, following a protocol that has been used

with elementary school age students by the Project REAL PIs for over two decades. Teachers completed their assessments of study participants separately. Students received small gifts, and teachers received financial remuneration, for participating in the study. The following instruments were used for the current study:

Interpersonal Competence Configurations (ICCs). Configurations were generated from teachers' responses to the *Interpersonal Competence Scale-Teacher (ICS-T),* an 18-item questionnaire consisting of seven-point Likert scales (Cairns, Leung, Gest, & Cairns, 1995). The ICS-T yields composite scores on multiple sub-scales: aggression, popularity, academic competence, affiliative, internalizing, and Olympian. Multiple studies indicate strong psychometric properties for this instrument (e.g., Cairns & Cairns, 1994; Cairns, Leung, Gest, & Cairns, 1995; Coie & Dodge, 1983; Farmer, Irvin et al., 2006).

Cluster analyses (Aldenderfer & Blashfield, 1984) of ICS-T scores were used to discern distinct risk configurations separately for boys and girls at the end of the 5th grade. The resulting male and female configurations are presented in Tables 1 and 2. Labels are assigned with respect to whether or not students in a given cluster were higher or lower than average with respect to the 8 ICST subscales (i.e., aggression, affiliative, internalizing, academics, etc.).

Emotional risk of participation. A 6-item scale measured perceptions of the emotional risk associated with academic participation (Hamm & Faircloth, 2005). Given the prompt, "If I give a wrong answer to a question in my classes, the following happens:" students rate items such as "…other students will think I'm not smart" on a 6-point scale (strongly disagree to strongly agree). Cronbach's alpha ranged from was .73 to .79 for students of different groups (e.g., ethnic minority, gender).

School belonging. The Psychological Sense of School Membership-Brief is an 11-item measure that assesses students' sense of school membership and belonging (Hagborg, 1994, 1998). Students rate their agreement with statements on a 5-point response scale ranging (completely false to completely true) to items such as, "I feel a real part of my school", "Most teachers at my school are interested in me.", and "Other students like the way I am.". Cronbach's alpha ranged from ranged from .78 to .86 across diverse groups of students.

Peer norms for effort and achievement. Adolescents' perceptions of the acceptability of and expectations for academic effort and achievement by their peer group were measured by an 11-item scale (Hamm, Schmid, et al., in press). Students responded to questions such as, "The kids I hang around with at school think it is good to volunteer to answer questions," by rating their agreement on a scale of 1 = strongly disagree to 6 = strongly agree. Cronbach's alpha ranged from .79-.83 across diverse student groups.

School Valuing. Students rated their agreement with items such as "most of the things we learn in class are useless" on Voelkl's (1996; 1997) widely used scale of the perceived worthiness of school to one's future. Cronbach's alpha exceeded .80 across studies; construct validity has been established through high correlations with academic achievement and class participation (Finn & Frone, 2004; Voelkl, 1996; 1997).

Student background. Student minority status (recoded from race/ethnicity, 1 = African American, Latino, or Native American students, 0 = White students) and gender (1= female) were obtained from school records.

Analysis. Questions regarding differential intervention effects by gender were tested using hierarchical linear modeling (HLM) procedures for CRCT designs (see Brown et al., 2009), with 13 dummy-coded blocking variables corresponding to each matched pair included at the school-level. The worst matched pair served as the referent. A 2-level model (students nested in schools) was estimated, with an initial model that included the school blocking variables and

the intervention dummy coded variable at level 2 and student gender at level 1 entered as predictors. The next model added the cross-level interaction term for intervention condition X student gender.

Cluster analyses (Aldenderfer & Blashfield, 1984) were conducted using teacher ratings on the ICST to identify distinct risk configurations separately for boys and girls at the end of the 5th grade (Wave 1). Differential effects of the intervention by risk configuration type within each gender were examined using hierarchical linear regression analyses with intervention condition X risk configuration type interaction terms to determine whether the SEALS program had a differing effect on the social-affective context experienced by youth with different types of risk.

