MEMORANDUM November 14, 2016

TO: Caleen Allen
General Manager of Strategic Partnerships

FROM: Carla Stevens
Assistant Superintendent, Research and Accountability

SUBJECT: **NCAA READ TO THE FINAL FOUR LITERACY COMPETITION, 2015–2016**

The NCAA Read to the Final Four Literacy competition was initiated in a partnership between the Houston Independent School District (HISD), NCAA Team Works®, Houston NCAA Final Four Local Organizing Committee, Houston Public Library, the University of Houston, and CYCLE (Changing Young Children's Lives through Education). The competition was implemented in conjunction with the April 2016, NCAA Men's Basketball Final Four championship in Houston. HISD administrators selected 68 elementary-level campuses and all third-grade students at those campuses to compete across six rounds of reading. Campuses with the highest average number of reading minutes advanced to the next level of the competition. School selection was based on high enrollment of at-risk students and the school's commitment to the district's Literacy By 3 initiative. The Literacy By 3 initiative aims to help every child read on grade level by the end of third grade by 2020.

Key Findings:

- On the beginning-of-year ISIP™ Early Reading assessment, all students who competed in the competition tested below grade level. However, on the end-of-year assessment, students in the Final Four group achieved overall reading scores that were on grade level compared to students who were eliminated in other rounds of the competition.
- Students' overall reading performance on the ISIP™ Español assessment revealed consistent growth from the beginning of the year to the end of the year. However, the largest gain in Spanish overall reading comprehension was among the Final Four student group over the time period.
- Relative to reading motivation and learning, Final Four students perceived higher levels of agreement on items measuring belief in their ability to perform the reading task, the extent that learning to read was influenced by the competition, and the extent that the environment influenced their motivation to read compared to students who were eliminated in other rounds.

Further distribution of this report is at your discretion. Should you have any further, please contact me at 713-556-6700.

Attachment

cc: Grenita Lathan
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HOUSTON INDEPENDENT SCHOOL DISTRICT

RESEARCH

Educational Program Report

NCAA READ TO THE FINAL FOUR LITERACY COMPETITION, 2015–2016

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NCAA READ TO THE FINAL FOUR LITERACY COMPETITION, 2015–2016

Executive Summary

The NCAA Read to the Final Four Literacy competition was initiated in a partnership between the Houston Independent School District (HISD), NCAA Team Works®, Houston NCAA Final Four Local Organizing Committee, Houston Public Library, the University of Houston, and CYCLE (Changing Young Children's Lives through Education). The program was implemented in conjunction with the April 2016, NCAA Men's Basketball Final Four championship in Houston. HISD administrators selected 68 elementary-level campuses and all third-grade students at those campuses to participate in the program[1]. School selection was based on high enrollment of at-risk students and the school's commitment to the district's *Literacy By 3* initiative. The *Literacy By 3* initiative aims to help every child read on grade level by the end of third grade by 2020.

Modeled after the NCAA Final Four, third-grade students at participating schools competed across six rounds (brackets) of reading from October 2015 to April 2016. Rounds corresponded to the brackets used in the NCAA Final Four tournament. The school that documented the highest average number of minutes read was announced in April at the official NCAA Final Four event in Houston's NRG Stadium. In addition, the winning school received a $5,000 cash prize, trophy, campus celebration, and recognition through local media. Consistent with the *Literacy by 3* objective, this evaluation addressed students' growth in reading. In addition, the evaluation measured students' perception regarding reading motivation and learning.

The HISD HUB, a web-based platform, was used to log students' reading materials and time spent reading. A limitation of this evaluation is that data were self-reported by students. However, students' teachers were asked to monitor their reading logs prior to data entry. Additional mitigation strategies included district administrators reviewing the data monthly in the HUB to detect outliers, and reporting outliers to site coordinators assigned to each participating school. Although there were six rounds of competition, the winning school was grouped with the Final Four schools in the analyses to increase the sample size. An assumption was that Final Four schools were similar relative to reading achievement and motivation prior to the competition.

Highlights

- Students in targeted schools were more likely to be economically-disadvantaged (90% vs. 79%), limited English proficient (47% vs. 45%), at risk (57% vs. 50%), and classified as special education (7% vs. 6%) when compared to all third-grade students enrolled in HISD during the 2015–2016 academic year. There was a lower percentage of gifted/talented students among the targeted population (13% vs. 21%), and a comparable percentage of students identified with dyslexia (1%). Gender representation among the schools was consistent with district percentages at 51% and 49%, for males and females, respectively.

- On the ISIP™ Early Reading (English) assessment (Istation), longitudinal tracking of reading performance revealed gradual improvements in students' overall reading ability index score from beginning-of-year (BOY), middle-of-year (MOY), to end-of-year (EOY). The data were analyzed for students who completed the three assessments over the course of the 2015–2016 academic year. The largest gain in English reading ability, from BOY to EOY, was among the Final Four student

[1] See **Appendix A** for schools by round.

sample (11.1 points); whereas, the lowest gain was among students at schools who were eliminated in Round 4.

