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Manuscripts should be original works not previously published nor concurrently submitted for publication to other journals. Manuscripts should be written clearly and concisely for a diverse audience, especially educational professionals in K-12 and higher education. Topics appropriate for *The Journal of At-Risk Issues* include, but are not limited to, research and practice, dropout prevention strategies, school restructuring, social and cultural reform, family issues, tracking, youth in at-risk situations, literacy, school violence, alternative education, cooperative learning, learning styles, community involvement in education, and dropout recovery.

Research reports describe original studies that have applied applications. Group designs, single-subject designs, qualitative methods, mixed methods design, and other appropriate strategies are welcome. Review articles provide qualitative and/or quantitative syntheses of published and unpublished research and other information that yields important perspectives about at-risk populations. Such articles should stress applied implications.

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Submit electronically in Microsoft Word, including an abstract, and send to the editor at [gregory.hickman@waldenu.edu](mailto:gregory.hickman@waldenu.edu) for editorial review. Manuscripts should also include a cover page with the following information: the full manuscript title; the author's full name, title, department, institution or professional affiliation, return mailing address, email address, and telephone number; and the full names of coauthors with their titles, departments, institution or professional affiliations, mailing addresses, and email addresses. Do not include any identifying information in the text pages. All appropriate manuscripts will be submitted to a blind review by three reviewers. Manuscripts may be submitted at any time for review. If accepted, authors will be notified of publication. There is no publication fee.

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# Examining the Effects of SRA FLEX Literacy<sup>®</sup> on Measures of Lexile<sup>®</sup> and Oral Reading Fluency With At-Risk Middle School Readers

Shannon Flaum-Horvath, Nancy E. Marchand-Martella, Ronald C. Martella, and Cassondra Kauppi

**Abstract:** This study examined the effects of the SRA FLEX Literacy (FLEX) program provided to 44 middle school students considered at risk for reading failure as compared to their peers who were not at risk in reading ( $N = 197$ ) who received instruction in the Holt Elements of Literature series. Two outcome measures were used to judge the effects of the programs on reading improvement—the Scholastic Reading Inventory<sup>®</sup> (SRI) Lexile assessment and the oral reading fluency (ORF) measure included in AIMSweb. Results indicated the FLEX students demonstrated greater SRI Lexile gains than did the comparison group. Additionally, the FLEX students demonstrated significant improvements in their AIMSweb ORF scores. These results are discussed in relation to the need for effective adolescent literacy programs for students at risk for school failure; areas of future research are also noted.

The value of learning to read cannot be underestimated. In fact, “Learning to read is the most important skill our students can learn in school, serving as the very foundation of all other academic subjects” (Marchand-Martella, Martella, Modderman, Petersen, & Pan, 2013, p. 161). For adolescent readers, reading proficiency becomes even more critical. Students must read more complex text with higher levels of understanding to perform well in their middle school and high school classes and on high-stakes assessments as they develop the foundational college and career readiness skills to succeed in post-high school endeavors. Unfortunately, the vast majority (over 80%) of students with learning and behavior difficulties struggle in reading proficiently (Vaughn & Bos, 2015). According to the National Center for Education Statistics (2013), only 32% of eighth graders read proficiently (defined as demonstrating “solid academic performance and competency over challenging subject matter” [p. 7]); in fact, 64% scored at *basic* or *below basic* levels, making complex text and related comprehension activities difficult to navigate and understand.

A nationwide focus has been placed on adolescent literacy efforts. In fact, the International Literacy Association’s *What’s Hot* survey of literacy leaders noted adolescent literacy as *extremely hot* with 100% of survey respondents in agreement that focus should be placed on this area in 2016 (Cassidy, Grote-Garcia, & Ortlieb, 2015). Adolescent literacy is typically defined as focused reading instruction for those students in grades 4 to 12 (Biancarosa & Snow, 2006; Marchand-Martella et al., 2013). When efforts are intensified to promote higher levels of adolescent literacy, particularly for those who are at risk for school failure, researchers are in agreement that five components should be included in instruction (e.g., Boardman et al., 2008; Kamil et al., 2008; Marchand-Martella et al., 2013; Roberts, Torgesen, Boardman, & Scammacca, 2008; Scammacca et al., 2007; Torgesen et al., 2007). These five components include word study, fluency, vocabulary, comprehension, and motivation. Marchand-Martella et al. (2013) include focused overviews of each of these components. Word study involves word analysis and word recognition strategies with

an emphasis on decoding multisyllabic words found in more complex text. Fluency includes activities with reading text in an effortless manner with focus on accuracy and prosody. Vocabulary instruction incorporates specific word instruction along with word-learning strategies such as context clues and glossary and dictionary use. Comprehension strategies are used to help students navigate more complex text with understanding; strategies such as summarizing, asking and answering questions, providing text evidence, and activating prior knowledge are often taught. Finally, motivation relates to providing interesting reading materials in interesting ways (e.g., computer-based literacy), increasing social interactions related to reading, and supporting student autonomy. These five components are critical *must haves* in adolescent literacy efforts, particularly for those who are at risk for school failure.

Further, the Common Core State Standards in English Language Arts (CCSS ELA; National Governors Association Center for Best Practices, Council of Chief State School Officers, 2010) should be addressed (see Marchand-Martella & Martella, 2013, for details on incorporating CCSS ELA into adolescent literacy efforts). These standards serve as a roadmap of what skills should be acquired by grade level. Two sets of standards (K–5 and 6–12) are used with individual grade-level standards provided. Grade-level standards are noted for reading (foundational skills, informational text, and literature); writing; speaking and listening; and language. Adolescent literacy instruction for all learners should include skills aligned to the CCSS ELA.

One program that incorporates the five components of effective reading instruction for adolescents who are at risk for reading failure and is built to address the CCSS ELA is SRA FLEX Literacy (FLEX; Marchand-Martella et al., 2014). FLEX is a comprehensive reading and language arts intervention system for struggling readers in grades 3–5 (Elementary System) and grades 6–12 (Secondary System). Over 90% of the CCSS ELA are covered in the Elementary System with 85% of these standards formally assessed; in the Secondary System, 85% of the Standards are covered with 80% formally assessed.

In *FLEX*, students participate in three learning experiences (digital, print, and project). These experiences are designed to build college and career readiness skills and address word study, fluency, vocabulary, comprehension, and motivation. The digital experience includes computer-based learning with over 1,000 ELA objectives taught through approximately 5,000 activities. The digital experience covers CCSS ELA related to literature, informational text, foundational skills, and language. The print experience incorporates shared, interactive reading with a focus on complex text and includes 32 weeks of instruction. Teachers lead students in debate, discussion, and individualized skill application. The print experience covers CCSS ELA related to literature, informational text, and language. Finally, in the project experience students build higher-order thinking skills through writing-centered projects where they research, present, collaborate, reflect, and evaluate. Twenty projects include activities for each of 15 days of instruction. The project experience covers CCSS ELA in informational text; speaking; and listening, writing, and language.

Two prior investigations have been conducted using *FLEX*. First, Martella and Marchand-Martella (2015) examined key behavior management approaches related to academic and behavioral success that were integrated within *FLEX*. These management approaches have been shown to enhance classroom behavior and set the occasion for better academic performance. Specific program examples were shared to illustrate these management approaches in this paper. Second, Flaum-Horvath, Marchand-Martella, Martella, and Cleanthous (2015) examined the effects of a prepublication version of *FLEX*. The Lexile growth data gathered within the *FLEX* system were examined for 69 students at risk for school failure in grades 3 to 8 from five sites across five states. Teacher satisfaction with the program was also evaluated. Results showed a mean Lexile growth of 166.30L across the five sites (range: 56.11L for Site E to 317.31L for Site B). Also, 47.8% exceeded the expected Lexile growth from fall to spring assessments. On average, 29.32% (range: 5.06 for Site E to 67.14 for Site B; 12.51% for Grade 6 and 42.20% for Grade 5) of the expected yearly lessons were completed; the correlation between Lexile growth and percentage of yearly lessons completed for the program was statistically significant. Teachers also reported satisfaction with the program. The authors noted the following:

Although the majority of the yearly lessons were not conducted, the mean Lexile growth across sites and grade levels was statistically significant. In fact, on average, students in grades 5, 7, and 8 exceeded the expected Lexile growth. This is notable, because once behind it is very difficult for lower-performing students to make the necessary expected gains. Although the average Lexile growth for students in grades 3, 4, and 6 was below the level expected for a year of instruction, their average gains were less than 28L of what would be expected. Also, almost 48% of students exceeded the expected Lexile growth. Importantly, there was

a statistically significant relationship between Lexile growth and percentage of yearly lessons completed. Thus, the more lessons students completed, the greater gains they made...these results underscore the difficulty students at risk face when they fall behind in their reading skills. (p. 55)

No formal investigation of the published version of *FLEX* has been conducted. Further, no investigation has been done to date where middle school students who were at risk for school failure were targeted exclusively for remediation.

The purpose of this study was to examine the effects of *FLEX* using the published version of the program with middle school students identified as at risk for reading failure. Student Lexile growth and growth in oral reading fluency were targeted as measures.

## Method

### Setting and Participants

The site for this study was a middle school located in the eastern part of Washington state. At the time of program implementation, the school served 476 students in the sixth through eighth grades. The school population was predominantly Caucasian (90.5%) and of low socio-economic status (54.2%). Roughly 15% of students schoolwide were identified with special needs. The percentage of students identified as Limited English Proficient was negligible. On the 2014 administration of the state reading test, about 70% of sixth-grade students, 57% of seventh-grade students, and 73% of eighth-grade students schoolwide were considered proficient in reading.

Participants included 241 students in grades 7 and 8. Of these, 44 students were considered at risk in reading and were selected to receive Tier 3 reading support in *FLEX* through the school's Learning Assistance Program (LAP). These students were considered at risk in reading and were chosen based on scores from the Washington State Assessment Measurements of Student Progress (MSP; State of Washington OSPI, 2015), Scholastic Reading Inventory (SRI; Scholastic, 2015), and AIMSweb oral reading fluency (ORF) measures (Pearson, 2012). The criteria for entry into the *FLEX* program were that students had to be one or more grade levels below in reading and/or writing on two or more of the aforementioned assessments and did not receive special education services in the area of reading.

The remaining 197 students were not identified as at risk in reading based on the above measures and were not selected to receive instruction using *FLEX*. These students served as a comparison group, thus providing a metric by which to assess the reading gains of at-risk readers as compared to the reading gains of mostly typical readers. Table 1 presents a summary of characteristics for students receiving instruction using *FLEX* (the "*FLEX*" group) and students not receiving instruction using this program (the "comparison" group). As shown in Table 1, there was a higher percentage of seventh-grade students in the *FLEX* group (54.5%) than in the comparison group (46.7%). There was also a higher percentage of males (61.4%) than



females (38.6%) in the *FLEX* group, indicating that a higher percentage of males than females were identified as at risk in reading. The most frequently reported ethnicity for students in the *FLEX* and comparison groups was Caucasian, representing 88.6% and 81.2% of students, respectively. The majority of students (72.7%) in the *FLEX* group received free/reduced price meals, while slightly over half of students (53.8%) in the comparison group were known to receive free/reduced price meals. Free/reduced lunch status for 23.9% of the students ( $n = 47$ ) in the comparison group was not provided by the district. A small percentage of students (6.8% for the *FLEX* group and 3.6% for the comparison group) received special education services in areas other than reading. Information regarding English Language Learner status was requested but not furnished by the district. Institutional Review Board approval was obtained through the University of Oklahoma.

Table 1

*Student Demographics as a Percentage of the Sample by Group*

Demographic	<i>FLEX</i> ( $n = 44$ )	Comparison ( $n = 197$ )
Grade		
7	54.5	46.7
8	45.5	53.3
Gender		
Female	38.6	48.2
Male	61.4	51.8
Ethnicity		
African American	6.8	0.5
Caucasian	88.6	81.2
Hispanic	4.5	5.1
Other Ethnicities	--	3.5
Missing	--	9.6
Free/Reduced Lunch		
Yes	72.7	53.8
No	27.3	22.3
Missing	--	23.9
Special Education		
Yes	6.8	3.6
No	93.2	96.4

## Materials

The school implemented the published version of *FLEX*. The three experiences (digital, print, and project) were conducted. Those students not considered at risk in reading received instruction in the *Holt Elements of Literature* series (Beers, Jago, & Appleman, 2009, 2010).

## Dependent Variable and Measures

The primary dependent variable was reading improvement. Reading improvement was assessed using two published measures: the *SRI* and the *AIMSweb ORF*.

***SRI*.** The *SRI* is a research-based computer-adaptive reading comprehension assessment that measures reading skill and text difficulty. The standard error of measurement for the *SRI* Lexile assessment is approximately 56L (Scholastic, 2012). The Lexile framework has strong validity; linking studies conducted with the Lexile framework and various standardized measures show correlations ranging from .60 to .93 (Stenner, Burdick, Sanford, & Burdick, 2007).

***ORF*.** *AIMSweb ORF* measures were quick, 1-min administrations of a reading passage, during which students read aloud. The number of words correctly read within 1 min represents the *ORF* score. *AIMSweb ORF* measures possess strong technical adequacy. The alternate-form reliability for the mean of three probes at grades 7 and 8 were .92 and .97, respectively (Daniel, 2010), and the test-retest and split-half reliability estimates were in the 90s (Pearson, 2012). *AIMSweb ORF* scores correlate in the mid-to-low 60s with state reading tests for students in grades 6 through 8 (Pearson, 2012). There is a moderate correlation between *AIMSweb ORF* scores and Lexile Student-Ability measures, where  $r = .59$  for grade 7 and  $r = .65$  for grade 8 (Pearson, 2012).

**Reading improvement.** Reading improvement was determined by (a) fall to spring *SRI* Lexile gains, (b) percentage of students meeting their respective individual *SRI* Lexile growth expectations from fall to spring, and (c) fall to spring gain in words per minute (WPM) on the *AIMSweb ORF* measures. Fall to spring *SRI* Lexile gain was determined by subtracting each student's fall score from the spring score on the *SRI* Lexile assessment. The percentage of students meeting their individual *SRI* Lexile growth expectations was determined by first determining each student's expected growth based on the fall *SRI* Lexile score, in accordance with projections by Scholastic. The expected growth projection is based on fall *SRI* Lexile scores and indicates the growth needed to reach the 50<sup>th</sup> percentile in *SRI* Lexile performance for a given grade level (Scholastic, 2011). Then, the expected *SRI* Lexile growth was compared to the actual *SRI* Lexile growth. Fall to spring gain in WPM on the *AIMSweb ORF* measures was determined by subtracting each student's score on the fall administration of the *ORF* to the respective score on the spring administration of this measure. The annual expected growth is derived from *ORF* norms constructed by Hasbrouck and Tindal (2006). To test for differences in the mean gain in *SRI* Lexile score and *AIMSweb WPM* on the *ORF*, a 2 (instruction: *FLEX* and comparison)  $\times$  2 (grades: 7<sup>th</sup> and 8<sup>th</sup>) ANOVA was conducted. Differences were considered statistically significant at the  $p < .05$  level.

## Procedures

*FLEX* was implemented in four LAP classrooms or "blocks" across one academic year (36 weeks; September

to May). Daily blocks lasted 70 min. Two blocks served students in the seventh grade, and two blocks served students in the eighth grade. Students serving in the comparison group received English language arts instruction using *Holt Elements of Literature* series in 45-min daily classes. One teacher (fourth author) implemented *FLEX* and taught both seventh- and eighth-grade students. The teacher had a master's degree in teaching and eight years of experience. Two teachers implemented the comparison group literature series; these teachers had master's degrees in teaching and an average of 1.5 years of teaching experience (range one to two years).

The seventh- and eighth-grade students received instruction using the digital, print, and project experiences (full implementation). The digital and print experiences were implemented four days per week, and the project experience was implemented one day per week. Students completed one to two digital lessons per week and seven to 13 activities per lesson. They completed 27 weeks in the Print Secondary Volume A Edition and four project experiences. The first 10 min of each class period were devoted to entry tasks/silent reading. The next 50 min were devoted to the digital and print experiences, with students participating in 25 min each for both the digital experience and the print experience. The final 10 min were devoted to exit tasks. The exit tasks included additional review of vocabulary and grammar as well as completion of any tasks from the print experience that were not completed during the 25-min period. One day a week, students worked on the project experience. On these days, the first 10 min of each class period were devoted to

entry tasks/silent reading, then the students participated in the project experience for 60 min.

Prior to implementing *FLEX*, during benchmark periods, and at the end of the year, students in the *FLEX* group and students in the comparison group were administered *SRI* Lexile assessments. Students in the *FLEX* and comparison groups were also administered ORF measures via AIMSweb. Students in the *FLEX* group were assessed prior to implementing *FLEX* and during an additional benchmark period (mid-year) for LAP participation; students in the comparison groups were assessed at the beginning and end of the year.

#### *Procedural Fidelity*

Prior to implementation, the *FLEX* teacher was provided one full day of training by educational consultants from McGraw-Hill Education. She received training on the digital, print, and project experiences. To ensure the program was implemented with integrity, a consultant from McGraw-Hill Education assisted the teacher in setting up her classroom. To assess the quality of program implementation, on-site visits were conducted three times per year (fall, winter, and spring) by program authors (second and third authors), who served as raters. Both raters visited each classroom and observed each class in its entirety. After each observation, raters provided feedback to the teacher. The results for each rater were collapsed across the three observation periods and classes and were compared to determine the degree of inter-rater agreement. Both raters reported optimal levels of program implementation and were in 100% agreement in all areas assessed (see Table 2).