Findings / Results:

The results regarding differential effects of the intervention by gender are summarized in Table 1. Results indicate that compared to girls, boys reported peer norms less supportive of effort and achievement, lower levels of school belonging, and less valuing of school. Estimation of the model that included the gender X intervention effect indicated that the intervention condition enhanced the experiences of boys for peer norms and for school belonging. No gender or gender X intervention condition effects were evident for perceptions of emotional risk.

The results from cluster analyses to identify male and female risk configurations for Wave 1 are presented in Tables 2 and 3. Dummy variables were created to capture these risk configurations and entered into initial regression models (Model boys and girls were the reference group). Of focus in these analyses is the interaction between these risk configurations and intervention condition. The results (see Table 4) indicate that for girls classified into the high aggressive risk category or into the multi-risk category, experiencing the intervention condition had a promotive effect on peer norms for effort and achievement. A significant trend toward a promotive intervention effect for school belonging was observed for girls classified as multi-risk. No significant intervention X risk configuration effects were evident for boys.

Conclusions:

Early adolescent boys and girls can be at-risk for positive school adjustment in different ways. The results provide evidence regarding how the SEALS program benefits boys and girls in general, and at particular types of risk for school adjustment. For boys, the SEALS program had a general, promotive effect on two key experiences of the school social-affective context: peer norms for effort and achievement, and sense of belonging. Although the SEALS program did not enhance girls' experiences of the social-affective context in general, the peer norms for effort and achievement of girls at particular types of risk, including high aggression and multiple social, behavioral, and academic risk, were more supportive in SEALS intervention schools. A trend toward a promotive effect of SEALS was observed for sense of belonging for girls classified as at-risk for high aggression. Thus, the results indicate that the SEALS program has enhancing effect for boys in general, and for girls at particular risks for adjustment. These results highlight particular aspects of adjustment and particular types of students that stand to benefit from the SEALS program, but indicate that students at high levels of risk may require additional support not offered in a universal program.

Appendices

Appendix A. References

Aldenderfer, M.S. & Blashfield, R.K. (1984). *Cluster analysis.* Beverly Hills, CA: Sage Publications.

Brown, J. L., Jones, S. M., LaRusso, M. D., & Aber, J. L. (2010). Improving classroom quality: Teacher influences and experimental impacts of the 4rs program. *Journal of Educational Psychology, 102,* 153-167. doi:10.1037/a0018160

Cairns, R. B., & Cairns, B. D. (1994). *Lifelines and risks: Pathways of youth in our time*. New York, NY: Cambridge University Press.

Cairns, R. B., Leung, M.-C., Gest, S. D., & Cairns, B. D. (1995). A brief method for assessing social development: Structure, reliability, stability, and developmental validity of the Interpersonal Competence Scale. *Behaviour Research and Therapy, 33*, 725-736. doi:10.1016/0005-7967(95)00004-H

Coie, J. D., & Dodge, K. A. (1983). Continuities and changes in children's social status: A five-year longitudinal study. *Merrill-Palmer Quarterly, 29*, 261-282.

Eccles, J. S., & Gootman, J. A. (2002). *Community programs to promote youth development*. Washington, D.C.: National Academy Press.

Eccles, J. S., & Midgley, C. (1989). Stage-environment fit: Developmentally appropriate classrooms for young adolescents. In C. Ames & R. Ames (Eds.), Research on motivation in education: Goals and cognitions (Vol. 3, pp. 139-186). New York, NY: Academic Press.