- At BOY students in all groups tested below grade level on the ISIP™ Early Reading assessment. However, by EOY, students in the Final Four group achieved overall reading scores on the assessment that were on grade level (> 241).

- Program effectiveness, as measured by the Cohen's d statistic, revealed a "medium" program effect for students in Final Four and Round 2 schools, and a "small" program effect for students in schools that were eliminated in other rounds on the Early Reading Istation assessment.

- Longitudinal tracking of students' overall reading performance on the ISIP™ Español assessment (Istation) revealed consistent growth from BOY to MOY to EOY for students in Rounds 1 through 4 who completed the three assessments over the 2015–2016 academic year. However, the largest gain in Spanish overall reading comprehension from BOY to EOY was among the Final Four student sample (41.2 points); whereas, the lowest gain was among students at schools eliminated in Rounds 1 and 4 (35.4 points).

- At BOY, students in all rounds were performing on grade level on the ISIP™ Español assessment. By EOY, the Final Four and Round 4 student groups were performing on grade level.

- The Cohen's d effect size statistic yielded "large" program effect for students in all elimination rounds on the Istation Espanol.

- Hierarchial multiple regression was used to predict English and Spanish overall reading scores of students who participated in the program. BOY overall reading scores, special education, at risk, and gifted/talented status were the independent variables and EOY performance was the dependent variable. Relative to English overall reading performance, for each one-point increase in BOY score, there was a 1.4-point increase in EOY score. On the Spanish assessment, for each one-point increase in BOY score, there was a 2.4-point increase in EOY score. However, being a student in a Final Four school did not make a statistically significant contribution to higher English or Spanish overall reading scores compared to students eliminated in previous rounds.

- Relative to reading motivation and learning, Final Four students perceived higher levels of agreement on items measuring "self-efficacy," "performance goal," and "learning environment stimulation" compared to students who were eliminated in other rounds. "Self-efficacy" measured students' belief in their own ability to perform the reading task, "performance goal" assessed the extent that students' goals in learning to read was to compete with other students and get attention from the teacher, and "learning environment stimulation" measured the extent that the environment influenced students' motivation to read. Students who were eliminated in Round 4 perceived the highest "active student learning" and "reading learning value." "Active student learning" measured their perception of taking an active role in using strategies to increase knowledge and understanding, while "reading learning value" assessed their level of motivation to read.

Recommendations

1. In this report, positive differences were noted in overall reading performance of students at schools who participated in the NCAA Final Four Literacy program on the Istation English and Spanish

assessments. Students in the Final Four group demonstrated more growth on the English and Spanish assessments compared to students in other elimination rounds. The district should consider seeking alternative funding to develop programs that motivate students to read.

2. Student surveys provided evidence that the program influenced their intrinsic value to read. Therefore, the district should consider allocating resources for sustainability.

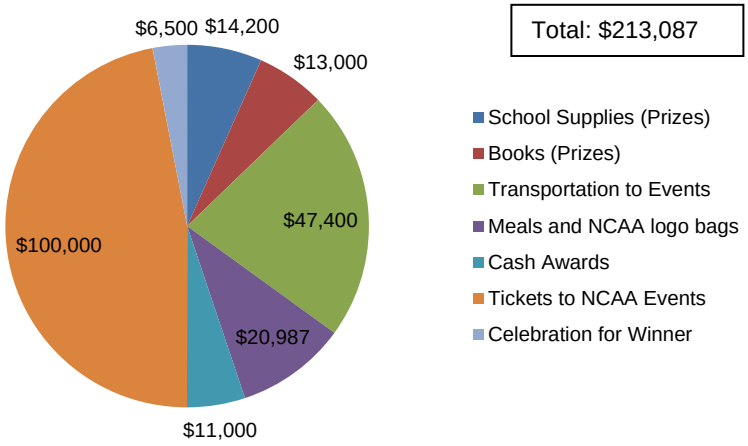
Introduction

Through a partnership with NCAA Team Works®, the Houston NCAA Final Four Local Organizing Committee, Houston Public Library, the University of Houston, and CYCLE, HISD launched the Read to the Final Four Literacy competition. The competition was conducted among 68 elementary-level campuses and all third-grade students at those campuses. Schools competed as teams across six rounds (brackets). Schools with the highest average number of minutes read advanced to the next round of the competition. The winner of the competition was awarded a $5,000 cash prize, Final Four trophy, campus celebration, and recognition at the official NCAA Final Four event.

Several systems were developed for students to document reading activities. Specifically, in collaboration with the HISD PowerUp initiative, a website on the HUB housed an electronic link to the reading log, a paper version of the reading log, reading log due dates, book lists, promotional videos, and bracket status. Staff contact information for technical assistance was also posted on the HUB. Staff in the HISD departments of Research and Accountability, Elementary Curriculum and Development, Strategic Partnerships, Communications and Publications, and Library Services contributed to the development of the website. A site coordinator, at each participating school, coordinated program activities for students. Site coordinators helped to ensure that teachers at their school had access to information on the HUB.