Table 2

*Fidelity of Program Implementation*

Area	Results	Inter-Rater Agreement
SRA <i>FLEX</i> Literacy activities and routines	Follows all routines; makes appropriate modifications when needed.	100%
Teacher support	Level of support is almost always appropriate and aligned to student need.	100%
Error correction	Errors are immediately and accurately addressed in a positive manner; students have an opportunity to correct.	100%
Classroom characteristics	Affect is positive; teacher is organized, with established routines and clear expectations. Students are actively engaged. Pacing of lessons is appropriate and students are monitored.	100%

## Results

### Lexile Growth

Table 3 presents the mean fall SRI Lexile score, the mean spring SRI Lexile score, and the mean gain in SRI Lexile score for students in the *FLEX* and comparison groups. Students without a complete set of data (i.e., a fall SRI Lexile and a spring SRI Lexile score) were eliminated from the analysis. All scores are rounded to the nearest Lexile. At the start, students in the comparison group scored higher and were overall better readers than students in the *FLEX* group. To illustrate, the mean fall SRI Lexile score for seventh-grade students receiving instruction in *FLEX* was 715L, while the mean fall SRI Lexile score for seventh-grade students in the comparison group was 1043L. The mean gain in SRI Lexile for all students in the *FLEX* group was 134L, and the mean gain in SRI Lexile for all students in the comparison group was 30L. The difference in the mean gain in SRI Lexile units was 104L. To determine if there was a statistically significant difference in the mean gain in SRI Lexile score, a 2 (instruction: *FLEX* and comparison) X 2 (grades: 7<sup>th</sup> and 8<sup>th</sup>) ANOVA was conducted. Results showed that there was a statistically significant main effect for type of instruction,  $F_{(1,225)} = 36.873$ ,  $p < .01$  [95% CI 70 – 138]. The effect size, partial eta squared ( $\eta^2_p$ ), was .141.

Partial eta squared is interpreted in the following fashion, where .01 is small, .06 is medium, and .14 is large (Cohen, 1988). There was not a statistically significant interaction ( $p = .752$ ) between instruction and grade level. Thus, the effects of *FLEX* instruction did not vary from one grade level to another.

While *FLEX* students demonstrated statistically significant gains overall compared to students in the comparison group, it was important to determine whether students attained the amount of growth needed to “close the gap.” Based on Scholastic’s growth expectation guidelines, students scoring lower on the fall SRI Lexile benchmark, as most of the *FLEX* students did, need to make greater gains to catch up to standard (Scholastic, 2011). Figures 1 and 2 present the percentage of seventh- and eighth-grade students, respectively, who met their individualized growth expectation, based on the fall SRI Lexile score (Scholastic, 2011). Approximately 83% of seventh-grade students in the *FLEX* group met their individual growth expectation, while 49% of seventh-grade students in the comparison group met their individual Lexile growth expectation. Approximately 81% of eighth-grade students in the *FLEX* group met their individual growth expectation, while just over 52% of eighth-grade students in the comparison group met their individual growth expectation.

Table 3

Mean SRI Lexile<sup>®</sup> Scores by Group

Grade	n	FLEX			n	Comparison		
		Fall SRI	Spring SRI	Gain		Fall SRI	Spring SRI	Gain
7	24	715L	848L	+133L	85	1043L	1077L	+34L
8	16	809L	945L	+136L	104	1131L	1157L	+26L
Total	40	753L	887L	+134L	189	1091L	1121L	+30L

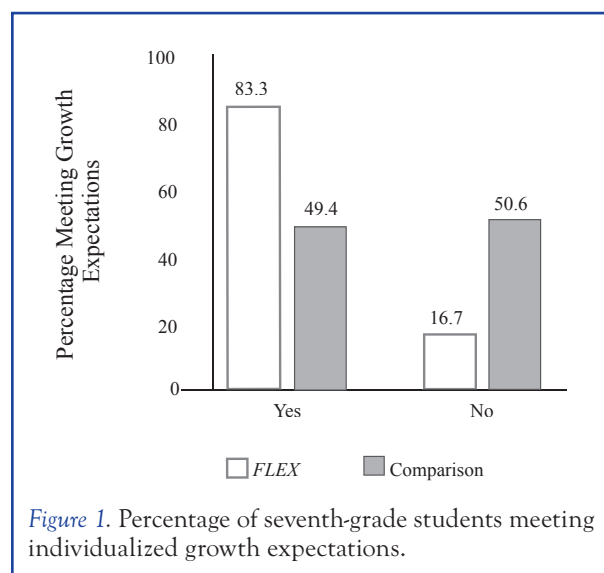


Figure 1. Percentage of seventh-grade students meeting individualized growth expectations.

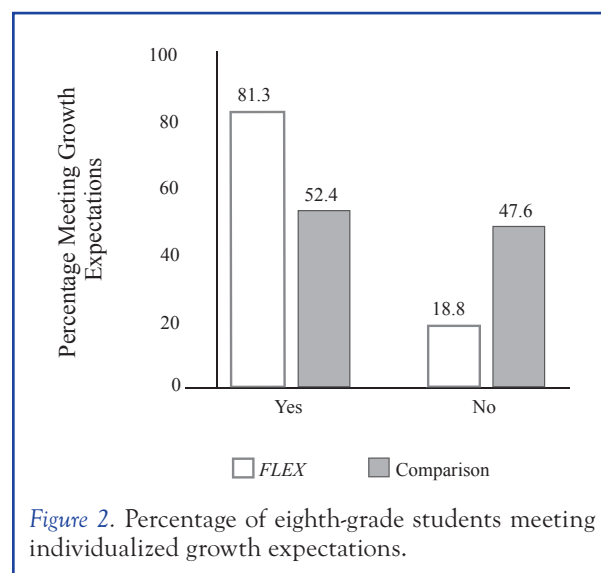


Figure 2. Percentage of eighth-grade students meeting individualized growth expectations.

Table 4 presents the average increase in Lexile score by students' proficiency band on the fall SRI Lexile administration. Students without a fall score and a spring score were excluded from the analysis (four students in the *FLEX* group and eight students in the comparison group). With the exception of seventh-grade students initially performing in the below basic category (for which there was only one student in the comparison group), students participating in *FLEX* experienced, on average, greater Lexile gains than comparison peers at every proficiency band on the fall SRI Lexile administration. For example, seventh-grade students in the *FLEX* group ( $n = 15$ ) and initially performing in the basic range on the fall SRI Lexile administration gained an average 144L compared to 56L for students in the comparison group ( $n = 8$ ). Seventh-grade *FLEX* students initially considered proficient ( $n = 5$ ) gained 109L, while comparison students initially considered proficient ( $n = 47$ ) gained 43L.

Similarly, eighth-grade students in the *FLEX* group experienced, on average, greater Lexile gains than comparison peers at every proficiency band on the fall SRI Lexile administration. For example, eighth-grade students initially performing in the basic range ( $n = 12$ ) gained an average of 136L, compared to 66L for students in the comparison group ( $n = 8$ ). The results for all students combined were similar to those described above based on grade level.

### ORF Growth

Table 5 details the mean WPM on the fall and spring administration of the ORF for students receiving instruction with *FLEX*. Although ORF scores were desired for students in the comparison group, 148 students (approximately 75% of those in the comparison group) were missing a spring score as recorded by the district. Therefore, data from comparison students could not be included in the analysis. For seventh-grade students, the expected growth was 20 WPM, and the expected growth for eighth-grade students was 15 WPM. As shown in Table 5, seventh-grade students gained, on average, 28.75 WPM, which exceeded the expected growth. Eighth-grade students gained, on average, 15.51 WPM, which exceeded the expected growth. On average, all students combined gained 22.61 WPM.

A dependent samples  $t$  revealed that the difference in ORF scores from fall to spring was statistically significant for seventh-grade students,  $t_{(23)} = 11.39$ ,  $p = .000$  [95% CI = 23.53 – 33.97], for eighth-grade students,  $t_{(19)} = 4.40$ ,  $p = .000$  [95% CI = 7.99 – 22.51], and for the combined sample,  $t_{(43)} = 9.80$ ,  $p = .000$  [95% CI = 17.96 – 27.27]. Effect sizes were computed using Hedge's  $g$ , an unbiased estimate appropriate for small sample sizes. The magnitude of effect is interpreted in a similar fashion as Cohen's  $d$ , where .2 is *small*, .5 is *medium*, and .8 is *large* (Cohen, 1988). In terms of the practical significance of educational interventions, a meta-analysis of 124 studies incorporating 181 independent samples and 829 achievement effect sizes yielded a total mean effect size of .28 (Lipsey et al., 2012). The effect size ( $g = 1.06$ ) for students in the seventh grade was considered large. The effect size ( $g = .63$ ) for students in the eighth

grade was considered medium. Finally, the effect size ( $g = .87$ ) for all students combined was considered large.

### Discussion

The results of this investigation revealed positive results across the dependent measures. Students in the comparison group began the year with higher SRI Lexile scores and were at a higher reading level compared to students in the *FLEX* group. The *FLEX* group received daily instruction for 70 min as compared to the comparison group that received 45 min per day, given the *FLEX* group's need for reading remediation. Interestingly, the *FLEX* group made significant gains on the comparison group. The mean gain for the *FLEX* group was over 100L greater than the comparison group by the end of the academic year; this result was statistically significant. Additionally, over 80% of the *FLEX* students met their individual growth expectation, while approximately 50% of the students in the comparison group met their individual growth expectation. There were also greater gains for the *FLEX* students as compared to the comparison students across proficiency bands. These gains resulted in a large effect size. Finally, *FLEX* students on average made greater gains on the AIMSweb ORF measure than the expected annual growth. The increases in ORF scores were statistically significant. These increases translate to medium to large effect sizes.

These results were consistent with those found in an investigation on the prepublished version of the *FLEX* program (Flaum-Horvath et al., 2015) where significant increases in Lexile scores were reported. Additionally, Flaum-Horvath et al. reported that only 29.32% of the expected yearly lessons were completed on average; they suggested that greater gains would be expected if a greater proportion of the program was completed given that there was a statistically significant correlation between Lexile growth and percentage of yearly lessons completed. The percentage of expected yearly lessons completed on average in the present investigation was 75%, resulting in greater gains for all students—47.8% exceeded the expected Lexile growth from fall to spring assessments in the Flaum-Horvath et al. investigation whereas over 80% of the *FLEX* students in the present investigation exceeded the expected growth.

These results are especially important when one considers that over 80% of U.S. students struggle in reading proficiency (Vaughn & Bos, 2015) and why adolescent reading is considered an extremely hot focus topic for 2016 (Cassidy et al., 2015). Instructional programs must be developed to meet the needs of students who are at risk for school failure, particularly those in middle and high school. Such programs must address CCSS ELA standards (Marchand-Martella & Martella, 2013) and contain the five components of effective reading instruction for older learners: word study, fluency, vocabulary, comprehension, and motivation (Marchand-Martella et al., 2013). An especially critical area among these five components is motivation. One approach to addressing the motivational aspects of instruction is by integrating technology into the program.

Table 4

Average SRI Lexile® Growth for FLEX Students by Proficiency Band

Grade	SRI Proficiency Band Fall*	n (FLEX)	Mean Lexile Growth FLEX	n (Comparison)	Mean Lexile Growth Comparison
7	Below basic	4	122L	1	279L**
	Basic	15	144L	8	56L
	Proficient	5	109L	47	43L
	Advanced	~	~	29	5L
8	Below basic	1	263L	1	131L
	Basic	12	136L	8	66L
	Proficient	2	127L	44	38L
	Advanced	1	11L	51	8L
All Students	Below basic	5	150L	2	205L
	Basic	27	140L	16	61L
	Proficient	7	114L	91	41L
	Advanced	1	11L	80	7L

\*For proficiency bands in Lexile by grade level see Appendix C in Scholastic's *Growth expectations: Setting achievable goals*. Retrieved from [http://teacher.scholastic.com/products/sri\\_reading\\_assessment/pdfs/SRI\\_GrowthExpectations.pdf](http://teacher.scholastic.com/products/sri_reading_assessment/pdfs/SRI_GrowthExpectations.pdf)

\*\*n = 1 for this category.

Table 5

Student Performance on AIMSweb ORF Fall and Spring Administrations

Grade	Mean WPM	Fall ORF		Mean WPM	Spring ORF		Gain	Effect Size**
		SD	N		SD	N		
7	118.21	27.15	24	146.96	27.36	24	28.75*	1.06
8	126.60	24.64	20	141.85	19.98	20	15.51*	.63
All Students	122.02	26.08	44	144.64	24.15	44	22.61*	.87

\*Statistically significant,  $p < .01$

\*\*Computed using original standard deviation, per recommendation of Dunlop, Cortina, Vaslow, and Burke as found in Meta-analysis of Experiments With Matched Groups or Repeated Measures Design, *Psychological Methods*, 1, 170-177.



Computer-based instruction can increase student engagement and improve student attitudes toward learning and school (Hattie, 2009). According to Hattie,

Computers are used effectively (a) when there is a diversity of teaching strategies; (b) when there is a pre-training in the use of computers as a teaching and learning tool; (c) when there are multiple opportunities for learning (e.g., deliberate practice, increasing time on task); (d) when the student, not the teacher, is in “control” of learning; (e) when peer learning is optimized; and (f) when feedback is optimized. (p. 221)

Such an approach is advocated by the National Education Association (NEA) as an approach to making instruction more student-centered (NEA, 2013). *FLEX* is designed to address these key issues.

Although positive findings were shown in the present investigation on the effects of *FLEX*, there are several caveats. First, although a comparison group was used in this investigation, the group was not equal to the *FLEX* group. The comparison group involved students who were higher readers; however, there may have been other differences between the two groups that could have accounted for the differences before and after the investigation. Therefore, future investigations should use a true control group to remove any selection and history effects.

Second, the comparison group was exposed to the *Holt Elements of Literature* series. Treatment fidelity was not measured to ascertain the extent to which the comparison program was implemented. Therefore, future research should conduct fidelity measures on the comparison or control program.

Third, given that the investigation was implemented in a rural school district in Eastern Washington, it is unknown whether these results would generalize to students in other areas of the country or areas with different demographics. The prepublication study provided some preliminary information on this issue in that the program was implemented in districts across five states; however, further replications are needed to determine the generalizability of these effects to other students. A related issue is that the current investigation involved authors of the *FLEX* program as fidelity observers. The authors were not involved in the prepublication implementation; therefore, there is a need to determine the effects of the program by researchers who are not affiliated with the program.

Finally, it is unknown what the effects of the program would be if it were implemented across all instructional days. The program was implemented across 75% of the instructional days due to the need for training of classroom staff and meeting the technological requirements at the beginning of implementation. There are data to suggest the results would be greater if the program were to be implemented more often as evidenced in the prepublication and current investigations. However, further research should establish the effects of the program when implemented across all instructional days.

Although there are several caveats present in this investigation, the results are promising and suggest that *SRA FLEX Literacy* can produce significant improvements in the reading performance of adolescent students who are at risk for school failure. Further research is warranted on the program to validate these effects.

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# Maximizing Academic Success for Foster Care Students: A Trauma-Informed Approach

Anna Berardi and Brenda M. Morton

**Abstract:** Children in foster care have experienced significant trauma due to the loss of primary attachment figures and the circumstances associated with that loss. Children who have suffered trauma generally present with cognitive, social, physical, and emotional vulnerabilities. These vulnerabilities are often expressed in the P-12 academic setting through difficulties with behavioral and emotional self-regulation, academic functioning, and physical ailments and illness related to chronic stress-induced compromised immune systems. This results in academic failure for half of all children in care. Training in how to respond to children who have suffered trauma is essential to ensure that children are comfortable and feel secure in the classroom so that they can access their education. To that end, a framework to support children in P-12 settings who are particularly vulnerable to academic failure due to trauma is presented.

Foster children are an invisible population. Moved from one foster care placement to another, they are shuffled through life. Their complex needs due to abuse and neglect compound the challenges they will encounter as they work through their P-12 education. While Zetlin (2006) and Zetlin, MacLeod, & Kimm (2013) have identified children in foster care as one of the most academically vulnerable groups of learners in schools today, Wolanin (2005) has noted that people outside of the child welfare system know very little about the foster care system. This lack of information creates an unfortunate disadvantage for the student, teacher, and administrator, creating a significant disconnect.

In addition to academic struggles, foster youth face a bleak future in many areas of their lives. Pecora et al. (2005) reported that 56.3% of foster youth alumni earned a high school diploma, 22.2% experienced homelessness, 16.8% received Temporary Aid to Needy Families or General Assistance, 33.2% live at or below the poverty line, 54.4% report mental health concerns, 25.2% are diagnosed with Posttraumatic Stress Disorder, and 62% report having less than \$250 in total financial assets.

## Barriers to Academic Success

Foster children experience a divided focus between survival (Rossen & Cowan, 2013), working through the challenges of state custody (Samuels & Pryce, 2008), and academics. Many foster children and youth will face significant trials as a result of abuse and neglect, including the potential of mental and developmental delays (Bruskas, 2008). For 14% of foster children, the abuse and neglect results in disabilities (Mitchell, Turbiville, & Turnbull, 1999).

Children with traumatic backgrounds have lower IQs and are underachieving in reading, comprehension, and writing compared to children in foster care for reasons other than neglect (Stone, 2007). Emerson and Lovitt (2003) found foster children to be significantly below their non-fostered peers on standardized tests, with math and reading to be of critical concern. These findings were echoed by Shin (2003), who reported that over one third of foster youth, with an average age of 17.5, were reading

below the sixth-grade level and 18% with a ninth- and eleventh-grade reading level.

The impact of frequent moves combined with increased need for special education services, the side effects of attachment-based trauma, and common responses to the foster child's behavior further identify the foster child's experience. It also illustrates our need to examine the efficacy of our current efforts.