Estell, D. B., Cairns, R. B., Farmer, T. W., & Cairns, B. D. (2002). Aggression in inner-city early elementary classrooms: Individual and peer-group configurations. *Merrill-Palmer Quarterly, 48*, 52-76. doi:10.1353/mpq.2002.0002

Estell, D., Farmer, T. W., & Cairns, B. D. (2007). Bullies and victims in rural African American youth: Behavioral characteristics and social network placement. *Aggressive Behavior, 33,* 145-159. doi:10.1002/ab.20176

Estell, D. B., Farmer, T. W., Cairns, R. B., & Cairns, B. D. (2002). Social relations and academic achievement in inner-city early elementary classrooms. *International Journal of Behavioral Development, 26*, 518-528. doi: 10.1080/01650250143000472

Estell, D. B., Farmer, T. W., Cairns, B. D., & Clemmer, J. T. (2003). Self-report weapon possession in school and patterns of early adolescent adjustment in rural African American youth. *Journal of Clinical Child and Adolescent Psychology, 32*, 442-452. doi: 10.1207/S15374424JCCP3203_12

Farmer, T. W. (2000). The social dynamics of aggressive and disruptive behavior in school: Implications for behavior consultation. *Journal of Educational and Psychological Consultation, 11*, 299-321. doi:10.1207/S1532768XJEPC113&4_02

Farmer, T. W., Estell, D. B., Bishop, J. L., O'Neal, K. K., & Cairns, B. D. (2003). Rejected bullies or popular leaders? The social relations of aggressive subtypes of rural African American early adolescents. *Developmental Psychology*, 39, 992-1004. doi:10.1037/ 0012-1649.39.6.992

Farmer, T., Estell, D., Leung, M., Hollister, T., Bishop, J., & Cairns, B. (2003). Individual

characteristics, early adolescent peer affiliations, and school dropout: an examination of aggressive and popular group types. *Journal of School Psychology, 41*, 217-232. doi:10.-1016/S0022-4405(03)00046-3

Farmer, T. W., Goforth, J. B., Hives, J., Aaron, A., Jackson, F., & Sgammato, A. (2006). Competence Enhancement Behavior Management. *Preventing School Failure, 50*(3), 39-44. doi:10.3200/PSFL.50.3.39-44

Farmer, T. W., Irvin, M. J., Sgamatto, A. N., Dadisman, K., Thompson, J. H. (2009). Interpersonal competence configurations in rural Appalachian fifth graders: Academic achievement and associated adjustment factors. *Elementary School Journal.*

Farmer, T. W., Leung, M-C., Pearl, R., Rodkin, P. C., Cadwallader, T. W., & Van Acker, R. (2002). Deviant or diverse peer groups? The peer affiliations of aggressive elementary students. *Journal of Educational Psychology, 94*, 611-620. doi:10.1037/0022-0663.94.3.611

Farmer, T. W., Price, L. N., O'Neal, K. K., Leung, M-C., Bishop, J. L., Cairns, B. D., & Reese, L. E. (2004). Exploring risk in early adolescent African-American youth. *American Journal of Community Psychology*, 33, 51-59. doi:10.1023/B:AJCP.0000014318.16652.30

Farmer, T. W. & Xie, H.L. (2007). Aggression in school: The good, the bad, and the ordinary. *Journal of School Psychology, 45,* 461-478. doi:10.1016/j.jsp.2007.06.008

Farmer, T. W., Xie, H. L., Cairns, B. D., & Hutchins, B. C. (2007). Social synchrony, peer networks, and aggression in school. In P. H. Hawley, T. D. Little, & P. C. Rodkin (Eds.), *Aggression and adaptation: The bright side to bad behavior* (pp. 209-233). Mahwah, NJ: Lawrence Erlbaum Associates Publishers

Finn, K. V. & Frone, M.R. (2004). Academic performance and cheating: Moderating role of school identification and self-efficacy. *Journal of Educational Research, 97*, 115-123.

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*, 59-109.

