

Bridges Research Brief
Dr. Rob Horowitz
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As part of the ArtsConnection Bridges program evaluation, we compared Bridges students' scores on the Teachers College Reading & Writing Project (TCRWP) "running records" with an equivalent comparison group of non-Bridges students from the same schools. The TCRWP running records are an accepted Measure of Student Learning (MoSL) in New York City schools, assessing reading ability, fluency and comprehension.

The treatment study sample consisted of Bridges students (kindergarten, first and second grade) with TCRWP pre-test and post-test scores during the 2015-2016 or 2016-2017 school year (n= 979). The comparison group included all students who did not participate in the program from the same grades and had TCRWP pre-test and post-test scores during the 2015-2016 or 2016-2017 school year (n = 949).

TCRWP scores are reported as levels A through Z. To conduct the analysis, the letter scores were converted to numbers (1 to 26) with scores below an A assigned to a value of 0. The pre-test values were subtracted from the post-test values to derive a score indicating how many levels each student increased throughout the school year.

Results indicate that Bridges students made significantly better progress on the running records than the comparison group.

The following table compares the average score increase for the Bridges students and the comparison group. Both groups increased about 4 levels, with the Bridges group significantly outperforming the comparison group (t -test, $p < .05$).

	N	Mean Increase	Std. Deviation	Std. Error Mean
Bridges	979	3.93	2.027	.065
Comparison	949	3.75	1.879	.061

The next table shows the average pre-test and post-test levels for each group. A t -test indicated that the Bridges treatment and control groups were equivalent at baseline.

	Pre-Test Mean	Pre-Test Std. Deviation	Post-Test Mean	Post-Test Std. Deviation
Bridges	5.77	4.447	9.70	4.363
Comparison	5.43	4.099	9.18	4.409

The significant difference in Bridges TCRWP progress may be due to the instructional content of Bridges, which emphasizes authentic discussion of character, setting, and narrative of stories – with embodied classroom practice – as opposed to a more formulaic presentation and recall of classroom texts. Young children benefit from experiencing language in an authentic manner, and physically embodying language through the artistic process.

Researcher comments about BRIDGES – Rob Horowitz – May 2018

Teachers acquired and implemented puppet-literacy teaching strategies that support student development in literacy outcomes in story narrative, sequence, character development, setting and emotional and descriptive expression.

Teachers developed content knowledge and pedagogical skills in puppetry and literacy.

Teachers developed their capacity to use puppet curriculum strategies to support students' development of oral and academic language skills.

The program developed a culture of professional inquiry among teachers and schools. Teacher observations were facilitated by group discussions and reflection on teacher-generated videos of classroom behavior. Teachers discussed how these observations of students improved their classroom instruction, while also facilitating coordination among teachers within schools. Teachers also shared their analysis with other schools, building a project-wide culture of inquiry. Teachers developed their skills at digital documentation and embedded digital and written documentation into their assessment process.

Through professional development, teachers developed their capacity to document and share behavioral indicators of student learning in puppetry/theater and connections to literacy, as well as other behaviors reflecting development in social-emotional learning. Teachers learned methods for collecting video samples of student behaviors, collected video samples, and shared them at professional development sessions.

In this way, the teachers worked in a similar manner to our researchers who observed the Bridges classes. As researchers, we document student and teacher behaviors that can exemplify learning. We look for behavior indicators: what students might do, say, express, write, or use in the puppetry projects that reflect their learning. Similarly, we consider what teachers are doing or saying, and how that might indicate if they are able to incorporate Bridges teaching strategies.

Bridges teachers followed a similar process of observation, documentation and reflection. They then shared their observations within and across schools, building a project-wide culture of inquiry.

Bridges emphasized authentic discussion of character, setting, and narrative of stories – with embodied classroom practice – as opposed to a more formulaic presentation and recall of classroom texts. Young children benefit from experiencing language in an authentic manner, and physically embodying language through the artistic process.