## Access and Continuity of Special Education Services

The long-lasting consequences of early traumatic stressors can manifest in the classroom in a variety of ways, including identification for special education services. Learning, behavior, and emotional disabilities are the most common diagnoses for Individual Educational Plans (IEP) and Section 504 plans for students who qualified for special education (Morton, 2015). With abuse and neglect as the prevailing reason children come into care, it is not surprising to learn that approximately 50% of the foster children with IEPs have them for emotional/behavioral issues (Morton, 2015).

The consistent movement of foster children makes it difficult to ascertain the number of foster children receiving special education or Section 504 services. Geenen and Powers (2006) conducted a study of students in an Oregon urban school district. They found 44% of foster children were enrolled in special education, of which 30% were placed in the most restrictive learning environment. This finding is consistent with that of Zetlin (2006), who found that one third to one half of foster children are identified for special education, versus 10% to 11.4% of the general school population (McLeskey, Rosenberg, & Westing, 2010). It is important to note that while foster children appear to be overrepresented in special education, there are foster children in schools that are being underserved. In these schools there are children, unable to qualify for special education, who still have challenges who need to be addressed. These can include academic, behavioral, or counseling needs (Stone, D'Andrade, & Austin, 2007). Due to frequent relocations and uncertain residency status, these needs often are not recognized or communicated to the appropriate school personnel.



The high mobility and frequent school changes create a cascade of additional complications, including record transfers and evaluation for academic placement. Because youth in care are more likely than their non-foster peers to lack a consistent advocate, they experience these special education violations in greater numbers than their non-foster peers (Geenen & Powers, 2006). Lack of consistent advocacy in the education of the foster child is a troubling result of high mobility. This begins to explain why students who received special education services at the previous school associated with their former foster care placement are no longer receiving the same services in a new school under the supervision of a new foster parent(s).

Services are often delayed at the new school due to late record transfers and districts' requirements for their own evaluations, resulting in extended periods of time without needed services (Zetlin, MacLeod, & Kimm, 2013). Unfortunately, foster parents, who are often most familiar with the academic needs of the child in their care, are typically unfamiliar with how to navigate and negotiate through special education and Section 504 services (Vacca, 2008). These delays have both academic and disciplinary consequences. Without understanding the needs of their students, teachers are at a loss to understand the challenging behavior that manifests in the classroom. Therefore, foster youth have a higher rate of suspensions for behavior problems than their non-foster peers (Courtney, Terao, & Bost, 2004).

### *Posttraumatic Stress Risks and Implications*

Pecora et al. (2005) report that approximately 25% of foster children are at risk for developing posttraumatic stress disorder (PTSD), a significantly higher rate than the 7% risk rate for non-foster populations (Pecora et al., 2005; Vacca, 2008). This has significant implications for educators as they attempt to create a safe, welcoming environment without understanding the stimuli that could trigger a posttraumatic response from a student with an abuse or neglect background (Holmes, Levy, Smith, Pinne, & Neese, 2014).

The impact of stress and trauma affects each child in unique ways. Some children become overanxious and panicked in the classroom environment. Children suffering from posttraumatic stress disorder may instinctively freeze when they experience anxiety and can therefore be viewed as oppositional or defiant by others (Souers & Hall, 2016). This is one explanation for why foster children experience disciplinary actions that remove the child from the classroom disproportionately more often than non-foster peers. All of these children need permission to retreat to a place either within the classroom or school campus so they can practice learned skills of returning to an emotionally self-regulated state.

Because foster children could be suffering from anxiety or panic attacks due to PTSD, it is important to have a plan in place that is rehearsed with students so that they know how they will be supported if or when they become anxious. Training in how to respond to children who have suffered abuse or neglect is essential to ensure

that teachers know how to read and respond to the signs of an overstressed child. The attitudinal and behavioral shifts that this training inspires within educators changes classroom culture, promoting a greater sense of overall comfort and security for the child before anxiety escalates. Lacking this understanding, or without an IEP or Section 504 plan to help accommodate the student, educators are prone to reprimand an anxious child for defiant behavior rather than design interventions (which often include class removal) to empower the child to return to a sense of inner safety and control.

### *Suspension and Expulsion*

Suspension and expulsion hinder the educational process. Scherr (2007) reported 24% of children and youth in foster care had either been suspended or expelled from school; the national average for all children is 7%. While the student is removed from the classroom, suspension and expulsion do not address the underlying issues that caused the negative behavior that began the removal process. It is clear that foster youth bring emotional and behavioral challenges into a classroom and that the educational system may not be adequately prepared to meet those unique needs. Foster children need specific and individualized programs designed to address their challenges. Suspensions are a predictor of student outcomes, which include crime, delinquency, and drug use (Hemphill, Plenty, Herrenkohl, Toumbourou, & Catalano, 2014). The absence of programs or processes to address these behaviors results in adults in the criminal justice system or as welfare recipients (Monahan, VanDerhei, Bechtold, & Cauffman, 2014).

### *Implications*

As indicated, children in the foster care system generally present with psychosocial, cognitive, and physical vulnerabilities. These challenges are often expressed through difficulties with behavioral and emotional self-regulation (acting out or withdraw behaviors), academic functioning (completing grade-level academic tasks), and physical ailments and illness related to chronic stress-induced compromised immune systems (Commodari, 2013; Geddes, 2006; Nagel, 2009). Their needs are often unintentionally ignored due to school-based systems ill-equipped to understand the needs of the traumatized child. The foster child is perhaps the most visible representative of vulnerable children who need educators to rethink our approach to responding to their ongoing educational needs.

### *A Trauma-Informed Approach to Understanding the Foster Child*

A trauma-informed lens proposes that the foster child's academic and social difficulties are indicators of a specific type of adverse childhood event, namely relation-based trauma disrupting the child's ongoing need for safe and nurturing attachment to his or her primary caretakers. This attachment-based trauma disrupts the physical, psychological, and social development of the child (Bowlby, 1988; Dozier & Rutter, 2016; Perry, 2009).

A trauma-informed approach represents an integration of neurobiology and development, traumatology, and attachment theory (Kinniburgh, Blaustein, Spinazzola, & Van Der Kolk, 2005; Van Der Kolk, 2014; Siegel, 2012). This integration provides a framework for increasing our understanding of the complex challenges foster children may bring into the school environment, inviting a paradigm shift in our response.

### *Characteristics of Secure Attachment*

Attachment theory proposes that human development and functioning is dependent upon each person experiencing secure attachments characterized by sustained, consistent, and appropriate care throughout childhood (Bowlby, 1988; Cozolino, 2013). This care provided by trusted others creates internal working models/schemas that life is manageable despite inevitable uncertainties and coexisting anxieties. Anxiety is thus managed as we trust that if and when we need help along the way, we know we can reach out to an available community of care.

While our needs for secure attachments are lifelong, it is most formative during the first 18 years of life, and is crucial to all aspects of neural development and functioning, including a child's capacity to learn, emotionally self-regulate, and engage in prosocial behaviors characterized by empathy and moral reasoning (Cozolino, 2013; Siegel, 2012). Secure attachment also correlates to the developing immune system and is predictive of childhood and adult health (Bowlby, 1988; Everly & Lating, 2012; Van Der Kolk, 2014).

In addition to providing a sustained and consistent caring presence, quality attachment behaviors are characterized by genuine interest in the life and experience of the child, and the ability to cue into the emotional, social, physical, and cognitive needs of the child. The attuned attachment figure is able to discern age-appropriate responses, whether the child needs a structure-based (guidance, instruction, correction, etc.) or a nurture-based (comforting, reassurance, affection, etc.) response. Optimal attachment behaviors also include the adult's ability to discern when the child needs closer proximity and connection versus when the child needs greater independence and separation (Berardi, 2015; Siegel, 2012). The attuned parent honors and celebrates the child's changing needs rather than disparaging some needs (for example, the need for connection) while overvaluing others (for example, the need for separation).

Quality attachment requires clear delineation between the parent and child roles. This is most possible when the adult is able and willing to fully embrace the role of parent, both emotionally and financially. Likewise, the adult can manage his or her own needs for connection and validation through adult relationships, decreasing the likelihood of manipulating the emotional tone of the parent-child relationship, either through resenting the parenting role or using the child to appease personal feelings of inadequacy or loneliness (Bowlby, 1988; Siegel, 2012). When adults are not willing or able to assume the role of parent, interaction patterns can be characterized from covert messages of shame and guilt to overt behaviors of physical or emotional abuse and abandonment.

Sustained and consistent quality attachment over time does not imply that no deviation to this pattern should ever occur. Momentary parental failures and unavailability allow the child to understand the limitations of the parent—of everyone—to empathically respond to one another's needs at all times. Good-enough parenting strengthens our inner reserves so we can tolerate the inevitable frustrations of loved ones not being able to meet our every need. On a daily basis, the child learns that the parent cannot and should not prevent or protect from all things frustrating, scary, or painful. Rather, more times than not, the parent has taught the child that a caring presence is available for the asking. This repetition of safe connection, moments of misattunement followed by repair and the resumption of connection, sets the stage for the child to gradually learn to tolerate and accept life's limitations and the ultimate need and ability for each person to manage internal anxiety or grief when people or circumstances disappoint (Berardi, 2015).

This reflects the building blocks of self-efficacy, frustration, tolerance, and empathy. We are able to honor the needs of others (decenter ourselves) as an outgrowth of having received sustained care, even as we learn that self and other are never all-knowing or all-caring. Meanwhile, we have the inner confidence to know that we can tolerate and manage the anxiety, reach out if needed, and trust that eventually all will be well (Berardi, 2015).

### *Neurobiological Correlates of Attunement*

Physiological processes associated with attachment and self-regulation of thoughts, feelings, and actions are complex. However, an overview of key central and peripheral nervous system processes along with two of our innate stress-response systems illustrate the interconnectedness of attachment experiences and our physical, emotional, and cognitive development.

Habitual, quality attachment behaviors reinforce neurobiological processes associated with the building of internal attachment schemas that are characterized by trust in the love and availability of others, belief in one's innate sense of ability and worth, and confidence in one's ability to manage the inevitable anxiety that accompanies daily life challenges. Beginning with the empathic eye gaze and the soothing sounds and touch of a consistent caretaker, the growing infant's ability to be comforted indicates and supports the proper flow and regulation of oxytocin and acetylcholine, two of many neurochemicals responsible for promoting the functioning of the parasympathetic nervous system (PNS; Everly & Lating, 2012; Perry, 2009; Siegel, 2012). The PNS is designed to provide rest to the sympathetic nervous system (SNS), which is activated by norepinephrine and cortisol in response to even the most common and predictable stressors the child interprets as fearful.

Daily, the child experiences heightened states of anxiety when physically uncomfortable or scared. The limbic system registers that all is not well, triggering a cascade of neurochemical processes that release norepinephrine into the SNS, designed to ready the mind and body to respond to danger. This locus coeruleus/norepinephrine response

is commonly referred to as the Fight-Flight-Freeze response (Everly & Lating, 2012; Van Der Kolk, 2014; Vermetten & Bremner, 2002).

Norepinephrine is an effective but short-term facilitator of action. Thus, simultaneously a second stress response system is activated, called the General Adaptation Syndrome (Everly & Lating, 2012). Driven by the hypothalamic-pituitary-adrenocortical (HPA) axis, the body now prepares for the possible long-term energy needed in response to the perceived or actual danger. This is primarily fueled by cortisol, often described as the long-term stress response hormone (Everly & Lating, 2012; Vermetten & Bremner, 2002). Once the brain perceives that the threat has passed, the body begins to return to homeostasis, ideally characterized by a give-and-take among these systems, with distinct periods of calm, rest, and subjective feelings of safety.

Through repeated responses by the consistent care of the parent, each time a child's stress response systems are activated, the child is increasingly able to reestablish homeostasis as a result of integrated functioning between central and peripheral nervous system processes (Siegel, 2012). As the amygdala registers potential danger, the hippocampus becomes increasingly adept at identifying new and similar experiences with corresponding memories, the beginning of differentiating what may be a non-danger event (the coach is yelling so I can hear her) rather than an event requiring action (yelling leads to hitting, so watch out). As these messages are sorted by the frontal cortex, eventually a child can reason that while moments in the day are scary, these fears are tolerable and survivable. As the child self-soothes and uses internal and external resources to cope, they reinforce new memories of self-efficacy. As the child repeats these encounters over the years, language acquisition and the capacity of the prefrontal cortex to discern meaning and choose a response further promote the growing child's capacity to self-regulate amidst the stressors of the social environment and one's own internal need states (Siegel, 2012; Van Der Kolk, 2014; Vermetten & Bremner, 2002).

With each age and developmental stage, life presents new and increasingly stressful demands. The constant give-and-take of attachment relationships, including the child's relational reciprocations with family, friends, and the larger community, reinforces the neural networks associated with our sense of self, the capacity to self-regulate emotions and bodily processes, and the capacity to engage in complex reasoning processes. Thus, our increasing ability to understand how social and emotional health are primary building blocks to physical and cognitive health further reinforces the fundamental importance of attachment to whole, integrated growth and functioning.

### *Inadequate Attachment and Its Consequences*

The definition of a foster child indicates that a primary attachment relationship has been interrupted at some point in the child's development. The loss of a primary attachment is always accompanied with grief and anxiety (Jones &

Morris, 2012). However, many of the daily routines comprising quality attachment are often impaired long before the physical loss of the attachment figure or subsequently are not adequately established in the foster care setting(s). These realities are the building blocks of risk for the growing child.

Stressed parents caring for a child before they are emotionally ready may have difficulties knowing how to attune to the infant's needs, either missing cues for comfort and assurance or imposing attitudes and responses reflecting misunderstanding or intolerance (Cozolino, 2014; Siegel, 2012). The child searches for visual, auditory, and kinesthetic signs of the caretaker as a safe haven. For example, a hungry, scared, and overwhelmed infant may not be able to calm down enough to nurse, which in turn activates further annoyance from a parent unable to empathically connect to the child's needs, who then responds with anger, further activating the child's sense of fear and alarm.

Repeated misattunement robs the child of extended states of relaxation, impairing the parasympathetic nervous system's ability to return the body to a homeostatic state of calm. Rather, the child experiences an overabundance of norepinephrine and cortisol surges, placing stress on the child's emotional and cognitive processing, digestive, and immune systems, further increasing the child's vulnerability to social, emotional, and physiological dysregulation brought on by sustained distress (Everly & Lating, 2012; Van Der Kolk, 2014). Such dysregulation overwhelms the child's ability to cope, inviting reactive behaviors such as withdrawal or aggression, further complicating the child's social interactions (Cozolino, 2014).

### *An Invitation to Rethink School Culture*

As this review indicates, foster children who have experienced poor, inadequate, or inconsistent attachment relationships are at increased risk for problematic social, emotional, cognitive, and physical functioning. Whether diagnosed with a reactive attachment style, major depression, conduct disorder, or a learning disability, these children often are displaying the cumulative and progressive effects related to ongoing loss of quality attachment, causing neurological impairment manifested in the child's biological, psychological, social, and cognitive development. Most alarming, data gleaned from the Adverse Childhood Experiences studies suggest this is a national epidemic, with well over 50% of the population, not just foster children, at risk for such impairment (Centers for Disease Control, n.d.).

Meanwhile, schools are under increasing pressure to answer for P-12 students who do not perform at grade level. Educators are often blamed for inadequate teaching methods while long-time educators know that today's students come to school more challenged than in previous generations.

A trauma-informed understanding of the foster child's needs and behaviors invites schools to take a different approach, a school structure informed by advances in traumatology, neurodevelopment, and attachment. The following proposes what such a framework requires.

## A Movement Toward Trauma-Informed Schools

### *Educator Response*

Understanding that relation-based trauma has a profound impact on a student's physical, emotional, and cognitive development and that it is impacting a majority of P-12 students in addition to foster children provides a sober context to why many children struggle to be academically and socially successful in school. Change is imperative lest we continue to produce marginal to dismal outcomes in many of our most vulnerable school districts.

In response, there is a growing movement toward creating trauma-informed schools (Stevens, 2012). Consensus among multidisciplinary professionals (educators, researchers, mental health and health care practitioners) acknowledges that the nature and severity of need requires a systemic change within school districts, not just adjustments within a single classroom. Trauma-informed practices have steadily gained momentum over the past decade as youth residential care facilities, detention centers, hospitals, and other institutions serving vulnerable populations have abandoned token- and other positive reinforcement-based social learning methods with trauma-informed programming (Children's Defense Fund, 2014; Substance Abuse and Mental Health Services Administration, 2014). No longer is recovery from trauma viewed as primarily occurring within professional counseling environments. Rather, recovery requires a community-based way of being in relationship with each other, using relationship to heal relational injuries as prerequisite to and co-occurring with academic achievement.

As educators have embraced this shift, recognizing they are not serving as counselors but helping children learn by providing a nurturing and safe school environment, districts across the country and internationally are implementing change (Prewitt, 2014; Stevens, 2012). Encouraging data are emerging from schools that have successfully reformed district culture, including policies, structure, and teaching methods (Prewitt, 2014; Stevens, 2012).

These changes cannot be formalized and implemented in isolation, but in partnership with trauma-informed advocacy groups. Education and traumatology experts help districts design frameworks relevant to that district's culture and needs. For instance, Massachusetts Advocates for Children (Cole et al., 2005; Cole, Eisner, Gregory, & Ristuccia, 2013) has produced documents outlining the need for school reform, a framework for how to design a trauma-informed school, and a detailed process for how to begin advocating and changing public policy. The documentary, *Paper Tigers* (Redford, 2015), chronicles a high school in Washington state as it transitioned to trauma-informed school programming. And, Morton and Berardi (2016) cosponsor the Trauma-Informed School Initiative (TSI), a partnership with George Fox University's College of Education and its Trauma Response Institute to offer training and support for local school districts seeking to implement and monitor trauma-informed school programming.