Figure 1 shows that $213,087 was donated by the NCAA Local Organizing Committee to fund the program. The majority of these funds were expended transporting students to events ($100,000 or 46.9%). Additional support from partnering organizations included an estimated $4,420 in bicycles to students in Final Four schools.

Figure 1: Donated Funds by NCAA Local Organizing Committee, 2015–2016



The Houston Public Library provided each student with a free “Learning Link Library Card” to access all Houston-area libraries and digital learning resources from the beginning of the competition in October 2015 to July 31, 2016 (Houston Public Library, 2015). Students had the opportunity to borrow up to 10 juvenile items at one time at no cost with the Learning Link Library Card. Students could choose from printed items or audiovisual items, including juvenile DVDs and books on CD. Students also had unlimited access to digital materials with their Learning Link card, including e-books, e-audio books, and streaming video and music.

Review of Literature

U.S. schools are designed to provide an environment that supports academic and social skill development through targeted strategies (Polychronia, Hatzichristoua, and Sideridisb, 2012). Numerous studies have shown that, rather than programs, teacher preparation and teacher expertise are the most important determinants of student achievement (National Commission on Teaching and America's Future, 1996; Wong, n.d.). However, the continued lag in academic achievement among U.S. students has led to the use of innovative approaches that build on learning opportunities for students to meet the demands of a 21st century education.

Although generally associated with sports, competitions where individuals compete for rewards have been used to help students reach academic and social competencies. There are contrasting views regarding the influence of competition on student learning. Research purports that competitions may stimulate interest and enjoyment in tasks that would otherwise have limited value to students (Nichols and Sullivan, 2009). Team-based competitive approaches may be chiefly effective at making tasks more energizing and appealing to students (Nichols & Sullivan, 2009). Shindler (2009) maintains that when competition is a component of school activities, a sense of determination and excitement is introduced. Competition shifts the students' attention from the task to the cost of their performance on the task. Moreover, competition that is thoughtful and intentional is central in the transformative classroom (Johnson and Johnson, 2006; Shindler, 2009).

Nuyen and Nga (2003) found that students considered competitions as relaxing and motivating. Students were found to be more engaged and committed to the competitive program, which provided a natural opportunity to perform as a group (Chen, 2005, p. 1). Shindler (2009) maintains that competition may reinforce group interdependence and/or team skills, increase pressure among students that may potentially refine skills given the more demanding performance environment; while increasing the level of fun in an activity. At the same time, students may experience a fear of failure, stress, and discouragement, which may undermine their intrinsic motivation to perform the task (Reeve & Lee, 2014).

Goal orientation theory is a relevant theoretical framework to understand motivation and engagement in competitive activities among elementary-school students to achieve a common goal (Patrick, Anderman, and Ryan, 2001; Rabideau, 2005; Hurst, n.d.). While achievement goals are thought to provide intrinsic motivation for achievement, performance-oriented goals may be considered to undermine intrinsic motivation, focusing on demonstration of ability and how ability will be judged relative to others (Hurst, n.d.), and may have adverse effects on peer inclusion and conflict. On the other hand, performance goal theorists maintain that students may feel less threatened to work together, stimulating their interest to participate in competitive activities (Chen, 2005). Anderman & Anderman (1999) contributed research on the positive association between course grades and performance-approach goals in young students, particularly related to their perceptions of intelligence, achievement, and engagement (Anderman & Wolters, 2006). In lieu of goal orientation theory, competition theory suggests that focusing on competition in the context of an interdependent group activity may offset the possible negative consequences of competition, considering that the activity is considered fun, valuable, high-energy, and that there are no long-term effects of the activity for students (Len, 2001).

Meece, Anderman, and Anderman (2006) noted that underachieving students may not be motivated to perform in competitions relative to higher performing peers. Moreover, Good and Brophy (2008) found that if students become overly concerned about winning or losing the competition, they may not perceive the academic benefits, thus, their performance takes priority over motivation to learn and develop socially and academically. Nevertheless, activities that require students to apply their skills "are likely to promote motivation and effort among students, as they strive for greater understanding" (Nichols and Sullivan, 2009, p. 1).

Research suggests that competitive qualities vary based on gender, race, age, and cultures, thus, influencing attitudes toward competition (Schneider, et al., 2005). A meta-analysis conducted by Hattie (2009) identified that, depending on the level of the school, prior achievement, and demographic characteristics of students, repeated reading programs had the greatest effects on student achievement. Hattie found that other variables, such as the amount of classroom cohesion, and peer influences are important predictors of student learning and may be necessary for students to be successful in competitive activities. Research has shown that the amount of time students are successfully engaged in a content area, such as reading, and the overlap of the content area and the competition can be considered as immediate measures of student achievement and are vital to classroom processes (Huitt, 2003; Squires, Huitt, and Segars, 1982).