Goodenow, C., & Grady, K. E. (1993). The relationship of school belonging and friends' values to academic motivation among urban adolescent students. *Journal of Experimental Education, 62,* 60-71. doi:10.1080/00220973.1993.9943831

Gut, D. M., Farmer, T. W., Bishop-Goforth, J., Hives, J., Aaron, A., & Jackson, F. (2004). The school engagement project: Academic Engagement Enhancement. *Preventing School Failure, 48*, 4-9. doi:10.3200/PSFL.48.2.4-9

Hagborg, W. J. (1994). An exploration of school membership among middle- and high-school students. *Journal of Psychoeducational Assessment, 12*, 312-323. doi:10.1177/0734829-9401200401

Hagborg, W. J. (1998). School membership among students with learning disabilities and nondisabled students in a semirural high school. *Psychology in the Schools, 35,* 183-188. doi:10.1002/(SICI)1520-6807(199804)35:2<183::AID-PITS10>3.3.CO;2-X

Hamm, J. V., & Faircloth, B. S. (2005). Peer context of mathematics classroom belonging in early adolescence. *Journal of Early Adolescence, 25,* 345-366. doi:10.1177/027243160-5276932

Hamm, J.V., Farmer, T.W., Dadisman, K., Murray, A., & Lambert, K. (under review). Improving student capacity for success in early adolescence: The influence of Project REAL. *American Educational Research Journal.*

Hamm, J. V., Farmer, T.W., Robertson, D., Dadisman, K., Murray, A.R., Meece, J., & Song, S. (2010). Effects of a developmentally-based intervention with teachers on Native American and White early adolescents' schooling adjustment in rural settings. *Journal of Experimental Education, 78,* 343-377. doi:10.1080/00220970903548038

Hamm, J. V., Schmid, L., Farmer, T. W. & Locke, B. (in press). Is peer group influence normative in nature? Injunctive peer group norms and the academic adjustment of rural African American and White early adolescents. *Journal of Early Adolescence*.

Hamm, J.V. & Zhang, L. (2010). The schooling context of adolescents' peer relations. In J. Meece & J. Eccles (Eds.), *The handbook of schooling effects on development* (pp. 518-554). Mahweh NJ: LEA.

Johns, B. H., & Carr, V. G. (1995). *Techniques for managing verbally and physically aggressive students*. Denver, CO: Love Publishing Company.

Kenney-Benson, G. A., Pomerantz, E. M., Ryan, A. M., & Patrick, H. (2006). Sex differences in math performance: The role of children's approach to schoolwork. *Developmental Psychology, 42,* 11-26. doi:10.1037/0012-1649.42.1.11

Lewis, T. J., Sugai, G., & Colvin, G. (1998). Reducing problem behavior through a school-wide system of effective behavioral support: Investigation of a school-wide social skills training program and contextual interventions. *School Psychology Review, 27*, 446-459.

Maddox, S. J., & Prinz, R. J. (2003). School bonding in children and adolescents: Conceptualization, assessment, and associated variables. *Clinical Child and Family Psychology Review, 6,* 31-49.

Mahoney, J. L., & Cairns, R. B. (1997). Do extracurricular activities protect against early school dropout? *Developmental Psychology, 33*, 241-253. doi:10.1037/0012-1649.33.2.241

Meece, J. L., & Scantlebury, K. S. (2006). Gender and schooling: Progress and persistent barriers. In J. Worrell & C. Goodheart (Eds.), *Handbook of girls' and women's psychological health* (pp.283-291). New York, NY: Oxford University Press.

Nelson, J. R. (1996). Designing schools to meet the needs of students who exhibit disruptive behavior. *Journal of Emotional and Behavioral Disorders, 4,* 147-161. doi:10.1177/106-342669600400302

Roeser, R. W., & Eccles, J. S. (2000). School as a context of early adolescents' academic and social-emotional development: A summary of research findings. *Elementary School Journal, 100*, 443-471. doi:10.1086/499650

Sutherland, K. S., & Farmer, T. W. (2007). Classroom contexts and problem behavior. In G. D. Sideridis & T. A. Citro, T. A. *Best practices in learning disabilities: Bridging the gap between research and practice*. Boston, MA: LDW.

Voelkl, K. E. (1996). Measuring students' identification with school. *Educational and Psychological Measurement, 56*, 760-770.

Voelkl, K.E. (1997). Identification with school. *American Journal of Education, 105*, 294-318.