## *Mobilizing for Change*

Foster children attend school at a developmental disadvantage compared to peers from homes where adequate and sustained attachment is consistently provided. Anxiety management, capacity to focus and comprehend new concepts, and resilience in the face of daily challenges to one's sense of cognitive, social, and emotional competency can easily be impaired.

A trauma-informed response invites the educator to view the child's functioning through a trauma-attachment-neurobiological lens (Kinniburgh et al., 2005). Rather than labeling the child's behaviors as noncompliant or defiant, the behaviors make sense in that the child is reacting to the environment congruent with the nature of sustained loss and trauma. Before instruction can begin, overly stressed children need to be reassured that they are understood, valued, and are now safe in order to return to a state of calm. When such responses are characteristic of the broader school system, children begin to associate school as a secure base, allowing growth and development to resume and thrive. Such change includes:

- a paradigm shift within all school personnel regarding the purpose and function of the school as an institution, and the interpretation of the student's needs and behaviors;
- a commitment by all school personnel to learn about the interconnectedness between safe and secure relationships, neurological development, learning, and pro-social behaviors, along with new ways of response impacting discipline, classroom management, and teaching methods;
- an ongoing and working partnership with parents, school personnel, and students; and
- an ongoing collaboration with community trauma-informed experts who assist in training and monitoring progress (Children's Defense Fund, 2014; Massachusetts Advocates for Children, 2005; Massachusetts Advocates for Children, 2013).

Examples of trauma-informed strategies for school personnel include:

- curiosity and compassion for the life circumstances of each student;
- unwavering acceptance of each child regardless of the student's successes or failures;
- overtly addressing in each class the culture of care, including the why and the how, that characterizes the classroom and the school at large; and
- a view of discipline or structure as a method of providing safety to self and others while affirming the student's ability to learn less harmful coping measures.



With all stakeholders committed to creating a trauma-informed school environment, children impacted by trauma will receive the support needed to thrive. Creating such an environment, however, requires focus and commitment. School districts can begin this process by engaging in conversation with parents, educators, administrators, school boards, students, and local experts in trauma-informed training. Such partnerships can assure school districts of networking with other districts and allied organizations committed to increasing efficacy in serving the diverse developmental needs of all learners.

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# Differences in Extracurricular Activity Participation Intensity Among Middle School Students: Implications for Hispanic Youths

Victor Villarreal

**Abstract:** Extracurricular activity participation has been associated with a multitude of positive outcomes, including school completion, and research suggests that students at risk for school failure are particularly likely to benefit from participation. However, before extracurricular activity participation can be promoted to address such issues, predictors of participation should be examined. Thus, the purpose of this study was to examine the school-based extracurricular activity participation characteristics of middle school students, with an emphasis on that of Hispanic students. Hispanic students were less likely than European American students to participate in sports-related activities during the seventh grade. Additionally, within the Hispanic group, females and participants with a bilingual education background also reported lower participation. Results suggest that discrepancies in extracurricular activity participation rates for Hispanic students appear early, and they also underscore the significance of examining participation variability within this group.

Beginning in middle school and continuing through high school, many adolescents participate in school-based, structured extracurricular activities. Associations between involvement in such activities and outcomes across academic, behavioral, and psychological domains are well-documented and suggest that extracurricular activities are beneficial to participants and can lead to long-term achievement, including high school completion (e.g., Darling, 2005; Eccles & Barber, 1999; Feldman & Matjasko, 2005). Research in this area also indicates that early extracurricular activity participation is critical, as it is predictive of later participation (e.g., Bohnert, Kane, & Garber, 2008; Denault & Poulin, 2009; Pederson, 2005). Thus, promotion of participation in extracurricular activities, when they are first offered, may represent one strategy with which to improve outcomes of students at risk for school failure.

Notably, youths who are at the greatest risk for school failure seem to benefit the most from participation in extracurricular activities (Holland & Andre, 1987; Mahoney & Cairns, 1997), and Hispanic students represent the largest and arguably most at-risk ethnic minority group in American schools (Aud et al., 2013; Passel, D'Vera, & Lopez, 2011). Additionally, social capital theoretical perspectives suggest that participation in extracurricular activities could be particularly beneficial to Hispanic students. However, relatively little is known about the participation experiences of Hispanic adolescents, especially at stages when these opportunities are first offered (i.e., middle school). This represents a substantial limitation, as knowledge of potential differential participation patterns could be used to strategically promote participation in extracurricular activities. Thus, the purpose of this study was to explore possible variations in participation characteristics between Hispanic and non-Hispanic youths, as well as variations within the Hispanic group. Implications of the findings are presented within a social capital theoretical framework that considers the impact of early exposure to extracurricular activities.

## Benefits of Extracurricular Activities and Early Participation

Academic clubs, individual or team sports, and performance clubs (e.g., band) are common examples of school-based extracurricular activities. These activities routinely include regular participation schedules, rule-guided engagement, direction by adult activity leaders, and voluntary participation (Larson, 2000; Mahoney & Stattin, 2000). Research on the effects of extracurricular activity participation indicates that it is related to mostly positive outcomes that endure over time. Regarding education, multiple studies demonstrate that participation is linked to higher academic aspirations, grades, and rates of high school graduation (Bartko & Eccles, 2003; Brown & Evans, 2002; Darling, 2005; Davalos, Chavez, & Guardiola, 1999; Diaz, 2005; Dotterer, McHale, & Crouter, 2007; Eccles & Barber, 1999; McNeal, 1995). Participation in extracurricular activities has also been associated with decreases in externalizing symptoms, risky and delinquent behavior, and interactions with antisocial youth (Barnes, Hoffman, Welte, Farrell, & Dintcheff, 2007; Cooley, Henriksen, Nelson, & Thompson, 1995; Fredricks & Eccles, 2006; Mahoney & Stattin, 2000; Villarreal & Gonzalez, 2016).

Benefits of extracurricular activity participation are posited to result from opportunities to access and accumulate school-based social capital. Social capital can be broadly defined as connections to individuals within networks that provide access to resources and support (Stanton-Salazar, 2004). Components of social capital include attitudes, behaviors, norms, and information channels (i.e., knowledge, skill sets, and resources; Smith, 2007); these components support and facilitate the accomplishment of goals. School-based social capital refers to those information channels, behaviors, and supports unique to school settings that support the accomplishment of school goals (e.g., school completion). School-based extracurricular activities fit within this framework, as they offer supportive organizational opportunities that allow for unique social interactions (Lin, 2001; White & Gager, 2007). For example, participating in

extracurricular activities enables students to access general network support, such as school organizations and related organizational support, and provides students with opportunities to establish connections with individuals exhibiting prosocial behavioral norms and aspirations (Barber, Eccles, & Stone, 2001). This includes prosocial peers and school-based adults—including teachers and coaches who serve as mentors and leaders—that can lead to relationships and mentorship opportunities that uniquely increase school engagement and achievement (Denault & Poulin, 2008).

Notably, research indicates that early participation in extracurricular activities is a predictor of participation at later stages. For example, an investigation that followed adolescents over a four-year period showed that levels of extracurricular activity participation decreased over time; furthermore, the decrease was steeper at later years for students with lower initial levels of participation (Denault & Poulin, 2009). Similarly, a study that included students of various ages indicated that older adolescents participated in fewer activities than younger adolescents (Simpkins, O'Donnell, Delgado, & Becnel, 2011). Others have found that the percentage of students participating in school-based extracurricular activities decreases modestly across time or that the participation rate is mostly stable (Bohnert et al., 2008; Mahoney, Schweder, & Stattin, 2002; Pederson, 2005). Consequently, youth participation levels are likely to reach a peak in early- to mid-adolescence and then decline over time, and accumulation of school social capital is likely greater for those initiating participation at earlier ages. Therefore, understanding extracurricular activity participation characteristics at earlier stages may be especially beneficial.

### Hispanic Students, Social Capital, and Extracurricular Participation

Access to the school social capital appears especially important for Hispanic students. As previously noted, Hispanic students continue to attain relatively low levels of educational achievement and attainment, including lower rates of high school graduation and completion of postsecondary degrees (Aud et al., 2013). Additionally, Hispanic youths likely have lower levels of access to social capital. Social inequality and low socioeconomic status associated with being Hispanic in the United States may hinder access to opportunities to acquire social capital in the home and community settings (Lin, 2001; White & Gager, 2007). For example, social networks of Hispanics have a narrow range of nonfamilial and professional members (Cornwell & Cornwell, 2008; White & Gager, 2007). Hispanic families also often perceive isolation from school systems and school staff (Gamoran, Turley, Turner, & Fish, 2012; Stanton-Salazar, 2004; Suárez-Orozco, Suárez-Orozco, & Doucet, 2003), potential sources of school social capital.

Research that suggests that select, individual-level student characteristics impact the relationship between extracurricular activity participation and outcomes further suggests that Hispanic students are likely to benefit from participation in school-based extracurricular activities. Specifically, youths at the greatest risk for school failure

benefit more from participation (Holland & Andre, 1987; Mahoney & Cairns, 1997). However, before participation in extracurricular activities for Hispanic youths is suggested as one targeted, school-based method of addressing issues that lead to academic failure, an important step is to examine predictors of their participation and their participation characteristics.

When examining variability in extracurricular activity participation across different groups, research shows that African American students are as likely as European American students to participate in most extracurricular activities (e.g., Mahoney & Cairns, 1997; Marsh & Kleitman, 2003; Pederson, 2005). Although the use of Hispanic samples in studies of extracurricular activity participation is significantly lower than that of African American and European American samples, results indicate that participation rates are lower for Hispanic high school students (Brown & Evans, 2002; Darling, 2005; Davalos et al., 1999; Feldman & Matjasko, 2007). Little, however, is known about the participation rates of Hispanic students before high school, during the middle school period. This represents a critical limitation, especially when one considers that students are typically first provided opportunities for extracurricular activity participation during middle school and that early participation seems predictive of later participation. Additionally, few studies have explored characteristics within the Hispanic group that further predict participation.

### The Current Study

The present study examines patterns of participation characteristics in school-based extracurricular activities among an ethnically diverse sample of middle school students, with a focus on Hispanic students. The first goal was to determine whether student ethnicity predicted extracurricular participation intensity during the middle school years. The second goal was to examine potential differences in participation between students within the Hispanic group. Student demographic characteristics, including sex, ethnicity, economic status, and bilingual status, were examined as they have been associated with different rates of extracurricular activity participation (e.g., Pederson, 2005; Peguero, 2010; White & Gager, 2007). This investigation contributes to the literature by focusing on participation characteristics of Hispanic students at an early stage, when patterns of future behavior and participation appear to be set, and it provides a foundation for continued research on Hispanic youths' extracurricular participation.

### Methods

#### Participants

Participants in the current study were originally recruited from one of three school districts in Texas across two sequential cohorts in first grade during the fall of 2001 and 2002. At the time of initial recruitment, consent was received for 784 participants. From this group, participants were included in the present study if they had not left the study and were in the seventh grade during



the 2007–08 or 2008–09 academic years. Analyses of a broad array of variables indicated that students meeting eligibility criteria for the current study ( $n = 471$ ) were more likely to come from the first cohort of participants than those original participants not included in the current study ( $n = 313$ ); however, participants and nonparticipants did not vary on variables relating to performance on a district administered test of literacy, age, sex, ethnicity, eligibility for free or reduced price lunch, or bilingual class placement.

Of the participants, 54.6% were male; the ethnic composition was 25.1% African American ( $n = 118$ ), 35.5% European American ( $n = 167$ ), and 39.5% Hispanic ( $n = 186$ ). Although information regarding specific country of origin for the participants in the Hispanic group was not available, it can be assumed that the majority of participants had origins in Mexico, as recent data indicates that approximately 83% of Hispanics in Texas are of Mexican origin (Brown & Lopez, 2013). The average age of the participants was 13.57 ( $SD = .37$ ). The economic status for students was based on whether or not they received free or reduced price lunch; 66.0% were economically disadvantaged. A majority of the students in the current study remained within one of the three initial recruitment districts: 52.9% of the participants attended District 1, 25.7% attended District 2, and 10.4% attended District 3. The remaining participants were still active in the study, but had moved and attended a district outside of those utilized in the initial recruitment process.

### *Procedures*

In the present study, data collected when students were in the seventh grade were examined. Demographic information (sex, age, ethnicity, and economic status) and school information (district, school, teacher, and grade level) were collected from school rosters. Using an established protocol to ensure standardized data collection procedures, trained research staff also conducted individual interviews during which extracurricular activity participation data were collected. Students were interviewed once during the academic year and received nominal compensation for their participation.

### *Measures*

**Extracurricular activity involvement.** Based on a previous study that gauged student time use (Shann, 2001), participants were asked to indicate whether they had participated, either after school or during weekends, in any of five different school-based extracurricular activity domains. The assessed activity domains included: sports, fine arts/performance clubs, academic clubs, government, and service clubs. For each activity selected, students were subsequently prompted to estimate the number of hours per week spent in that activity. For data analysis, the five initial categories were collapsed into two summative categories: sports- and non-sports-related extracurricular activities. This was done because much of the literature in this area distinguishes between sports and other activity types, as research suggests that precipitates to participation and participation outcomes between these two categories

may be different (Eccles & Barber, 1999; Holland & Andre, 1987; McNeal, 1995). For the current study, participation intensity was examined; participation intensity refers to the amount of time, in hours per week, students spent in activities within each activity category.

### *Data Analytic Strategy*

Student demographic characteristics were examined as predictors for the number of hours per week spent in each activity category. Poisson regression was chosen for the analysis as this method is well suited for data relating to extracurricular activity participation, in which a large percentage of participants indicate spending zero hours participating in extracurricular activities. Estimated marginal means were calculated based on the Poisson regression models to aid in interpretation of the findings. The first set of Poisson regression analyses compared the participation of students across the three ethnic groups. I entered demographic variables, including sex, economic status, student ethnic group dummy variables, and school district dummy variables. The first ethnic group dummy variable compared the Hispanic to the European American group; the second dummy variable compared the Hispanic to the African American group. Additionally, I utilized dummy codes for the different school districts for statistical control purposes. I also examined product term interactions between each study variable; statistically significant interaction terms were to be included in the final model. The second set of regression analyses examined only the participation of Hispanic students. In these analyses, sex, economic status, bilingual status, and the school district dummy variables were included. Statistically significant interaction terms between each variable were to be included in the final model.

## *Results*

### *Descriptive Statistics*

Descriptive statistics representing the percentage of students participating in each activity type are presented in Table 1. Overall, approximately 50% of the students in the study participated in sports-related activities; about 26% participated in non-sports-related activities. Descriptive statistics representing participation intensity are presented in Table 2.

### *Ethnic Group Difference in Participation*

**Sports participation intensity.** The first Poisson regression model examined participation intensity in sports-related extracurricular activities. In this case, two of the school district dummy variables were associated with participation intensity. More importantly, after accounting for differences in participation between school districts, three of the demographic variables were associated with sports participation intensity. The mean number of sports participation hours for males was approximately 1.5 times greater ( $M = 3.51$ ) than for females ( $M = 2.35$ , Wald  $\chi^2 = 55.65$ ,  $p < .001$ ). The mean number of sports participation hours for non-Hispanic European Americans was approximately 1.6 times greater

Table 1

*Percentage of Students Participating in Extracurricular Activities*

Group	Sports	Non-sports
Hispanic		
Female	38.6	27.3
Male	49.0	20.4
Total	44.1	23.7
European American		
Female	57.4	29.4
Male	64.7	26.2
Total	61.7	27.5
African American		
Female	38.0	25.9
Male	51.7	26.7
Total	44.9	26.3
Total		
Female	44.4	27.6
Male	55.6	24.1
Total	50.5	25.7

( $M = 3.57$ ) than for Hispanics ( $M = 2.30$ , Wald  $\chi^2 = 39.23$ ,  $p < .001$ ). The mean number of sports participation for economically disadvantaged students was approximately 1.3 times greater ( $M = 3.21$ ) than for not economically disadvantaged students ( $M = 2.56$ , Wald  $\chi^2 = 11.67$ ,  $p < .01$ ). See Table 3 for these results.

**Non-sports-participation intensity.** The second Poisson regression model examined participation intensity in non-sports-related extracurricular activities. In this case, only the school district dummy variables were significant, indicating that there were differences in levels of participation based on student school district membership. Conversely, none of the other variables in the model (ethnic dummy variables, sex, or economic status) were predictive of participation in non-sports extracurricular activities. Hispanic students had similar levels of participation intensity in non-sports extracurricular activities as did students in the other ethnic groups, and interactions between variables were excluded from the model as they were insignificant.

#### *Hispanic Group Differences in Participation*

**Sports participation rates.** The third Poisson regression model examined participation intensity in sports-related extracurricular activities of only the Hispanic participants. In this case, two of the demographic variables were associated with sports participation intensity; Hispanic youths who were male and youths who did not have a history of bilingual education had a higher level of participation intensity than those who were female and did

Table 2

*Average Hours Per Week Spent in Extracurricular Activities*

Group	Sports M (SD)	Non-sports M (SD)
Hispanic		
Female	2.15 (3.42)	.97 (1.95)
Male	3.22 (4.30)	.64 (1.81)
Total	2.72 (3.94)	.80 (1.88)
European American		
Female	3.44 (4.63)	.87 (1.79)
Male	4.40 (4.36)	.98 (2.04)
Total	4.01 (4.48)	.93 (1.94)
African American		
Female	1.90 (2.96)	.95 (2.24)
Male	3.87 (4.72)	.90 (1.96)
Total	2.90 (4.06)	.92 (2.10)
Total		
Female	2.49 (3.78)	.93 (1.98)
Male	3.83 (4.44)	.83 (1.94)
Total	3.22 (4.20)	.88 (1.95)

have a history of bilingual education; see Table 4 for these results. The mean number of sports participation hours for Hispanic males was approximately 1.8 times greater ( $M = 2.85$ ) than for Hispanic females ( $M = 1.59$ , Wald  $\chi^2 = 5.00$ ,  $p < .05$ ). The mean number of sports participation hours for non-bilingual Hispanic participants was approximately 2 times greater ( $M = 2.93$ ) than for bilingual Hispanic participants ( $M = 1.50$ , Wald  $\chi^2 = 4.84$ ,  $p < .05$ ).

