Can Computers Teach Social Skills? Examining "The Social Express"

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Abstract

Previous research indicates that traditional school-based social skills training programs demonstrate school-wide improvement (Durlak et al., 2011). However, research also shows that this improvement either decreases or does not manifest for programs targeted towards referred children with diagnoses of emotional and behavioral disorders (Luiselli, Putnam, Handler, & Feinberg, 2005). Because of a dearth of literature on computer-based social skills training programs (Krach & McCreery 2016), the current study examined the efficacy of *The Social Express* (The Language Express, 2013) at both the school-wide and referred-child levels of intervention. Findings from the current study indicate statistically significant school-wide increases in social skills for children who received the intervention; the control group did not indicate any improvement. However, pre-post data indicated little improvement for the referred population of children with pre-existing behavior problems.

Procedures

This study took place over two years. The first year (2013-2014) examined 107 subjects (40 experimental group; 67 control group) in a Tier 1 population; whereas, the Tier 2 population was examined in the second year (2015-2016) using a sample of 24 subjects. All students were non-Hispanic, African American in a Tier 1 school; only third through fifth grade students were included

Tier 1 lessons were available for ten weeks. Children completed the vignettes independently. Pre / post teacher rating scale data was collected for both groups on the Performance Screening version of the Social Skills Improvement System (SSIS-PSG; Gresham & Elliot, 2012).

The Tier 2 study consisted of expanded instruction in a small group setting. Referred students were placed in groups of five to eight students; each grade level had two different groups. Each session consisted of a combination of computer vignettes and curriculum materials. Tier 2 data was collected from teacher ratings on the Social Skills Rating System version of the Social Skills Improvement System (SSIS-SRS; Gresham & Elliot, 2012).

Results

Tier 1.. Independent sample t-tests were run to examine control / experimental group differences in pre-test SSIS-PSG: PSB scores prior to the intervention. The Hartley test for equal variance indicated that equal variances cannot be assumed ($F = 1.594$, $p = 0.05$). Results (not assuming equal variances) indicated no significant differences, $t(68.051) = 0.405$, $p = 0.687$ in scores between experimental and control groups on the SSIS: PSB.

Next, two paired-sample t-tests were conducted to compare pre-post tests data for both the control and the experimental groups. Results for the experimental group indicated a significant difference, $t(39) = -2.199$, $p = 0.034$, $d = 0.345$. Results for the control group did not indicate a significant difference $t(66) = 0.00$, $p = 1.00$, $d = 0.00$.

Tier 2. Frequency data on pre-test / post-test change on the Social Skills Composite scores and Behavioral Problems Composite scores can be found in Table 2. Researchers calculated a comparison value to determine statistically significant pre-post differences using Anastasi and Urbina's (1997, p. 111) formula. The comparison value for the Social Skills composite was 0.76 for raw scores. The comparison values for the Behavioral Problems composites was 3.04 for raw scores.

Tier 2 data was also examined as a whole group using a paired samples t-test for statistical significance and effect size. The statistical significance calculation should be noted as problematic because of the small sample; however, the effect size data should be considered. For the Social Skills composite score pre-post test difference t-test findings for raw scores was $t(23) = .769$, $p = 450$, $d = 0.201$. For the Problem Behaviors composite pre-post difference t-test findings for raw scores was $t(23) = .382$, $p = .706$, $d = 0.105$.

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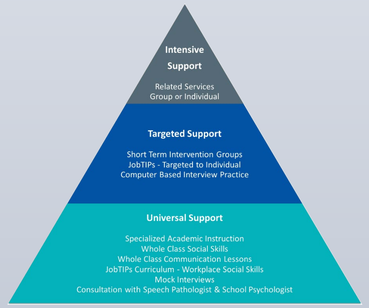
	Pre-Test			Post-Test		
	SSIS-PSG: Prosocial			SSIS-PSG: Prosocial		
Tier 1 Research Groups:	N	M	SD	N	M	SD
Control:	67	3.64	0.949	67	3.64	1.097
Experiment:	40	3.73	1.198	40	4.10	0.928
Combined:	107	3.67	1.044	107	3.81	1.056

	Pre-Test			Post-Test		
	SSIS-SSRS: Composite			SSIS-SSRS: Composite		
Tier 2 Referred Group:	N	M	SD	N	M	SD
Social Skills Raw	24	11.95	7.538	24	10.83	2.352
Social Skills SS	24	41.25	4.874	24	40.50	0.834
Problem Behaviors Raw	24	9.708	1.39	24	9.54	1.769
Problem Behaviors SS	24	88.12	1.59	24	87.95	1.989

Descriptive Statistics

The Pro-Social Behavior item on the SSIS-PSG is on a scale of 1 (very limited / extreme difficulty / poor control) to 5 (excellent skills). The SSIS-SSRS Composite scores were provided as either raw scores or as standard scores (SS).



	No Improvement		Improvement	
Tier 2 Referred Group:	Worse	Same	Some	Statistically Significant
Social Skills Raw	10	5	0	9
Problem Behaviors Raw	8	8	6	2

Tier 2 Improvement Frequencies

The SSIS-SSRS Composite difference scores were generated by subtracting pre-test scores from post-test scores. These scores were then compared to a value calculated by the formula found in work by Anastasi and Urbina (1997, p. 111); $n = 24$ across all scores.