There are several factors that may influence students gaining benefits from competitive activities. Specifically, students must be able to set goals, self-manage their efforts, and demonstrate a commitment to completing their goals, even when there are difficulties or distractions. Pintrich, Smith, Garcia, and McKeachie (1991) determined that "effort management is important to academic success because it not only signifies goal commitment, but also regulates the continued use of learning strategies" (p. 27). To that end, this study measured the impact of the NCAA Read to the Final Four Literacy competition on students' academic performance and motivation. The study assessed reading achievement over time, considering the extent that reading was documented by students. Measurement of students' motivation was captured at the end of the event to determine their perceptions of the program and how it influenced learning and attitudes about reading. An assumption of the study is that students who spent more time engaging in the competition would gain more value from their experiences.

Methods

Data Collection and Analysis

- The NCAA Read to Final Four study sample consisted of third-grade students at 68 elementary schools in HISD, which formed 68 independent, heterogeneous groups. The groups competed in six rounds (brackets) of competition. See **Appendix A** for schools by number of students and round. A map of schools, reflecting geographical locations, can be found in **Appendix B**. Schools advanced in the competition based on the mean number of minutes read. This number was collected by dividing the total number of minutes read by third-grade enrollment at each school. Schools with the highest average number of reading minutes per third-grade student enrollment continued in the competition.

- The number of minutes read was collected using a paper version (**Appendix C**) and a web-based version of a reading log. The paper version of the log provided students a means to immediately document reading and helped to ensure more reliable accounts of reading activities. However, only reading data entered into the web-based version of the log was used to determine the number of minutes that students read at participating schools. Students' reading teachers provided students access to both logs. Students were encouraged to record information on the paper-version of the log between electronic submissions. Students were allowed to document all extracurricular reading. Students had the opportunity to access the digital log from any computer with Internet capability.

- The HISD web-based reading data were initially captured in a Microsoft Office 365 Excel database located on the HUB. In order to ensure the reliability and validity of the data, periodic data checks were made at the site where data were stored. School site coordinators were provided updates on the number of minutes read by students at their school. Anomalies were explored and email messages were sent to coordinators regarding data accuracy and integrity.

- The ISIP™ Early Reading and the ISIP™ Español were used to obtain overall reading performance of third-grade students who participated in the program. ISIP is the acronym for Istation's Indicators of Progress. ISIP™ Early Reading is administered in English and ISIP™ Español is administered in Spanish. ISIP™ Español is not a direct translation of ISIP™ Early Reading. Overall reading on ISIP™ Early Reading measures vocabulary, reading comprehension, and spelling; whereas, vocabulary, reading comprehension, and writing are components of overall reading on the ISIP™ Español. Estimated ability level indices were used to determine students' overall estimated reading ability index (See **Appendix D** for interpretation of the index). The computer-adaptive assessment is "research-based and aligned to individual state standards and Common Core state standards" (Istation, n.d.).

- Students' ISIP™ overall reading scores were used to detect impact of the program using descriptive statistics, hierarchical regression analyses, independent t-test, and Cohen's d effect size statistics. The guidelines for interpreting Cohen's d are: .01 = small effect, .06 = moderate effect, and .14 = large effect (Cohen, 1988). The BOY assessment was administered in September 2015, MOY in January 2016, and the EOY in April 2016.

- A modified version of the Students' Motivation toward Science Learning (SMTSL) survey (Tuana, Chin, and Shieh, 2005) and the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, Smith, Garcia, and McKeachie, 1991) were used to assess the impact of the NCAA Read to the Final Four Literacy competition on students' reading motivation and learning (**Appendix E**). An explanation of the survey scales or constructs can be found in **Appendix F**. The SMTSL had a Cronbach alpha

reliability coefficient for each scale, using an individual student as the unit of analysis. The Cronbach alpha ranged between 0.70 and 0.87 (Tuana, Chin, and Shieh, 2005). Five of the six constructs developed in the SMTSL were modified to be used in this evaluation. To ensure validity and reliability of the modified version of the survey, two HISD elementary curriculum staff participated in a focus group. Items were revised accordingly. In addition, a pilot study was conducted with five third-grade students to assess the understanding and usability of the instrument at their reading level. The Cronbach alpha reliability analyses for the modified version yielded the following coefficients for each scale: Self-efficacy = .44 (8 items); Learning = .61 (8 items); Value = .56 (5 items); Performance = .61 (4 items); Achievement = .60 (5 items); and Environment = .57 (6 items). Cronbach alpha for the 36 item survey was .787. A reliability coefficient of .70 or higher is considered "acceptable" in most social science research.