**Non-sports-participation intensity.** The fourth Poisson regression model examined participation intensity in non-sports-related extracurricular activities of only the Hispanic participants. In this case, none of the included variables in the model were predictive of differences in participation intensity in nonschool-based extracurricular activities. In other words, student sex and bilingual status were not predictive of participation intensity in nonsports events for Hispanic participants (see Table 4 for results of the model). Finally, interactions between student characteristics were nonsignificant, so they were excluded from the model.

#### *Discussion*

Several studies have shown that participation in school-based extracurricular activities is associated with positive outcomes (e.g., Darling, 2005; Eccles & Barber, 1999; Feldman & Matjasko, 2005). If participation in these activities is to be promoted among Hispanic students, an important step is to examine predictors of their participation. Thus, the purpose of this study was to contribute to

Table 3

*Poisson Regression Models for Demographic Characteristics Predicting Intensity of Extracurricular Activity Participation at Grade 7*

	Sports Activities		Non-sports Activities	
	EM	Wald Chi Square	EM	Wald Chi Square
School District Dummy 1 <sup>a</sup>		.01		18.46***
District 1	2.88		3.11	
Other	2.86		1.02	
School District Dummy 2		4.40*		19.43***
District 2	3.15		3.21	
Other	2.60		.99	
School District Dummy 3		8.20**		14.24***
District 3	3.34		3.10	
Other	2.40		1.03	
Ethnic Dummy 1		39.23***		1.03
Hispanic	2.30		1.66	
European American	3.57		1.91	
Ethnic Dummy 2		.85		1.63
Hispanic	2.78		1.65	
African American	2.96		1.93	
Sex		55.65***		.95
Male	3.51		1.70	
Female	2.35		1.87	
Economically Disadvantaged		11.67**		.24
Yes	3.21		1.72	
No	2.56		1.84	

Note: EM = estimated marginal means.

<sup>a</sup>Dummy coded school district variables compare students in each original recruitment district to students not in one of the three original recruitment districts.

\*p < .05, \*\* p < .01, \*\*\* p < .001.

Table 4

*Poisson Regression Models for Demographic Characteristics Predicting Intensity of Extracurricular Activity Participation at Grade 7 for Hispanic Students*

	Sports Activities		Non-sports Activities	
	EM	Wald Chi Square	EM	Wald Chi Square
School District Dummy 1 <sup>a</sup>		1.78		1.41
District 1	2.86		1.28	
Other	1.57		0.71	
School District Dummy 2		.87		.07
District 2	2.73		.92	
Other	1.70		.107	
School District Dummy 3		1.09		2.09
District 3	1.57		1.43	
Other	2.86		.56	
Bilingual Status		4.84*		0.44
Yes	1.50		.88	
No	2.93		1.10	
Ethnic Dummy 2		.85		1.63
Hispanic	2.78		1.65	
African American	2.96		1.93	
Sex		5.00*		1.50
Male	2.85		.82	
Female	1.59		1.16	
Economically Disadvantaged		0.27		.01
Yes	2.01		.98	
No	2.42		1.00	

Note: EM = estimated marginal means.

<sup>a</sup>Dummy coded school district variables compare students in each original recruitment district to students not in one of the three original recruitment districts.

\*p < .05.

the literature by examining participation characteristics of Hispanic students in comparison to other groups (i.e., African Americans and European Americans) that have not been understudied and to explore predictors of extracurricular activity participation within the Hispanic group. The study results suggest that, at some of the earliest opportunities to participate in school-based extracurricular activities, Hispanic students were less likely to participate in sports-related activities than were European American students. Additionally, it seems necessary to also examine potential differences in participation within the Hispanic group, as female Hispanic students and Hispanic students with a history of bilingual education participated less in-

tensely than male Hispanic students and Hispanic students with no bilingual education background.

#### *Ethnic Differences in Participation Characteristics*

In regards to ethnic group membership, the results of this study extend previous findings that Hispanic high school students participate at lower rates in extracurricular activities than European American students (Brown & Evans, 2002; Davalos et al., 1999). Implications of lower participation in school-based extracurricular activities for Hispanic students are significant. Hispanic students are arguably the most at-risk ethnic group of students in our schools, and the finding that they participate less in

activities that are shown to promote school achievement and other positive outcomes is discouraging. Additionally, this study found that the nonparticipation trend emerges early, at the onset of extracurricular activity participation opportunities in middle school. This finding is especially problematic when one considers the fact that early participation is predictive of later participation (Bohnert et al., 2008; Denault & Poulin, 2009; Mahoney et al., 2002; Pederson, 2005) and that the shift to middle school begins a period of transition in which patterns of adaptation are being reorganized, transformed, and set for future behavior (Mahoney & Cairns, 1997). By not participating in school-based extracurricular activities, students in this high-risk group are likely to miss immediate and long-term benefits of extracurricular activities and the accumulation of school social capital.

Reasons for lower participation among Hispanic youths are complex and multiple explanations must be considered. At the broadest level, the extant literature suggests that lower familial socioeconomic status (SES) is linked to lower participation rates; adolescents of low-income families are typically less likely to participate in extracurricular activities than their wealthier counterparts (Marsh & Kleitman, 2002; Pederson, 2005; White & Gager, 2007). Low SES is associated with a limited ability to afford participation fees and related expenses and with attendance at poorer schools that may offer fewer extracurricular opportunities. Adolescents in families with limited economic resources also often spend their time after school supporting their family through household tasks or by working (Lareau, 2003), limiting their ability to access alternative opportunities. Given that Hispanic students are traditionally more likely to come from low SES backgrounds (Aud, Fox, & Kewal-Ramani, 2010), it may be of no surprise that their participation rates are lower. Notably, results of this study further confirmed that, in general, SES status is related to extracurricular activity participation intensity.

Other factors among Hispanics may also play a role in moderating the likelihood of extracurricular activity participation and exposure to school social capital opportunities. For example, recent immigrant status among Hispanic families has been associated with lower rates of participation (Peguero, 2010). Recent immigrants express lower levels of familiarity and comfort with navigation of the school system and communication with school staff, resulting in a limited understanding of additional opportunities available to students (Gamoran et al., 2012; Peguero, 2010; Simpkins, Delgado, Price, Quach, & Starbuck, 2013). Relatedly, an important predictor of adolescent behaviors is whether parents engaged in the same behavior during their childhood. Some immigrant parents may be less familiar with organized extracurricular activities—and less likely to encourage participation in them—if they grew up in places where organized activities were not available (Simpkins et al., 2013; Simpkins, Vest, & Price, 2011). That recent immigrant parents are likely to have limited English proficiency further complicates this matter, as Hispanic parents' use of English predicts their understanding of

schools (Plunkett & Bámaca-Gómez, 2003); this ostensibly limits their understanding of school-based extracurricular activity opportunities.

### *Hispanic Group Differences in Participation*

Results of this study expanded upon previous findings by also highlighting differences in participation characteristics in students within the Hispanic group. Such an examination is necessary as there are significant differences among Hispanic youths based on individual characteristics, so promotion of participation may need to be further targeted. In this regard, cultural orientation may explain results that indicated that (a) Hispanic students with a bilingual education background participated less than Hispanic students with no history of bilingual education and (b) female Hispanic students participated less than male Hispanic students.

Cultural orientation, including levels of acculturation and enculturation, may influence extracurricular activity participation. Although this study did not include a direct measure of cultural orientation, it is reasonable to examine bilingual education status as a related domain; bilingual education status is associated with parents who do not speak English as a primary language and more recent immigrant status, for both parents and their children. Additionally, Spanish language proficiency has been identified as an important component of ethnic identity and cultural orientation (Stanton-Salazar & Dornbusch, 1995). Thus, Hispanic youths receiving bilingual education are likely to be less acculturated and more enculturated than Hispanic youths with no history of bilingual education. In regards to extracurricular activities, previous research suggested that acculturation positively predicted the time that Hispanic adolescents spent in organized and leisure sport activities (McHale, Updegraff, Kim, & Cansler, 2009), and foreign born and nonnative English-speaking Hispanic high school students, those with ostensibly lower levels of acculturation, have been shown to have lower participation in extracurricular activities than their peers (Peguero, 2010). Other studies have also typically found significant variability in participation based on markers of cultural orientation, with those reporting higher traditional Hispanic cultural orientation also reporting lower levels of extracurricular activity participation (Simpkins, O'Donnell, et al., 2011; Simpkins, Vest, et al., 2011).

There are multiple ways in which cultural orientation may influence extracurricular activity participation. As previously noted, recent immigrant parents may not encourage participation in extracurricular activities if they are unfamiliar with those opportunities. In addition, higher level of enculturation in Hispanic families is associated with parents being more protective of their children; this is exhibited through stronger monitoring and less unsupervised time (Halgunseth, Ispa, & Rudy, 2006). Parents with this high cultural orientation also reported that extracurricular activities interfered with quality family time (Simpkins, Vest, et al., 2011). Notably, friendship networks of Hispanic students with a higher proportion of co-ethnic friends or foreign-born Hispanics have been associated with lower



activity participation (Simpkins, O'Donnell, et al., 2011), possibly because they are high on enculturation and lower on acculturation. This may limit social relationships that Hispanic students develop with their peers. For example, one study found that Hispanic students reporting higher enculturation were less likely to report having nonfamilial peers (Roosa et al., 2011). Similarly, results of a different study indicated that Hispanic students were less likely than others to identify having friends or a "best friend" at school (Vaquera, 2009). Hispanic youths with social networks that include few students participating in extracurricular activities are thus less likely themselves to participate in such activities.

In general, previous research indicates that extracurricular activity participation in sports is higher for males than females (Bouffard et al., 2006; McHale et al., 2009). The results of the current study are in line with those of previous studies and suggest that factors contributing to this trend are true for Hispanic females as well. However, in this study the estimated marginal mean for Hispanic female participation was lower than it was for females in all ethnic groups; Hispanic female students participated less intensely in extracurricular activities than non-Hispanic female students. These results are similar to those of another study that found that Hispanic females were less likely to participate in sports (Simpkins, O'Donnell, et al., 2011). Thus, it is important to consider unique cultural factors that may play a role in these findings. For example, Stanton-Salazar, Chávez, and Tai (2001) found that Hispanic girls were less likely to be involved in community-based extracurricular activities; they attributed differences in participation to parents' greater expectations for girls' involvement in household activities. Similarly, Hispanic parents, particularly those indicating higher adherence to traditional gender roles and values, are more likely to monitor girls more than boys (McHale et al., 2009; Prelow, Loukas, & Jordan-Green, 2007). These differences in parental monitoring and in behavioral expectations between boys and girls are reasonably related to different participation rates. Overall, these findings suggest that characteristics of students within the Hispanic group need to be considered when examining extracurricular activity participation and outcomes.

### Implications for Practice

Knowledge of differences in participation in school-based extracurricular activities is significant given the literature suggesting beneficial effects for participants. Results from this study suggest areas to consider when promoting this participation. First, it is important for schools to bolster parents' knowledge and value of school-based extracurricular activities. This is especially important for Hispanic parents and others who may have little experience or exposure to extracurricular activities. In bolstering this knowledge, it is critical to discuss what extracurricular activities are available, as well as goals and benefits of participation. This information could be delivered directly to parents as part of parent-teacher meetings or related school

functions. However, if parents cannot be reached in this way, targeting adolescents may be useful as they can serve as a bridge between the family and school (Simpkins, Vest, et al., 2011). Second, interventions to increase participation in school-based extracurricular activities among nonparticipating students should be made early, when students are first exposed to these opportunities and their patterns for future behavior are being set. Students at greater risk for school failure, and subsequent low educational attainment, should be especially encouraged to participate. Results of this study indicate that this group includes Hispanic students in general, as well as female Hispanic students and Hispanic students with bilingual education backgrounds.

### Limitations

It is important to consider that school contextual variables, in addition to the individual level variables included in this study, may influence the participation characteristics. For example, different schools may provide different participation activities, and participation intensity might be influenced by school size, school ethnic group composition, and other related factors. Although school district codes were utilized in this study to attempt to account for these possibilities, a more nuanced examination of these variables was not possible. Another limitation of this study is that data on student motivations for participating or not participating in school-based extracurricular activities were not available. As such, it is difficult to know why the participation patterns of this sample of students emerged as it did, both between and within the ethnic groups studied. Future studies should explicitly address reasons for nonparticipation. It should also be reiterated that the participants in this study were all from a single state (Texas) in the United States and likely of Mexican origin. Thus, generalizations based on this study should not be made to Hispanic populations in the United States of a different origin from different geographic regions. Additional research from dispersed Hispanic populations is necessary.

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# An Evaluation of Close Reading With At-Risk Fourth-Grade Students in Science Content

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**Abstract:** The study's primary purpose was to evaluate the effectiveness of a widely promoted close reading instructional routine for elementary grades students at risk for reading failure. Close reading is designed to help students read complex text independently and proficiently. Participants were six fourth-grade students receiving supplemental instruction in a rural public school. A single subject alternating treatments design was implemented to compare the close reading instructional routine to a validated reading comprehension strategy instruction intervention over a six-week intervention time frame. Results determined through visual inspection of a general outcome reading comprehension measure were mixed, seemingly favoring the validated intervention and not close reading. Limitations of the research and implications for use of close reading with students at risk are discussed.

In the most functional United States public school systems today, students at risk for academic failure receive preventive supports in what have been called responsiveness-to-intervention (RTI) systems (Fuchs, Mock, Morgan, & Young, 2003). The stated goal of RTI is to provide appropriate academic services to the most students through a tiered support system. Most students receive the core instructional program (i.e., Tier 1), with periodic assessment included, to identify objective success or failure in meeting core expectations and allowances for classroom-level differentiation of instruction if warranted. Generally core instructional programs are based on research, rather than validated through a true experiment (e.g., randomized control trial; Fuchs, Fuchs, & Compton, 2012). In reading curricula, for example, program components likely include phonemic awareness, phonics, vocabulary, fluency, and comprehension development.

In functional RTI systems, students identified as failing in the core program are provided additional academic intervention(s) in the area of identified need, and their progress is monitored more frequently than Tier 1 only students in order to determine if the supplemental (i.e., Tier 2) efforts are working (i.e., moving students closer to being successful in the core curriculum without supports). Supplemental intervention efforts for at-risk students in Tier 2 programs are designed to be different from the core curriculum by incorporating empirically validated interventions in the area of need (e.g., phonemic awareness or comprehension) and delivered to small-group formats for a specified time frame. Tier 2 progress monitoring is more frequent, with the assessment tools validated to serve the function of determining whether the combination of Tier 1 and 2 services is preventing additional academic and/or behavioral failure (Fuchs et al., 2012).

The implementation of RTI in schools has coincided with employment of the Common Core State Standards (CCSS) for English Language Arts-Literacy (ELA-L) in history/social studies, science, and technical subjects (Coleman & Pimentel, 2012; National Governors Association Center for Best Practices/Council of Chief State School Officers, 2010). From the outset of CCSS, proponents of the newly designed standards wanted to ensure that students graduating from high school were prepared to take

college courses or enter the workforce. Changes to the ELA-L curriculum have included emphases on (a) a deeper understanding of the content of challenging or complex texts; (b) literary (i.e., reading, writing, and speaking) tasks that demand documentation of text-based evidence; and (c) a greater emphasis on the reading of informational texts in ELA classrooms.

## Close Reading

One literary practice that has been featured prominently in the promotion and implementation of the CCSS and the accompanying national assessments (e.g., Partnership for Assessment of Readiness for College and Careers) is close reading. Also described as analytical reading, close reading has been defined as an in-depth analysis of a short piece of complex (i.e., at or above grade level) text conducted over multiple readings or lessons that stress attention to multiple textual aspects (Brown & Kappes, 2012). The instructional routine generally consists of teacher selection of short, complex texts that students read multiple times, with each subsequent reading having a different emphasis. Along with the multiple readings, there are discussions of teacher-developed questions that also serve to develop deeper understandings of the text than would likely be gained through single readings. Moreover, during the reading and discussion process, students annotate texts as another way to engage with what can be complex material (Brown & Kappes, 2012; Fisher & Frey, 2014b; Shanahan, 2014).

Close reading has been promoted as an essential element of the implementation of the CCSS ELA-L for all students. However, the public school evidence base, particularly in the younger grades, remains scant. Fisher and Frey (2012) conducted an observational study of close reading implementation in secondary school settings. The stated goals of the inquiry were to evaluate the appropriateness of the close reading instructional routine for use with elementary school students and to determine modifications that would be useful in implementing close reading with students in elementary school. Fisher and Frey (2012) indicated that findings supported the assertion that close reading practices were appropriate for elementary school settings. Use of short, varied, complex (at or above grade level) texts was described as an appropriate instructional

routine in elementary classrooms as long as the texts were read multiple times and students were afforded opportunities to provide text-based responses to teacher or student inquiry. Modifications for elementary grade classrooms included the teacher engaging in reading of text in certain incidences and the use of limited preteaching activities, such as with difficult vocabulary.

Fisher and Frey (2014c) used teacher and student interviews of close reading practices to better understand close reading implementation. Teachers reportedly questioned their own teaching abilities, struggled to locate texts, and wondered about how the lack of preteaching impacted their students, yet voiced optimism that the practice could help their students over time. Students, meanwhile, were said to express the view that the multiple readings of complex texts, complete with discussions and annotations, were “mentally exhausting” (Fisher & Frey, 2014c, p. 33). Both parties reportedly noted that the texts used were interesting; there was a focus on the right answers to questions; and the practice required strong effort on the part of all.