Wang, M-T., & Holcombe, R. (2010). Adolescents' perceptions of school environment, engagement, and academic achievement in middle school. *American Educational Research Journal, 47,* 633-662.

White, R., Algozzine, B., Audette, R., Marr, M. B., & Ellis, E. D. (2001). Unified discipline: A school-wide approach for managing problem behavior. *Intervention in School and Clinic, 37,* 3-8. doi:10.1177/105345120103700101

Appendix B. Tables and Figures

Figure 1: Intervention Model

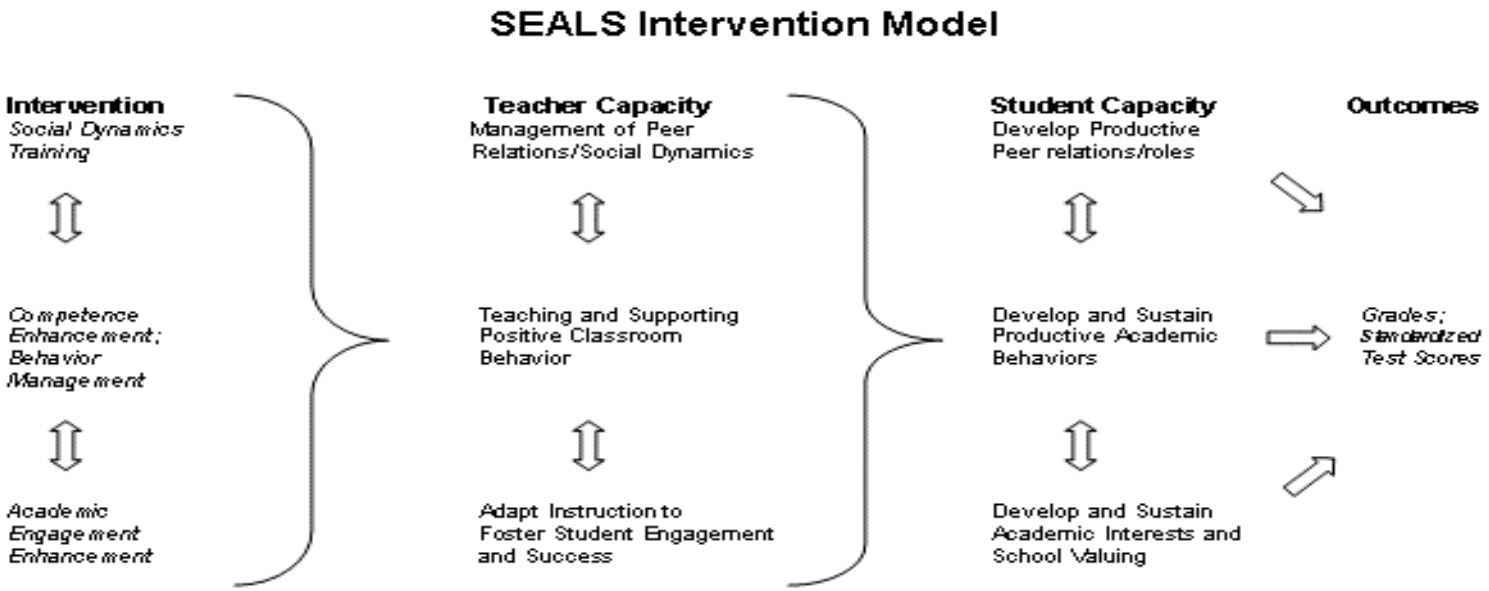

Table 1
Results of Final HLM Model for Effects of SEALS Intervention on Students' Experience of School Social-Affective Context by Gender

	Peer Norms for Effort and Achievement		School Belonging		School Valuing	
	B	SE	B	SE	B	SE
				.03		
Intercept	3.63***	.03	3.62***		4.17***	.03
Male	-.25***	.05	.19**	.04	-.25***	.04
Intervention	.06	.06	.07	.06	.01	.07
Intervention X Gender	.37***	.11	.14+	.08	..01	.08

Note: Blocking variables are not included.
+p = .08; *$p \leq .05$, $p \leq .01$, $p \leq .001$.