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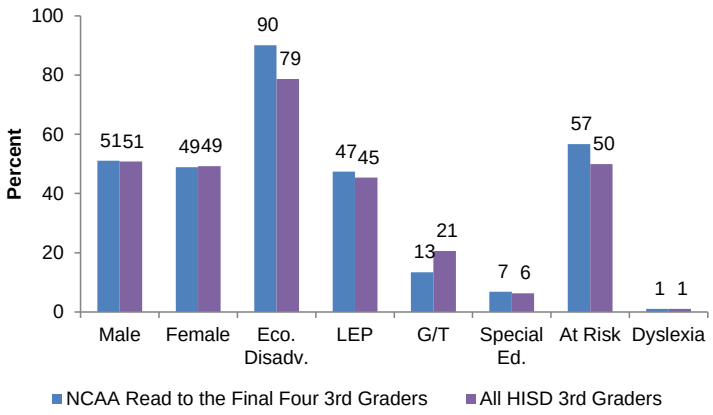
Results

What were the demographic characteristics of students who participated in the NCAA Read to the Final Four Literacy program?

A total of 7,236 third-grade students at 68 HISD schools were targeted to compete in the NCAA Read to the Final Four Literacy program. This represented 36.1% of the total HISD third-grade enrollment. (**Appendix G** provides a comparison of the targeted population and all HISD third-grade students.)

- The targeted student population consisted of a higher percentage of economically-disadvantaged (90% vs. 79%), limited English proficient (47% vs. 45%), at risk (57% vs. 50%), and special education (7% vs. 6%) students compared to all HISD third graders during the 2015–2016 academic year (**Figure 2**). There was a lower percentage of gifted/talented students among the targeted population (13% vs. 21%), and a comparable percentage of students identified with dyslexia (1%). Representation of males and females was consistent with district percentages at 51% and 49%, respectively.

Figure 2: Profile of Read to the Final Four Literacy program participants vs. all HISD third-grade students



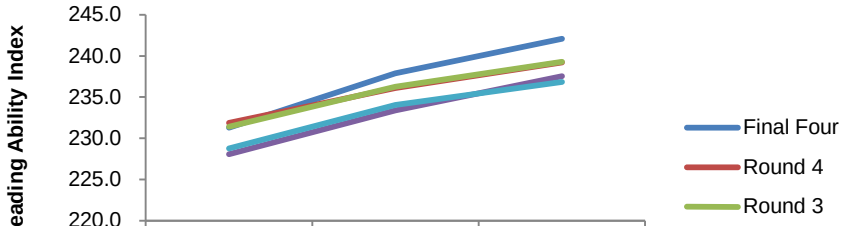
What was the longitudinal impact of the NCAA Read to the Final Four Literacy program on students' overall reading performance at targeted schools?

The ISIP™ Early Reading and ISIP™ Español assessments were used to measure the longitudinal impact of the NCAA Read to the Final Four Literacy program on overall reading performance of third-grade students at the 68 targeted schools. Only students with beginning-of-year (BOY), middle-of-year (MOY), and end-of-year (EOY) data were used in the analyses. Demographic characteristics of students by elimination round can be found in **Appendix H**.

- **Figure 3** depicts the mean overall reading ability scores on the Early Reading (English) assessment for the sample of third-grade students who took the test according to elimination round. The winner of the competition was included in the Final Four to increase the sample size, and to provide more reliable results.

- The mean BOY score for Final Four students was fairly comparable to scores of students in Rounds 3 and 4, but slightly higher than students in Rounds 1 and 2 schools (approximately 3 points). At BOY all groups' overall reading ability were below grade level (< 234) (See Appendix D for Istation ability indexes.) Additional descriptive statistics by round are presented in **Appendix I**.

Figure 3: Mean ISIP™ Early Reading (English) overall reading scores by elimination round

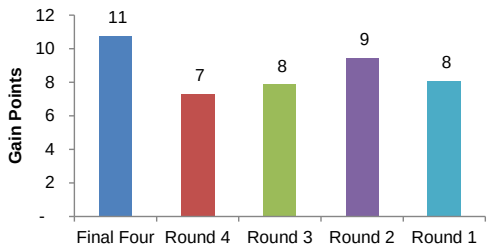


	BOY	MOY	EOY
Final Four	231.3	237.9	242.1
Round 4	231.9	236.1	239.2
Round 3	231.4	236.3	239.3
Round 2	228.1	233.4	237.5
Round 1	228.8	234.0	236.8

Note: On grade level scores: BOY (September 2015) > 234; MOY (January 2016) > 239, and EOY (April 2016) > 241.

- By EOY (April 2016), only students in the Final Four group achieved overall reading scores on the ISIP™ Early Reading assessment that were on grade level (> 241).

Figure 4: Overall reading gain from BOY to EOY on the ISIP™ Early Reading assessment (English) by elimination round

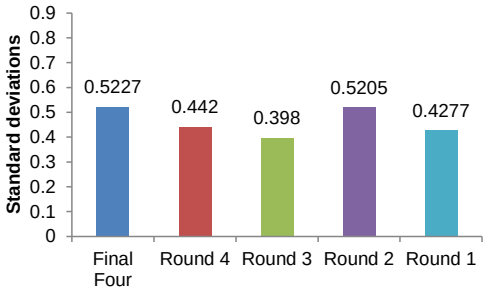


- The largest gain in overall reading ability was among the Final Four student sample (11 points); whereas, the lowest gain was among students at schools eliminated in Round 4 (7 points) (**Figure 4**).