The lone experimental study to date (Fisher & Frey, 2014a) was directly aimed at middle school students at risk for academic failure who were being served in an afterschool program. Fisher and Frey (2014a) targeted 438 students in grades 7–8, with 100 of the total randomly assigned to one of five intervention classrooms. The treatment involved close reading instruction; independent reading; and small-group, teacher-led instruction in areas of instructional need related to vocabulary, comprehension, or fluency, whereas control group activities involved a combination of computerized interventions; teacher-led, small-group instruction; and independent reading. Findings noted increases in student attendance, better reader perception survey scores, and improved statewide reading test scores following the year-round intervention.

## Problem Statement

In spite of the advocacy by CCSS and/or close reading proponents, there is reason to proceed cautiously (Hinchman & Moore, 2013). In the present context of school-based personnel who are responsible for implementing CCSS and RTI, two major concerns emanate. First, the present body of evidence supporting implementation of close reading practices is lacking. Second, and equally concerning, is the fact that an implementation protocol for close reading has yet to be settled upon (Fisher & Frey, 2015). In the research described herein, there were no checklists used and processes described to ascertain the degree to which all of the components of close reading (e.g., multiple readings, annotation, text-dependent questions) were implemented or not, as well as whether or not the implementation was effective. These concerns were weighed against the reality that the CCSS ELA-L were being implemented in public schools and that new national assessments addressing CCSS ELA-L (e.g., PARCC) was administered nationally for the first time in the spring of 2015. These concerns were balanced by the positive potential of close, analytical reading practices (e.g., Fisher

& Frey, 2014a) to provide students at risk with ever deeper understandings of complex informational and narrative text, as well as any potential accompanying positive impact on students’ college and career readiness. Utilizing a close reading protocol adapted from Shanahan’s (2014) description, the present study addressed the following research questions:

1. What were the effects on fourth-grade student reading comprehension achievement of implementation of close reading and Collaborative Strategic Reading (CSR; Klingner, Vaughn, Dimino, Schumm, & Bryant, 2001), a validated intervention, in RTI Tier 2 programming utilizing science content instruction?
2. What did students like and dislike about close reading and CSR following implementation?

## Method

### Participants

Participants were five fourth-grade boys and one girl who were recommended by their classroom teacher due to risk of academic failure. Risk status was determined by teacher recommendation and was based on previous poor performance on state accountability tests and at-risk scores on the fall benchmarking reading assessment (i.e., less than 70 words correct per minute on grade-level oral reading fluency [ORF] probes for the fall benchmarking period). All African American students were receiving Tier 2 supplemental reading intervention at the time of the study.

### Interventions

Two interventions were compared in the present study, close reading and CSR. The researchers chose to make the comparison because at the time of the study, close reading was not an empirically validated intervention for elementary grades students. That, therefore, made close reading an inappropriate choice for a Tier 2 intervention program, which is designed to utilize small group formats and research-validated interventions (Fuchs et al., 2012). In order to ensure that students received a validated intervention as part of the program, a decision was made to include CSR as part of the Tier 2 programming and compare it against a close reading instructional routine that was based on the description of Shanahan (2014) and the qualitative research of Fisher and Frey (2012).

**Close reading.** Table 1 outlines the close reading instructional routine utilized, which included 10 elements of teacher and/or student action. An active routine was prescribed, consisting of three 30-min sessions over three days in one week. The teacher opened the lesson with introductory remarks about her expectations and a purpose statement. The teacher and students then shared responsibility over the three days for conducting multiple reads of the same text. Following the suggestion of Shanahan (2014), the first reading involved determining what the text said; the second, figuring out how the text worked; and the third, analyzing the text and making connections to

Table 1

*Close Reading Instructional Routine Elements*

Elements of Close Reading	Possible Behaviors Observed
Teacher opens with introductory remarks and purpose statement	Teacher introducing close reading text, lesson purpose and/or students' responsibilities
Teacher conducts multiple reads of the same text	Close read lesson plans including previously developed text questions Instructing students to reread the text (or sections of it) with a different focus in mind
Students actively engaged with complex text	Students annotating complex text while reading Students referring to their annotations during discussions
Students engage in meaningful discussion	Students agreeing or disagreeing with each other and/or teacher during group discussions, citing textual evidence to support their claims
Students annotate complex text	Students writing on the actual text to communicate/record/capture their thinking
Lesson experiences connect to the close read text	Teacher redirecting "off text" discussions Students giving textual evidence/support when adding to the discussion
Teacher comments/actions support students' learning	Teacher leading "Think Aloud" on a section of complex text to demonstrate how to annotate Teacher explicitly praising and/or expanding student(s) comments/writing
Students use text during close read activities	Students revisiting/relying on annotated text to successfully complete an activity
Teacher formally or informally checks for student understanding	Teacher keeping a checklist of who's participating Teacher recording accuracy of student's response for further reflection Teacher administering online vocabulary check
Students engage in collaboration	Students discussing and making decisions about their thinking while working with other students (not directly with the teacher)

science classroom reading and students' own background knowledge. Reading on day two also involved teacher-led attention to critical vocabulary. The selected science passage was chosen to align with the current topic of study in class. Students were actively engaged in the reading of the text by reading, listening, and/or annotating text. They were also part of teacher-directed discussions that were based on text-dependent questions that addressed different reading purposes.

**CSR.** A reading comprehension strategy instruction intervention for students with, or at risk for, academic disabilities, CSR is considered an evidence-based practice for students with learning disabilities (Vaughn et al., 2011). Students are taught a soft-scripted body of 17 lessons relating to before-, during-, and after-reading strategies (i.e., predicting, monitoring, developing main ideas, and summarizing) in a scaffolded format, beginning with interventionist modeling and then proceeding through guided and independent practice. Students are also taught and expected to carry out collaborative roles.

As with close reading, when CSR was implemented, students read a single informational passage three times per week with one reading taking place per session. During the first week of CSR, preview, brainstorming, and “clicks and clunks” were introduced. Students were given a science text to read and discuss. Prior to reading, students brainstormed what they may already know about the topic and predicted what they may learn after reading the article. Students used pictures and graphs as part of the process. Students took turns reading aloud and were encouraged to highlight words or terms that were “clunks.” Clunks are words that are unfamiliar to student readers and interrupt comprehension. During the second week of CSR, the “fix-up strategies” of clunks were continued, which included reading sentences around the clunk sentence looking for comprehension clues, as well as examining the clunk for affixes that might facilitate understanding. Students were taught to annotate or take notes when they come to clunks to help them understand what they read. The final week of CSR, students were introduced to the “get the gist” strategy.

### *Treatment Fidelity*

Treatment implementation fidelity observations were scheduled to be conducted once weekly over the course of the six-week study, for a total of 33% of the 18 sessions. Each intervention was to be observed three times by the author familiar with both interventions. Researcher-developed checklists were used during the observations. Each checklist contained a specific number of intervention components that were marked in terms of whether or not the component was implemented during the intervention session. The close reading checklist consisted of the 10 components listed in Table 1. The CSR checklist included different forms to account for the four comprehension strategies that were implemented over the course of the experiment. Data were reported as the proportion of components observed.

### *Dependent Variables*

There were two measures used as dependent variables in this study: (a) Daze (Dynamic Measurement Group, 2011); and (b) critical content monitoring (Mooney, McCarter, Russo, & Blackwood, 2013). Daze was administered weekly, while critical content monitoring was administered at pre- and posttesting.

**Daze.** Daze is a group-administered measure of reading comprehension in which students were asked to read a passage silently. In the passage, approximately every seventh word is removed and replaced with three choices, one of which is correct. Daze requires students to choose the correct word as they read the passage. Students were given 3 min to work on this task. The score was the number of correct words circled minus one-half of the number of incorrect words the student circled. Daze was chosen because it assesses reading comprehension, is group administered, and has adequate reliability and validity (Wayman, Wallace, Wiley, Ticha, & Espin, 2007).

**Critical content monitoring.** Critical content monitoring is an online, timed general outcome measure of content knowledge (Mooney et al., 2013). Students were expected to read a stem/question and then select the best answer by placing a mark beside the correct choice. Scores consisted of the number of correct choices in the time frame. Correct score totals were provided to students in the form of a fraction (such as 6 out of 20) at the completion of testing. Mooney et al. (2013) reported moderately strong criterion validity findings for the measure when compared with statewide accountability test results. Critical content monitoring was included as a measure of content learning.

### *Social Validity*

Researcher-created social validity surveys were administered to all students at posttesting. Students rated their experiences with the interventions from 1 (not at all) to 9 (liked very much) for 10 items. For item 11, students were asked to circle the strategy they preferred: close reading or CSR. For item 12, students were asked to circle the strategy in which they learned the most science content: close reading, CSR, or both.

### *Procedures*

Parent consent was secured prior to initiation of the intervention. Students provided assent to participate. The first experimental activity was administration of the dependent measures for pretesting. Then, the intervention order of presentation was determined. Each treatment was implemented once every two weeks over the six-week time frame with a coin flip determining which intervention was first.

The school's Tier 2 program included 60 min of supplemental services daily and was taught by a certified teacher who held a master's degree. Students received supplemental instruction in place of their regular physical education class. The Tier 2 curriculum used was the Harcourt Storytown Strategic Intervention program (Harcourt School Publishers, 2009), supplemented by a computer-aided reading intervention. The Harcourt program was used and lessons were



selected to reinforce what was being taught in students' reading class. The four components that were targeted during intervention were phonics/phonemic awareness, comprehension, vocabulary, and fluency. In a typical Tier 2 intervention session, students began by engaging in vocabulary word exercises. Students read a story and completed fill-in-the-blank activities using the vocabulary words. They answered two questions at the end of the exercise and then shared their answers with the teacher. Next, students were guided through the comprehension task of drawing conclusions. A student volunteer read the passage and the teacher asked questions. The teacher guided students through the use of a graphic organizer to promote comprehension. Students targeted decoding/spelling skills using words with suffixes. Before wrapping up the lesson, students participated in fluency practice where they were instructed to read words in a column from their text aloud to each other. They then practiced reading the column of words to their partners. Two days out of the week, students were given the opportunity to substitute a computer-aided reading intervention for the Harcourt program.

Prior to the intervention, the students were administered the CCM pretest, which was a timed assessment. When the intervention began, students were pulled for the first 30 min of their Tier 2 intervention time three days a week. The intervention took place in an empty classroom. On the first day of interventions, students selected their seating positions at a large table, remaining in those seats for all of the subsequent sessions. At the end of each week of implementation, students completed the Daze measure. Once the intervention component of the experiment was complete, students completed posttesting and the social validity survey.

### Design

A single subject research alternating treatments design was utilized to answer the first research question. Use of an alternating treatments design allowed for a direct comparison of the effectiveness of close reading and CSR on students' reading and writing performance. Visual analysis was the interpretation approach utilized (Alberto & Troutman, 2009). A descriptive summary was utilized to address the third (social validity) research question.

## Results

### *Interscorer Reliability and Treatment Fidelity*

The Daze student response protocols were scored by independent parties and their respective total scores compared. For Daze, agreement was 100%. As score agreement with an independent scorer was greater than 80%, scores of the first author were graphed. Treatment fidelity was completed by a graduate student who was trained in both procedures. Collaborative Strategic Reading received three observations and close reading received two. For CSR, fidelity ranges on separate checklists related to three independent reading comprehension strategies. Fidelity ranged from 60% for both of the reading strategies (i.e.,

get the gist; click and clunk) to 100% for the preview (before reading) strategy. The overall average across three observations was 75.6%. For close reading, the average rating was 95% (range 90%–100%).

### *Content Learning*

Comparison of pre- and posttest scores for the content-focused general outcome measure critical content monitoring showed performance improvements in four of six cases. Figure 1 showed that Students 1, 3, 4, and 5 had larger scores at posttest, with Student 6's performance showing no change and Student 2's evidencing score decreases. Due to the nature of the design, it was impossible to determine if achievement gains were impacted differentially by intervention.

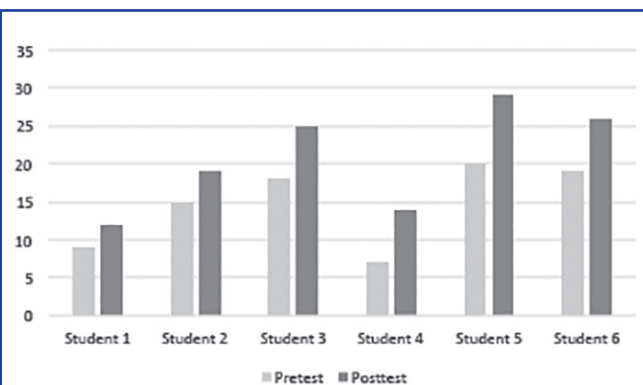


Figure 1. Critical content monitoring pretest-posttest score comparison.

### *Research Question 1: Effects on Reading Comprehension Achievement*

Visual analysis indicated a pattern of no clear separation between the two interventions across the six students (see Figure 2). Only in the case of Student 6 was there no overlap across conditions from start to finish. Four of the six students indicated increasing Daze achievement trends across conditions, with growth from first to last testing for both interventions. While overall results were mixed, with no intervention evidencing clear separation across conditions, there was one uniform finding. In all six cases, the Daze score for CSR was higher than that for close reading by intervention's end. Related to that, in four of six cases—Students 1, 2, 5, and 6—the largest differences between intervention data points were at intervention's end. That is, the difference between Daze scores for CSR and close reading was greatest for the last two data points.

### *Research Question 2: Likes and Dislikes of the Interventions*

Participants responded favorably to both interventions. In terms of rating each intervention as a whole, close reading received a slightly higher mean score than CSR, with all participants rating the intervention in the highest third of the nine-item Likert scale. However, the

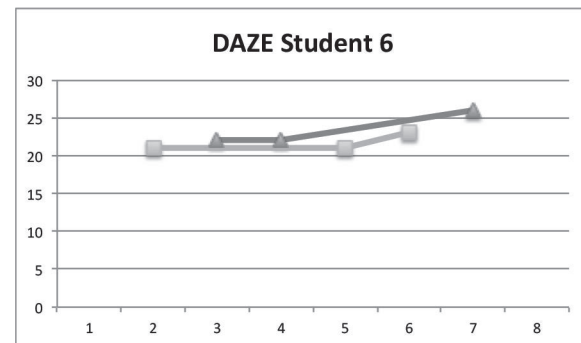
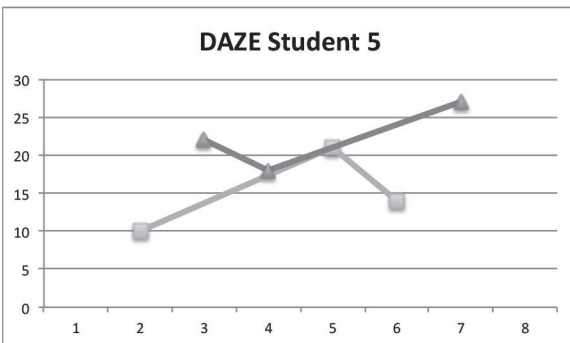
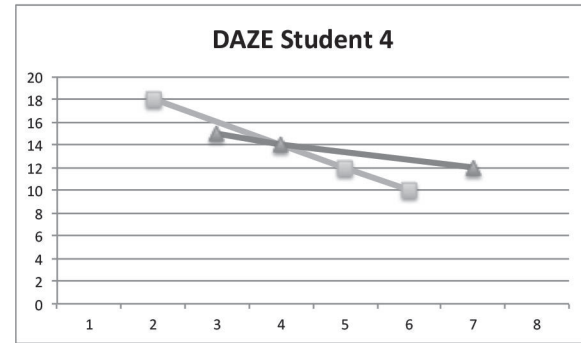
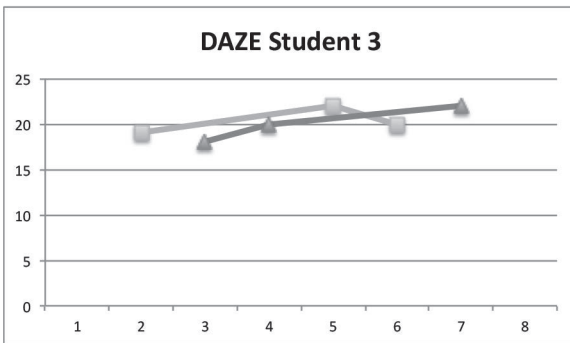
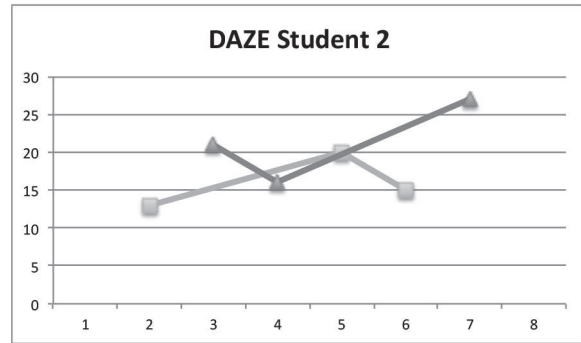
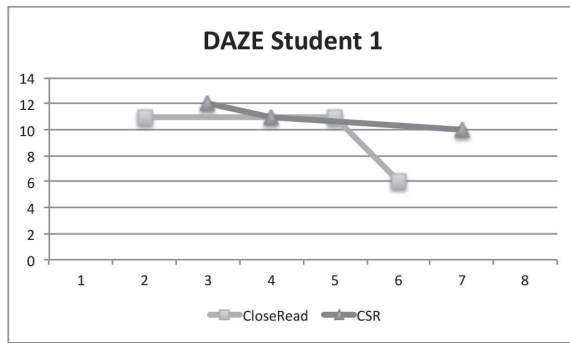


Figure 2. Daze scores for close reading and collaborative strategic reading.

close reading components were viewed less favorably than were CSR elements. The highest mean score of 9.0 came for the CSR click and clunk comprehension monitoring strategy. The lowest mean score (i.e., 5.5) related to the annotating/note taking component of the close reading intervention. In fact, the three lowest-rated items were related to close reading components. If students were given the opportunity to select the intervention, four out of six selected CSR over close reading. However, when students were asked which intervention helped them learn more science content, five students felt that both interventions prepared them equally well.