Table 2
Boys' Interpersonal Competence Configurations at Spring of Pre-Transition Year (Wave 1)

Clustering Variable	Unengaged		Studious		Tough		Aggressive		Multi-Risk		Model	
ICS-T Factor												
Popular	-.57 (.68)	***	-.17 (.67)	*	.75 (.60)	***	-.41 (.71)	***	-1.59 (.58)	*	1.04 (.61)	***
Olympian	-.61 (.70)	***	-.26 (.61)	***	.60 (.69)	***	-.24 (.71)	***	-1.54 (.73)	***	1.12 (.64)	***
Affiliative	.01 (.79)		.18 (.70)	**	.48 (.67)	***	-.73 (.74)	***	-1.59 (.88)	***	.88 (.59)	***
Academic	-1.14 (.47)	***	.54 (.57)	***	-.25 (.81)	**	-.11 (.85)		-.44 (.98)	**	1.19 (.41)	***
Internalizing	.61 (.83)	***	.50 (.74)	***	-.68 (.64)	***	-.16 (.68)	**	1.52 (.81)	***	-.74 (.74)	***
Aggressive	-.42 (.69)	***	-.65 (.64)	***	.27 (.73)	***	1.09 (.60)	***	.38 (.98)	*	-.89 (.66)	***
Cluster n	97		111		134		137		48		102	

Note. N = 629 boys. Cells contain means on ICS-T clustering variables for corresponding interpersonal competence configuration (standard deviations given in parentheses).
***$p < .001$, **$p < .01$, *$p < .05$ for the T-tests of the mean (versus a value of 0).

Table 3

Girls' Interpersonal Competence Configurations at Spring of Pre-Transition Year (Wave 1)

Clustering Variable	Aggressive	Studious	Affiliative Internalizing	Multi-Risk	Model
ICS-T Factor					
Popular	-.21 (.79) **	-.07 (.72)	-.48 (.71) ***	-1.22 (.71) ***	1.04 (.53) ***
Olympian	-.19 (.71) **	.04 (.65)	-.70 (.65) ***	-1.16 (.77) ***	1.02 (.65) ***
Affiliative	-.58 (.76) ***	.23 (.70) ***	.30 (.64) ***	-1.52 (.80) ***	.74 (.56) ***
Academic	-.25 (.82) ***	.54 (.057) ***	-1.21 (.65) ***	-.72 (.87) ***	.72 (.62) ***
Internalizing	-.14 (.76) *	.23 (.68) ***	.45 (.80) ***	1.24 (.79) ***	-.92 (.66) ***
Aggressive	1.33 (.69) ***	-.59 (.48) ***	-.36 (.63) ***	.25 (1.09) *	-.33 (.74) ***
Cluster n	143	178	113	92	201

Note. N = 727 girls. Cells contain means on ICS-T clustering variables for corresponding interpersonal competence configuration (standard deviations given in parentheses).
***$p < .001$, **$p < .01$, *$p < .05$ for the T-tests of the mean (versus a value of 0).

Table 4

Results from Regression Analyses for Intervention Effects on Configurations for Girls

	Peer norms effort/achievement		School belonging	
	B	*SE*	*B*	*SE*
Step 1				
Minority	.29	.08	-.07	.06
Aggressive	.03	.12	-.34***	.09
Studious	.17	.11	-.16†	.09
Affiliative-Internalizing	.10	.13	-.40***	.10
Multi-risk	-.02	.14	-.44***	.11
Step 2				
Intervention	-.19*	.08	-.01	.06
Step 3				
Aggressive*Int.	.55*	.24	.01	.18
Studious*Int.	.33	.23	.07	.17
AffInt.*Int.	.06	.27	.07	.20
Multi-risk*Int.	.75**	.29	.39†	.22
Step 3 ΔR^2	.018		.006	
Step 3 $F\Delta$	2.60*		0.91	
Total R^2	.05		.06	

†$p \leq .10$. *$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.