- Paired t-tests were conducted to compare the BOY and EOY ISIP™ Early Reading overall reading index scores for the student sample in each round of competition. Only data for students with scores at each time interval were included in the analyses. There were statistically significant differences in scores from BOY to EOY for students in each round (**Appendix J**).

- Program effectiveness was measured at all rounds with ISIP™ Early Reading data using the Cohen's d effect size statistic. **Figure 5** reflects a "medium" program effect for students in Final Four and Round 2 schools, and a "small" to "medium" program effect for students in other elimination rounds.

Figure 5: Cohen's d Effect Sizes for ISIP™ Early Reading (English) by elimination round



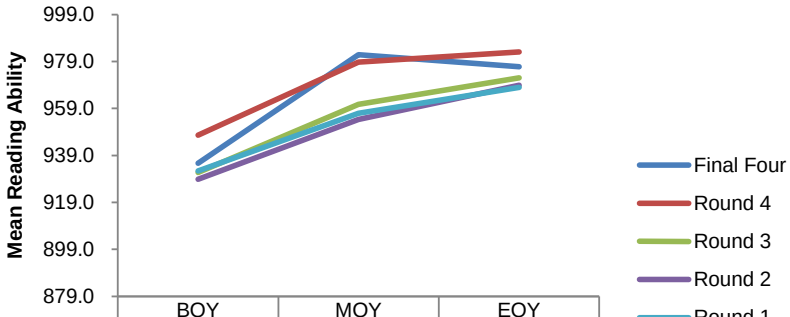
***The size of the effect is indicated as follows: .2 = small, .5 = medium; and .8 = large.**

The ISIP™ Español assessment was used to measure the longitudinal impact of the NCAA Read to the Final Four Literacy program on Spanish overall reading performance of third-grade students at the 68 targeted schools. Only students with BOY, MOY, and EOY data were used in the analyses. More detailed descriptive statistics used in the analyses are presented in **Appendix K**.

- Longitudinal tracking of students' overall reading performance on the ISIP™ Español assessment revealed consistent gains from BOY to EOY for students in Rounds 1 through 4 who completed the three assessments. There was an increase in the mean overall reading score of Final Four students from BOY to MOY and a decline in scores from MOY to EOY (**Figure 6**).

- At BOY, all groups were performing on grade level, by EOY, the Final Four and Round 4 student groups were performing on grade level.

Figure 6: Mean ISIP™ Español overall reading scores by elimination round

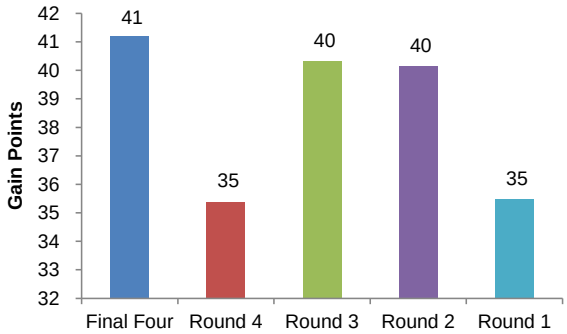


	BOY	MOY	EOY
Final Four	935.6	981.9	976.8
Round 4	947.7	978.8	983.1
Round 3	931.7	960.8	972.0
Round 2	928.8	954.3	969.0
Round 1	932.5	957.0	967.9

Note: On grade level scores: BOY (September 2015) > 917; MOY (January 2016) > 954, and EOY (April 2016) > 972.

- The largest gain in Spanish overall reading was among the Final Four student sample (41 points); whereas, the lowest gain was among students at schools eliminated in Rounds 1 and 4 (35 points) (**Figure 7**).

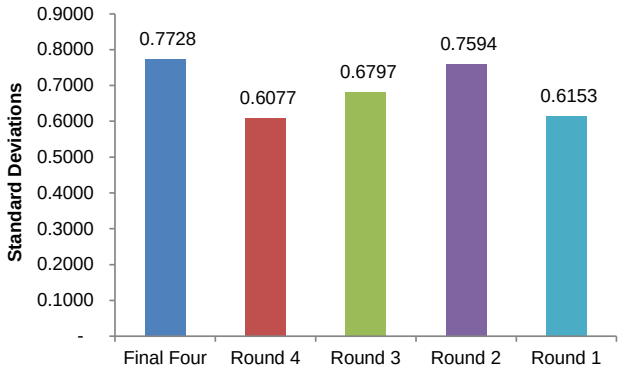
Figure 7: Overall reading gain from BOY to EOY on the ISIP™ Español by elimination round



- Paired t-tests were conducted to compare BOY and EOY ISIP™ Español overall reading index scores for the student sample in each round of competition. Only data for students with scores at each time interval were included in the analyses. There were statistically signifcant differences in scores from BOY to EOY for students in each round (**Appendix L**).