## Discussion

Close, analytical reading is a promoted and potentially promising instructional practice that, to date, lacks an evidence base of empirical support to match the professional promise. For purposes of the present study, the evidence for close reading includes contexts with elementary school students, students at risk for academic failure, and informational text. The evidence supporting the efficacy of close reading in relation to these areas thus far has been scant. What follows is a summary of the findings from the study and how they fit within the larger literature, a description of the study's limitations, and a presentation of implications and future research needs.

### Summary of Research Findings

The predominantly nonexperimental close reading literature previously described has generally been supportive of the instructional routine advocated for CCSS ELA-L use. The lone experimental study (Fisher & Frey, 2014a), implemented by close reading advocates in an afterschool program for at-risk middle school students, itself evidenced supportive findings. Yet, while qualitative inquiry with secondary close reading teachers has indicated that the practice can be successful if adapted in elementary classrooms (Fisher & Frey, 2014c), results from our experimental inquiry suggest that the caution proposed by Hinchman and Moore (2013) is indeed warranted.

Academically at-risk students in today's public schools are likely served in some form of RTI framework. In effectively implemented systems, at-risk students receive a research-based core curriculum plus supplemental research-validated small-group intervention that is regularly evaluated to determine if the combination is successfully advancing students academically in comparison to same-age peers. Tier 2 (supplemental) programming needs a valid research base to support its implementation. That is why a nonvalidated close reading instructional routine (see Table 1) was compared to the validated CSR reading comprehension in an alternating treatments experimental design. The close reading instructional routine implemented herein in an elementary RTI Tier 2 program did not measure up to CSR over time. Scores for all six students in the study favored the CSR condition, with the largest differences between interventions recorded by study's end in two thirds of the cases. What is more, the complete CSR intervention was not implemented in the experimental

time given, so that its impact over time may have been greater if full implementation had occurred.

Potentially positive findings were threefold. First, students expressed satisfaction with the close reading instructional routine as implemented, which might facilitate student buy-in over time, with increased engagement leading to better results. Second, in four of six cases, student trend lines for the close reading routine were positively leaning in the short amount of time that the intervention was implemented. Moreover, those findings came about through implementation by a practicing teacher who was not an expert in close reading. Experts had been implementers in the lone other experimental study (Fisher & Frey, 2014c). Finally, student knowledge in science content utilized as part of the Tier 2 program grew as measured by a general outcome measure of content knowledge. That is, posttest critical content monitoring scores for four of six students were higher than pretest scores after six weeks of implementation.

### Limitations

The results of this study should be viewed with caution. First, the length of the study was short and may not have allowed for a clear pattern to develop in terms of separation between the two interventions. Second, interpretations for alternating treatments designs are considered weak until experimental control is determined following a successful implementation of the treatment of choice. Third, the fact that critical content monitoring was not implemented weekly did not allow for an evaluation of whether close reading or CSR contributed more to the pre- to posttest growth in content achievement scores. Finally, the low treatment implementation proportions for CSR may have influenced the weekly Daze scores that were collected from participants. With only three weeks and 90 min total of intervention time devoted to CSR implementation, not all of the components of the 17 lessons were adequately addressed.

### Implications

With the study results and limitations noted, some takeaway points revolve around a central theme, which is that research rather than advocacy needs to drive the discussion of how close reading practices are to be implemented in elementary schools and content courses and with students at risk for academic failure. The need for caution in moving forward in the implementation of close reading that was expressed by Hinchman and Moore (2013) and Fisher and Frey (2015) is warranted, particularly as it relates to the elementary grades, elementary students, and informational texts. At this point, there are two experimental studies targeting close reading, with only the presenting study involving elementary students.

A starting point for systematic inquiry has to be development of a detailed operational checklist that clearly outlines a testable close reading instructional routine. First, the descriptions of how it can be implemented seemingly fit well within an evidence-based effective instruction paradigm (Rosenshine, 2012). Research-based practices include

presenting new material in small steps and practicing after each step, asking a large number of questions and checking for all students' understanding, providing models, guiding student practice, and obtaining high student success rates. Such practices are particularly pertinent to students at risk for academic failure. Second, a product in the form of a validated intervention is necessary if a close reading instructional routine is to be included in the prototypical RTI Tier 2 system. Tier 2 programming incorporates research-validated practices that presumably target areas of student weakness and are delivered in small group settings in addition to the core instructional program. Experimental studies need to be conducted which include findings indicating positive effects for an accurate implementation of the clearly described treatment in comparison to a similar intervention or business-as-usual condition. Therefore, in order for what could be considered a research-informed close reading instructional practice to be implemented in Tier 2 (and 3) settings with students at risk for academic failure as well as students with disabilities, there needs to be a clearly outlined and validated instructional practice or protocol that has been validated for the setting and students served in Tier 2 (or 3) programs.

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# Effective Aspects of Reengagement and Recovery Programs in Southeastern Wisconsin High Schools

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**Abstract:** The number of students in the United States who did not complete high school decreased by 27% from 2008 to 2012 (Alliance for Excellent Education, America's Promise Alliance, Civic Enterprises, & The Everyone Graduates Center at Johns Hopkins University, 2015). This is a positive trend. High schools can help students complete school and prepare for career and technical education (CTE) by incorporating (a) career academies, (b) dual enrollment, (c) paid employment/internships, (d) flexible scheduling, and (e) social services. The purpose of this study was to determine the presence of these proven characteristics in Reengagement and Recovery Programs in Southeastern Wisconsin. Twenty-seven of 85 survey responses were returned, for a response rate of 31.7%. It was found that a majority of programs provided flexible programs and support services, but were not focused on providing students career and occupational credentials. The study underscores the need for a stronger focus on CTE in high schools.

The number of students in the United States who did not complete high school decreased by 27% from 2008 to 2012 (Alliance for Excellent Education, America's Promise Alliance, Civic Enterprises, & The Everyone Graduates Center at Johns Hopkins University, 2015). This is a remarkable accomplishment and is largely attributed to federal policies enacted in 2008. One policy in particular required that school districts intervene in high schools that have below a 60% graduation rate (Alliance for Excellent Education et al., 2015).

Although this drop is cause for celebration, there is more work to do. In 2014, there were still 1,040 high schools in the United States that had below a 60% graduation rate, down from 1,812 in 2008. The students attending these low-graduation-rate high schools are disproportionately students of color and students from low-income families. African American students make up less than 16% of the K-12 population nationwide, but in these high schools, they make up 40% of the student body (Alliance for Excellent Education et al., 2015). In 15 states, the gap in high school graduation rates between African American and White students is more than 15 percentage points. This gap grew in nine states over the past four years. In addition, 12 states have a gap of 15 percentage points or more between the graduation rates of White and Latino students (U.S. Department of Education, 2015).

To gain insight into the low rates of high school completion for students with disabilities, the National Longitudinal Transition Study-2 conducted interviews with parents and students during the period from 2000 to 2003 (Wagner, Newman, Cameto, Levine, & Marder, 2003). For students with a disability, slightly more than one of every four (26%) dropped out before finishing high school. High rates of absenteeism, disciplinary problems at school, and grade level retention were precursors to dropping out. Two thirds of out-of-school youth with disabilities were male, and nearly two thirds were from households with low (\$25,000 or less) or moderate (\$25,001 to \$50,000) annual incomes. Slightly more than one fifth were African American (21%) and 13% were Hispanic. Approximately four of every five students who left high school early had

been diagnosed with a learning disability (67%) or emotional disturbance (14%; Wagner et al., 2003).

The average annual income for students who do not complete high school is nearly \$15,000 less than for a high school graduate (as cited in Alliance for Excellent Education et al., 2015). Students who leave high school are 3.5 times more likely than high school graduates to be arrested in their lifetimes; and nearly three of every four males in prison did not complete high school (Illinois Task Force on Re-Enrolling Students Who Dropped Out of School, 2008). Costs of not completing high school may also be social and psychological in nature, including the lost opportunity of being able to attend postsecondary education and an increase in the potential for personal health risks (Pleis, Lucas, & Ward, 2010; Zajacova, 2012). Benefits to society include an increase in economic health due to increased wages and lower costs for incarceration and social services.

## Approaches to Reengage and Recover High School Dropouts

Reengaging and recovering students who dropped out requires approaches that meet widely varied personal needs, learning styles, and life situations. Some programs have reenrolled students who have dropped out of school and successfully helped them to graduate from high school and make the transition into postsecondary education, training, or employment (Illinois Task Force on Re-Enrolling, 2008). The structures of these types of programs have varied, suggesting that students require several options, and that no one structure will meet the needs of all students. Those programs that have been successful include (a) full-time, comprehensive year-round programs; (b) part-time, flexible work and study programs; (c) online programs; (d) dual enrollment programs with community college classes; and (e) GED programs.

Regardless of the structure of the program, other key elements that should be considered include (a) establishing an effective learning environment, (b) utilizing a curriculum aligned with state standards, (c) ensuring teachers have recent professional development, and (d) incorporating

positive rewards and approaches rather than punitive ones (Southern Regional Education Board, 2013).

High-performing reengagement programs are successful in attracting students when they offer effective program characteristics that facilitate completion of necessary academic courses coupled with an eye on career development and/or employment (Bloom, 2010). In addition to those named above, common characteristics of dropout recovery programs that effectively achieve these outcomes include (a) career academies with occupational credentials; (b) career-oriented curricula contextualized to the real world beyond high school; (c) paid work experience; (d) mental health and case management support services; (e) flexible, self-paced programs; and (f) adult relationships and connections (Bloom, 2010; Cooper, Ponder, Merritt, & Matthews, 2005; Fleischman & Heppen, 2009; Martin & Halperin, 2006; Vargas, 2015; Zammitt & Anderson-Ketchmark, 2011). Each of these is described below.

#### Career academies with occupational credentials.

One characteristic that has proven successful in students' completion of academic prerequisites for postsecondary education and long-term gains in income from employment is the career academy model. A career academy merges the requirements for completing a college-preparatory academic core with those of completing a planned sequence of career courses (Bloom, 2010). The curriculum is integrated with occupational certificates, licenses, and credentials students acquire as they complete course content. High Schools That Work operates more than 1,200 high school sites that use the career academy model to raise student achievement and graduation rates (Southern Regional Education Board, 2013). Its Fred J. Page High School, for example, offers courses and postsecondary licensing opportunities in agriculture, media technology, marketing education, drafting, family and consumer sciences, health care, and technology engineering education. Bloom (2010) found that retention rates and labor market earnings for high-risk students in career academies were significantly higher; earnings were 17% higher than non-academy students eight years after they left high school. Another report found that career academies were a key factor in students' completing their education (What Works Clearinghouse, 2015).

**Career-oriented curricula contextualized to the real world beyond high school.** Another effective characteristic commonly cited in research literature is the use of career-oriented curricula that meets employers' needs. Students can relate daily instructional processes to the experiences they will have on the job (Malian & Love, 1998; Rutschow & Crary-Ross, 2014). Social skills and workplace behaviors, for example, can be learned in the classroom and generalized to the employment environment (Johnson, Mellard, & Lancaster, 2007). Martin and Halperin (2006) note that successful programs make extensive investments in curricula that prepare students for post-graduation employment, entry-level positions, and advancement in the world of work. They cite Improved Solutions for Urban Systems (ISUS), a nonprofit organization operating three charter schools in Dayton, Ohio, that has been successful in reconnecting out-of-school youth through

the use of curricula that is closely aligned with hands-on training required for high-demand fields. Transformational learning and performance occur when students can connect the curriculum to the demands of employers, the ability to obtain employment, and the world beyond high school (Fleischman & Heppen, 2009).

**Paid work experience.** Students need income to support themselves and their families. Providing real work experience to students while they are in school is an effective research-based practice (O'Connor, Kuebler, & Siddiqui, 2010). Jobs can help young people prepare for the real world and give them work experience that they can apply throughout their lives. Students benefit from the opportunity to explore and reflect on their likes, dislikes, and interests related to particular employment (Trainor, Smith, & Kim, 2012). Work experiences also build the student's social capital.

Youth unemployment is a serious problem with overall rates exceeding 17% and summer unemployment rates at 50% for young people between the ages of 16 and 24 (Kujjo, 2013). Changes in the labor market have dramatically reduced the opportunities for young people to find employment. Only after students who dropped out discovered they could find no jobs and their employment prospects were hopeless did they reluctantly return to re-enroll in high school (Berliner, Barrat, Fong, & Shirk, 2008). Work opportunities that provide students much-needed income and are related to their educational program increase retention and completion rates (Martin & Halperin, 2006). Providing young people with opportunities for paid work may be useful as an engagement tool and as a strategy for improving long-term labor market outcomes (Bloom, 2010). Academic programs that incorporate paid employment have shown significant gains in postschool employment (Benz, Lindstrom, & Yovanoff, 2000; Malloy, Drake, Abate, & Cormier, 2010). Several researchers have noted the common practice among large national recovery programs and small community-based organizations alike to provide some combination of education and employment (Bloom, 2010).

**Mental health and case management support services.** Many students who drop out of high school have mental health issues (e.g., anxiety, depression, and a sense of hopelessness; Berliner et al., 2008). Providing a thorough mental health assessment to understand the needs of a student leads to the selection of an appropriate recovery program and individualized learning plan (Zammitt & Anderson-Ketchmark, 2011). High-performing dropout recovery programs employ the use of case managers, social workers, and other mental health professionals to address barriers to learning (Martin & Halperin, 2006; Rutschow & Crary-Ross, 2014). Gonzalo Garza Independence High School in Austin, Texas, was cited by Martin and Halperin (2006) as an exemplary recovery program because it partners with Communities In Schools, a community-based organization that provides free support services to students, including individual and group counseling, crisis intervention, and health referrals.

**Flexible, self-paced programs.** Family crises, employment, pregnancy, gang pressure, and other life circumstances pull students in directions that stall high school completion (Berliner et al., 2008; Hynes, 2014). Programs that offer scheduling flexibility accommodate students' personal and family needs and allow students concurrently to work, receive job training, or attend credit-bearing courses at adult education or vocational schools (Shannon & Bylsma, 2003). Berliner et al. (2008) emphasize that recovery programs need to offer flexible options to students to permit them to make up failed course credits quickly and remedy credit deficiencies at their own pace, or students will become discouraged and quit. Cooper et al. (2005) noted the example that "each Sunday from 1:00–6:00 p.m., Grimsley opened its doors to allow students to participate in make-up time, which was filled with planned instruction that they had missed during regular school hours" (p. 6). Flexible scheduling and self-paced programs can take the form of open-entry, open-exit where students work through curricular modules at their own pace, or extended day, weekend, and year-round programming where students can attend at times they have available (Martin & Halperin, 2006).

**Adult relationships and connections.** Unconditional caring is an essential principle in effective approaches to support the success of students (Malloy et al., 2010). Caring adults play a central role in the recovery and subsequent outcomes of high school dropouts (Bloom, 2010). They personalize the environment and recognize students as individuals (Fleischman & Heppen, 2009). They listen carefully to establish starting points to engage students. They become thoroughly familiar with students across many domains, including background information, interests and preferences, underlying abilities and aptitudes, personal styles, interpersonal relationships, self-determination, academics and intelligence, and employment-related skills (Kortering & Brazier, 2008). Caring principals, teachers, coaches, and counselors spend individual time with students, are available, are helpful and understanding, and find creative ways to help each individual student succeed (Hynes, 2014; Lagana-Riordan et al., 2011). They leverage their personal relationships to persuade students to return and, knowing their students, promptly facilitate appropriate reentry academic and support services (Berliner et al., 2008). Strong relationships and connections correlate with high achievement by students and schools (Cooper et al., 2005; Sinclair, Christenson, & Thurlow, 2005).

Fourteen thousand young adults drop out of high schools in Wisconsin every year (Sullivan, 2012). Nearly half of that total derives from the Greater Milwaukee area. The percentage of Milwaukee residents without a high school diploma outnumbers the percentage with a college degree or better. Wisconsin is not producing enough high school graduates to fill near-term workforce needs. By 2018, the number of high school graduates in Wisconsin is expected to decrease while employment opportunities will increase (Carnevale, Smith, & Strohl, 2010). The purpose of this study was to assess the presence of characteristics of effective dropout recovery programs

offered at high schools in the seven counties comprising the Greater Milwaukee area.

## Method

### Participants

Participants for the study consisted of administrators of traditional and alternative public high schools throughout the seven counties in Southeastern Wisconsin (Kenosha, Racine, Walworth, Milwaukee, Waukesha, Ozaukee, and Washington). An Internet search ([https://en.wikipedia.org/wiki/List\\_of\\_high\\_schools\\_in\\_Wisconsin](https://en.wikipedia.org/wiki/List_of_high_schools_in_Wisconsin)) provided the basis for a list of public high schools in Wisconsin by county. Representatives from the National At-Risk Education Network-Wisconsin Chapter and other local practitioners who serve at-risk high school students were consulted to ensure schools that focus on the reengagement and recovery of high school students were included in the study. Correctional facilities were omitted from the list. Traditional Milwaukee Public School (MPS) high schools were not included because they channel students with severe credit deficiencies, significant behavioral incidents, and expulsions to their network of partnership and contract schools. Consequently, only MPS partnership and contract schools were selected as participants in the study. With one exception, a former partnership school for MPS that now operates as an independent voucher school, no choice high schools were included in the study. Although choice high schools enroll high-needs students who have left traditional high schools, choice high schools typically do not have educational programs for students with special needs, certified teachers, or specialized resources for the recovery and reengagement of public high school students. The final list of traditional and alternative education public high schools yielded 85 participant schools for the study. Names and contact information for current administrators were found on each school's website. When an administrator was not noted on the website, telephone calls were made to participant schools to obtain the name of the current administrator. The administrator contact information was compiled into a central database.