- Program effectiveness was measured at all rounds with ISIP™ Español data using the Cohen's d effect size statistic. **Figure 8** reflects a "large" program effect for students in all elimination rounds.

Figure 8: Cohen's d Effect Sizes based on ISIP™ Español overall reading performance by elimination round.



***The size of the effect is indicated as follows: .2 = small, .5 = medium; and .8 = large.**

What was the best predictor of students' reading performance of NCAA Read to the Final Four Literacy program participants?

Hierarchial multiple regression was used to predict overall reading performance of students who participated in the program. Students' ISIP™ Early Reading EOY overall reading index score was used in the analyses as the dependent variable, after controlling for their BOY overall reading score, gender, LEP, special education, and gifted/talented status, and whether or not the student was in the Final Four bracket. The results are presented in **Table 1**.

Preliminary analyses were conduted to ensure no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. BOY score, gender, LEP, at risk, special education, and gifted/talented status were entered at Step 1, explaining 62% of the variance of EOY overall reading scores. These variables statistically significantly predicted the ISIP™ Early Reading EOY overall reading performance, $F(6, 3702) = 1003.84$, $p < .0001$, $R^2 = .62$. All five variables added to the model were statistically significant predictors, $p < .0001$.

After controlling for Final Four status at Step 2, the total variance explained by the model was unchanged. Variables in *Model 2* also statistically significantly predicted Istation EOY overall reading scores, F(7, 3702) = 860.91, p < .0001, R^2 = .62. The R squared change = .000.

In *Model 1*, G/T, special education, LEP, at risk, and BOY overall reading comprehension score were statistically significant, with G/T status recording the highest beta value (*beta* = 5.097, p < .0001). In general, G/T students had statistically significantly higher overall reading scores than non-G/T students. In Model 2, with Final Four status added to the model, G/T, special education, LEP, at risk, and BOY overall reading scores were statistically significant, again with G/T status yielding the highest beta value (*beta* = 4.941, p < .0001). In this model, for each one-point increase in BOY score, there was a 1.4-point increase in EOY score. However, being a Final Four school did not statistically significantly contribute to higher overall reading scores than students eliminated in previous rounds.

Table 1: Hierarchical Multiple Regression Analyses based on ISIP™ Early Reading and Student Demographic Characteristics

	Model 1		***Model 2***	
	Total N = 3702		**Total N** = 3702	
	Beta	***p***	***Beta***	***p***
BOY Reading Score	.885	.000	.745	.000
Eco. Disadv	-.155	.824	-.146	.833
Special Ed	-3.921	.000	-3.915	.000
G/T	5.079	.000	4.941	.000
LEP	2.952	.000	2.994	.000
At Risk	-2.596	.000	-2.631	.000
Final Four vs. other Rounds			1.384	.170
	Adjusted R^2 = .619		***Adjusted R^2 =.619***	

Similar hierarchal regression analyses were conducted using the ISIP™ Español assessment. The results are provided in **Table 2**. BOY overall reading scores, gender, special education, and gifted/talented status were entered at Step 1, explaining 58% of the variance of EOY overall reading scores. LEP status was omitted considering 98% of the students in the sample were LEP. These variables made a statistically significant contribution to Istation EOY overall reading comprehension scores, F(7, 1349) = 303.95, p < .0001, R^2 = .58.

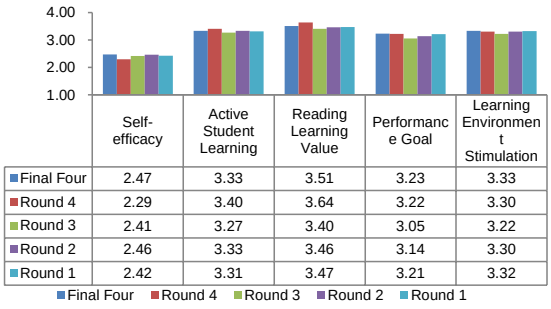
After controlling for Final Four status at Step 2, the total variance explained by the model was unchanged. The same variables in *Model 2* also made a statistically significant contribution towards Istation EOY overall reading comprehension scores, F(7, 1348) = 260.42, p < .0001, R^2 = .58. In *Model 1*, G/T, special education, at risk, gender, and BOY overall reading score were statistically significant, with special education status recording the highest beta value (*beta* = 37.74, p < .0001). Special education students had statistically significantly lower reading comprehension scores than non-special education students. In Model 2, with Final Four status added to the model, the same variables were statistically significant, with special education status having the highest beta value (*beta* = 37.753, p < .0001). In this model, for each one-point increase in BOY score, there was a 2.4-point increase in EOY score. However, being a Final Four school did not statistically significantly contribute to higher reading comprehension scores than students eliminated in previous rounds.