### Constructing the Survey Instrument

A survey instrument was created based on the literature review and gaps in information. Characteristics of high-performing schools and effective reengagement programs were identified. Questions were then developed to identify the presence of the characteristics among survey participants. The final survey consisted of four sections (a) preparing students for the world beyond high school; (b) paid work experience; (c) flexible, self-paced programs; and (d) support services. Each section had between three to six questions.

For many questions, the response consisted of a Likert scale to determine frequency of the characteristics. For example, the question "The program offers national, portable industry-specific occupational certifications, licenses or credentials" offered respondents the option to select *none, one or two, some, or several*. A number score related



to a scale ranging from 1 through 4 was associated with each response. As appropriate, questions also included simple *yes* or *no* responses. Each question included an optional section for comments to permit participants to clarify or provide additional information in relation to their response. An initial draft of the survey was piloted with the administrator of a local alternative education high school. Because the survey process was intended to last no more than 15 min, the final survey instrument was pared from 32 questions to a total of 21 questions.

### *Survey Distribution and Collection Procedures*

A cover letter was prepared to introduce the study. Also included was an offer to provide the respondent with a copy of the final report. A self-addressed, stamped envelope was included in the survey packet for the return of the survey. The survey packet was mailed via the U.S. Postal Service to the administrators of the 85 schools. After 10 days, follow-up calls were made to encourage administrators to complete and return the survey instrument. When requested, duplicate survey packets were also emailed. Completed surveys were returned by U.S. mail delivery or email directly to the researcher. Twenty-seven survey responses were returned from participants, for a response rate of 31.7%.

### *Data Tabulation Measures*

An Excel spreadsheet was constructed to itemize the survey responses by question item and category. Completed surveys were assigned a numerical code and the responses for the particular survey were entered into the cells corresponding to the question item. The format permitted responses to be aggregated and analyzed by question item.

## **Results**

### *Preparing Students for Work*

Respondents were asked if they provide opportunities for students to earn occupational certificates, licenses, or credentials. Almost half of the respondents (48%) indicated that their school does not provide such opportunities. At the same time, 38% of respondents indicated that some or several classes related to occupational credentials are provided. Fifteen percent reported that they offer 1-2 courses that offer an occupational certification, license, or credential.

### *Programs With Content Explicitly Aligned to Needs of Employers*

Survey respondents were asked if they align content to the needs of employers. This content related to both basic knowledge of an industry as well as soft skills, such as communication, listening, collaboration, teamwork, time management, and organization skills. Fifteen percent of respondents reported that their programs always provide this content to students, while another 15% responded that they sometimes provide this in their program. Eleven percent of respondents noted that they never incorporate this information; and 59% reported that they rarely do.

### *Selected Program Offerings*

The survey asked respondents to indicate the frequency with which their programs offered the following components: paid employment, dual enrollment, open-entry/open-exit, and accelerated options (Table 1).

Table 1

*Frequency of Selected Program Offerings*

	Never	Rarely	Sometimes	Almost Always
Paid employment	30%	30%	26%	15%
Dual enrollment	22%	37%	33%	7%
Open entry-exit	11%	22%	22%	44%
Accelerated credit	7%	11%	26%	56%

**Paid employment.** Table 1 shows that the majority of programs never (30%) or infrequently (30%) facilitate paid employment opportunities for students. Fifteen percent of programs always provide this option.

**Dual enrollment.** Forty percent of respondents sometimes or almost always provide a way for students to earn both high school and remedial college credit. Nearly 60% of survey respondents indicated their schools never or seldom offer students opportunities for concurrent enrollment into college remedial education courses (see Table 1).

**Open-entry/open-exit.** Almost half (44%) of all respondents almost always offer classes as open-entry and open-exit where students work through curricular modules at their own pace; an additional 22% of respondents offer several courses as open-entry and open-exit. The other one third of programs either never (11%) or rarely (22%) offer self-paced courses (see Table 1).

**Accelerated credit.** Over half (56%) of respondents indicated that they offer accelerated credit. This allows students to complete programs more quickly and reinforces students' efforts faster, so that they are more inclined to stay with the program (see Table 1).

### *Flexible Scheduling*

When asked, 56% of respondents said their program offers flexible scheduling with evening, weekend, and year-round learning to accommodate students. Forty-four percent indicated that they do not offer flexibility in the scheduling of course offerings.

### *Support Services*

Almost all of the respondents (97%) indicated that their school provides counseling and social services for students (see Table 2). Similarly, almost all of the respondents (92%) noted their teachers are coaches for students and



their programs are relationship-based. One half (50%) of the programs almost always provide students with mental health professionals, case managers, and other caring professionals.

Table 2

*Frequency of Support Services Offered by Programs*

	Never	Rarely	Sometimes	Almost Always
Counseling/ Social Services	0%	4%	30%	67%
Relationship- based	4%	4%	38%	54%
Health Professionals	11%	22%	22%	44%

## Discussion

High schools in Southeastern Wisconsin account for a disproportionately high share of the state's high school dropouts annually. A survey of programs and schools designed to reenroll students who are at risk for dropping out revealed they are implementing many of the characteristics of effective programs cited in literature to reengage and recover high school students. However, several effective characteristics were reportedly used with less frequency. Their absence may be a cause of the disproportionate number of high school dropouts in the region.

Overall, the research on the presence of effective characteristics in Southeastern Wisconsin high schools found that the majority of respondents provide many of the characteristics found to be successful in reengaging students who are at risk of dropping out. Schools offer students flexible opportunities to take classes at different times of the day and on different days of the week. Students can work at their own pace to accelerate credit. Teachers serve as caring adults and coaches, and schools wrap students with additional social service professionals for mental health and case management.

However, the survey findings on the presence of effective characteristics to reengage and recover at-risk students in Southeastern Wisconsin high schools also revealed that responding programs seldom offer opportunities for students to (a) earn occupational credentials, (b) receive explicit instruction in "soft skills," (c) engage in paid employment, or (d) enroll in courses for high school and college credit as part of the educational program. The majority of the respondents indicated that their programs rarely or never address these characteristics in their school programs.

## More Than Half of the Schools Rarely Provide Occupational Credentials

Providing courses that offer portable, nationally recognized occupational certifications, licenses, and credentials embedded within the curriculum not only makes the student more valuable to an employer, but also

increases the engagement of students. Students recognize the relevance of career and technical education, relating it to the experiences they will encounter on a job (Malian & Love, 1998). Career academies, where a college-preparatory academic core is merged with occupational credentials, have proven to increase retention rates of high school students (Bloom, 2010).

Harvard University recently initiated the Pathways to Prosperity Project as a national movement in response to its report that found roughly half of all young Americans arrive in their mid-20s without the skills or labor market credentials essential for success in today's increasingly demanding economy (Symonds, Schwartz, & Ferguson, 2011). The study underscores the need for states to create broader pathways for youth to explore their career potential. Pathways should combine the rigors of strong academics with career and technical programs and work-based learning experiences, which provide youth the tools they need to make better decisions as they enter the adult world.

## More Than Half of the Schools Rarely Have Classes Aligned to the Needs of Employers

Students who are at risk of failure, along with students with labels of emotional and behavioral disorders, are most likely to drop out of high school and then shuffle among several short-term jobs, unable to hold a position for an extended period of time, in part because they lack the communication, collaboration, conflict resolution, and employment skills to succeed in the workplace (Wagner et al., 2003). Teaching high school students the soft skills required by employers (e.g., work ethic, showing up on time, listening, communicating effectively, as well as providing the specific knowledge necessary for particular industry sectors), prepares students for careers and college after graduation. Students become more marketable to employers and can adapt better to workplace demands.

## More Than Half of the Schools Rarely Facilitate Paid Work Experience

Many youth are bored and disengaged in conventional academic classes, yet are unable to explore and develop their career options because of near-record youth unemployment. Paid work experience is particularly important for students who can reflect on their likes, dislikes, and interests related to particular employment prior to transitioning permanently into the world of work (Trainor et al., 2012). Schools, districts, and states have the ability to leverage their community relationships to facilitate paid work experiences for students who would be unlikely to secure the opportunities independently. Facilitating employment helps students earn income and keeps them engaged in school.

## More Than Half of the Schools Do Not Provide Dual Enrollment of High School Students Into College Remedial Courses

Tomorrow's jobs will require students to have postsecondary education and credentials beyond a high

school diploma. Based on projections of the Georgetown University Center on Education and the Workforce, 61% of Wisconsin jobs will require postsecondary education by 2018, and 33% of Wisconsin jobs will require a bachelor's degree or higher by 2018 (Carnevale et al., 2010).

The likelihood of postsecondary educational success by students who need to take remedial education in college is extremely low. Only 17% of high school graduates who require at least one remedial reading course and 27% who require a remedial math course earn a bachelor's degree (Vandal, 2010). Students take an assessment exam and are placed into a one-size-fits-all remedial education course sequence that often involves multiple semesters of classes that do not meet degree requirements. This sequence delays their entry into degree or certificate programs and drains their personal bank accounts and financial aid eligibility and, ultimately, their interest in pursuing a college credential.

Dual enrollment into college remedial courses while a student is still in high school is proving to be a practice to create a strong bridge to a credential. For example, Jobs for the Future's "Back On Track" education model provides high school students with instruction aligned to college gatekeeper courses (Jobs for the Future, 2016). High school students are enrolled into a college's or university's remedial course (dual enrollment) and study the remedial course curriculum. When high school students pass the college remedial course, they receive college credit. By taking college remedial education courses in high school, students can bypass remedial education requirements when they enter college and proceed directly to enroll into degree-related courses. By taking courses in high school, students also benefit by not having to pay fees for college remedial classes.

Another example is the Concurrent Courses Initiative (CCI). This was a pilot program in California, involving eight high school-postsecondary partnerships and approximately 1,800 students over two years. Approximately 60% of the participants were students of color; 40% were from non-English speaking homes; and approximately 33% of students struggled academically. Students enrolled in this dual enrollment were provided with college credit for courses completed in high school. Students who enrolled in CCI were more likely to complete high school, less likely to take basic skills courses in college, and more likely to persist in postsecondary education at rates higher than counterparts who were not part of a dual enrollment program (Rodriguez, Hughes, & Belfield, 2012). While dual enrollment has historically targeted high-achieving students using Advanced Placement courses in high school that "count" for college credit, the CCI focused on, and demonstrated success with, students from low-income families and students from historically underrepresented groups.

### Limitations of the Study

This study has several limitations. While efforts were made to have the survey completed by individuals who knew the program(s), it is possible that some respondents

may have been too far removed from the program details to provide accurate data. The construction of the survey and its technical word choice may have been misunderstood or misinterpreted by survey respondents, leading to inaccurate responses. For example, participants may vary in their definition of national, portable, industry-specific occupational certificates and licenses. Finally, the response rate of the survey was 32%, which means that we still do not have information from 68% of reengagement and recovery programs in Southeastern Wisconsin. A better response rate would provide us with a more comprehensive picture of options for recovering and reengaging students.

### Preparing Students for Education and Work: Career and Technical Education (CTE)

The high school education landscape must emphasize career readiness as much as college readiness. While rhetoric supports this ideal, recent policy does not. The standards movement has pushed school districts to double down on academics, while career and vocational options have become less available (Schwartz, 2014).

At the very same time, a move toward career and technical education (CTE) is shifting the conversation. CTE is replacing vocational education from decades past. CTE combines rigorous academics with occupational credentials in high-skill, high-demand fields, such as engineering, information technology, health sciences, and hospitality and tourism (Schwartz, 2014). It is clear that schools can do more to help students not only graduate, but also to graduate with knowledge and skills that employers need. High schools can work with postsecondary institutions and partner with industry to provide dual enrollment and paid employment for students. This keeps students engaged, decreases the cost of postsecondary education, and benefits employers. CTE can offer several pathways for all students, not only those who have historically been targeted as needing vocational training to complete their high school education. CTE can be a path to a career or to further education for those who choose to attend a 4-year college program.

Today's students will need advanced training, postsecondary education, and credentials to successfully compete for tomorrow's jobs in a global environment. A high school diploma is a prerequisite. The General Educational Development (GED) that results in a Certificate of High School Equivalency arguably will be insufficient. As an example, some branches of United States military will not enlist applicants who have a GED. The Marine Corps requires a high school diploma and the Air Force will accept a GED, but an applicant must also have 15 community college credits (Campbell, 2016). In addition, increasingly, even entry-level jobs will require some specialized knowledge and postsecondary training or education (Carnevale et al., 2010).

Therefore, it is imperative that schools offer programs that incorporate effective characteristics to reengage and recover students who are at risk of dropping out of high school. By providing a greater repertoire of effective ele-

ments to reengage and recover at-risk students, high schools enhance their ability to achieve greater student successes, school educational outcomes, and economic growth of the community at large.

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# Book Review: *Promoting Racial Literacy in Schools: Differences That Make a Difference*

Reviewed by Jaclyn Caballero

*Promoting Racial Literacy in Schools:  
Differences That Make a Difference*  
H. C. Stevenson, 2014  
New York: Teachers College Press  
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In recent years attention has been paid to the achievement gap in the education system. Politicians have been trying to focus on the problems that are currently aiding the achievement gap. Even though politicians have tried to decrease the gap, they have done so without talking about race; however, many people believe that the gap exists through race. We talk about race as a “social construct” and even though it has been socially constructed, it still has a negative impact on the Black and Latino populations in the United States, such as racial stress. One reason why politicians and our society do not talk about race is because we do not know the appropriate way to talk about race and, therefore, we choose to avoid racial interactions. Not all of us have been given ample opportunities to learn effective ways to be successful when talking about race and that is why we constantly choose to refrain from these interactions.

Howard C. Stevenson (2014) offers strategies to combat this resistance in *Promoting Racial Literacy: Differences That Make a Difference*. It includes chapters that teach educators, non-educators, administrators, students, and parents how to use storytelling as a tool to successfully inform others about racial literacy. According to Stevenson, racial literacy is being able to read, recast, and resolve social interactions that are racially stressful. The more knowledge about racial literacy a person has encourages more positive racial encounters with others. Finding ways to alleviate some of the racial stress of educators and students is a reason to own this book because it lays out many ways to improve racial literacy.

Racial stress weighs down many Black and Latino students in classrooms. Racial stress is measured on a high to low scale. If Black or Latino students do not have a high sense of belonging or if there is lack of a strong student-teacher relationship, then Black and Latino students are likely to have high racial stress, which sometimes leads to physiological symptoms that impact their academic performance. Many people believe we are in postracial America, which aids the lack of discussion about race, especially in the context of our education system. Stevenson uses the metaphor about blind scientists inspecting an elephant in the room, using the elephant as a symbol for race. The metaphor demonstrates that those focusing on race have narrowed ideas about what race is. Such restrictions make looking at the entire elephant difficult. They are not able

to look at all of race and its components. In order to keep students in school and motivated to learn from these common misconceptions, students need to feel comfortable in their school environments. To feel comfortable in classrooms there needs to be teacher “buy in” to improve the atmosphere of a classroom to encourage students to tell stories about racial instances they have encountered so that others around them and themselves can use RECAST (Racial Encounter Coping Appraisal and Socialization Theory) in their stories and have less anxiety about discussing race topics.

This book is organized into six chapters and begins with an introduction that helps the reader relate to the type of racial stress Stevenson endured in his early childhood. His personal anecdotes allow the reader to understand how Black and Latino children might feel today. Non-Whites and Whites both are impacted by racial stress; Whites have low racial stress while non-Whites have higher racial stress. Stevenson is trying to help lessen the racial stress inside classrooms in order to impact the education system as a whole by affecting the many parts that make up the whole system: educators, non-educators, administrators, parents, and students. Hopefully by providing these tools, Whites and non-Whites can decrease their racial stress and in turn help eliminate racial microaggressions that occur on a daily basis.

There are many different ideas about how to battle the achievement gap in regards to race; *Promoting Racial Literacy in Schools: Differences That Make a Difference* gives many concepts and ideas to successfully talk about race. With progress on the achievement gap at a standstill, the United States needs to change the education system as a whole and give educators the resources necessary to effectively combat the achievement gap. I think this book is necessary to progress in this battle and give it a five-star rating.

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## Reviewer

Jaclyn Caballero received her bachelor's degree in psychology. Currently, she is a master's student in the Transformative Education Department at Miami University. Her main focus is to help find solutions to bridge racial and cultural gaps that exist in the public school system to enable equal learning opportunities.

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## *The Journal of At-Risk Issues*

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*The Journal of At-Risk Issues* (JARI; ISSN1098-1608) is published by the National Dropout Prevention Center and the National Dropout Prevention Network. The combined missions of the Center and Network are to provide information and services to those engaged in helping young people in at-risk situations. The journal is nationally refereed, currently published twice per year, and abstracted in ERIC.

#### Focus

Manuscripts should be original works not previously published nor concurrently submitted for publication to other journals. Manuscripts should be written clearly and concisely for a diverse audience, especially educational professionals in K-12 and higher education. Topics appropriate for *The Journal of At-Risk Issues* include, but are not limited to, research and practice, dropout prevention strategies, school restructuring, social and cultural reform, family issues, tracking, youth in at-risk situations, literacy, school violence, alternative education, cooperative learning, learning styles, community involvement in education, and dropout recovery.

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