Table 2: Hierarchical Multiple Regression Analyses based on ISIP™ Español and Student Demographic Characteristics				
	Model 1		**Model 2**	
	Total N = 1348		**Total N** = 1348	
	Beta	***p***	***Beta***	***p***
BOY Reading Score	.908	.000	.908	.000
Eco. Disadv.	3.186	.173	3.204	.170
Special Ed.	-37.739	.000	-37.753	.000
G/T	9.991	.001	9.996	.001
Gender	-5.345	.021	-5.291	.022
At Risk	27.749	.017	27.598	.018
Final 4 vs. Other Rounds			2.377	
	Adjusted R^2 = .574		***Adjusted R^2 = .574***	

How did NCAA Final Four student groups compare relative to reading motivation and learning?

Figure 9 presents the mean scores on the reading motivation and learning survey relative to self-efficacy, active student learning, reading learning value, performance goal, and learning environment stimulation by round. A detailed explanation of the constructs can be found in Appendix F. Most notably, Final Four students perceived higher levels of agreement relative to self-efficacy, performance goal, and learning environment stimulation compared to students who competed in other rounds. Self-efficacy measured students' belief in their own ability to perform the reading task, performance goal assessed students' goals in learning to read was to compete with other students and get attention from the teacher, and learning environment stimulation measured the extent that the environmnent influenced students' motivation to read. Students who competed in Round 4 perceived the highest "active student learning" and "reading learning value." Active student learning measured students' perception of taking an active role in using strategies to increase knowledge and understanding, while reading learning value assessed their level of motivation to read.

Figure 9: Mean reading motivation and learning rating of the Read to the Final Four Literacy program student sample by elimination rounds

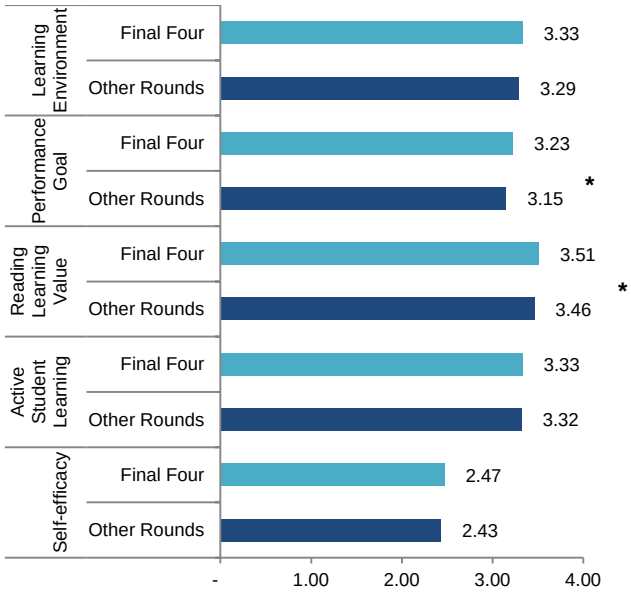


	Self-efficacy	Active Student Learning	Reading Learning Value	Performance Goal	Learning Environment Stimulation
Final Four	2.47	3.33	3.51	3.23	3.33
Round 4	2.29	3.40	3.64	3.22	3.30
Round 3	2.41	3.27	3.40	3.05	3.22
Round 2	2.46	3.33	3.46	3.14	3.30
Round 1	2.42	3.31	3.47	3.21	3.32

Note: Likert-type scale: 4 = Strongly agree, 3 = Agree = 2, Disagree = 1

Figure 10 compares the means of Final Four students with students who were eliminated in all other rounds to see whether there were differences, considering the effort required to reach Final Four status. Final Four students had higher means on all reading motivation and learning constructs. The largest difference was between Final Four students and other students on performance goal (reading to compete with other students and get attention from the teacher).

Figure 10: Independent t-test analyses of Final Four students compared to students in other brackets



***Significant at one-tailed, p < .05**

- An independent t-test revealed statistically significant differences between the perceptions of Final Four students and students who were eliminated in other rounds on performance goal (Final Four students (M = 3.23, SD = .58)) and other students (M = 3.15, SD = .60; t(3402) = 2.192, p = .014 (one-tailed test)). Statistically significant differences were also noted on items measuring reading learning value (Final Four students (M = 3.51, SD = .48) and other students (M = 3.46, SD = .46; t(3440) = 1.737, p = .04 (one-tailed test)) (**Appendix M**).

Discussion

During the 2015–2016 academic year, students enrolled in 68 HISD elementary schools competed in the NCAA Read to the Final Four Literacy program. The program was modeled after the NCAA Men's Final Four, held in Houston in April 2016. Students who participated in the program were among the most at-risk students in HISD. The program provided additional opportunities for student to read through access to the Houston Public Learning Link Library card. As students advanced through six rounds of competition, they were awarded prizes if their school had the highest mean number of minutes read during the round. Research has shown that competitions, where students compete for rewards, may help

them reach academic and social competencies (Nichols & Sullivan, 2009; Shindler, 2009). An assumption of this study was that participation in the program would have a positive impact on students' reading performance and motivation to read.

Among the most notable findings was gradual and continuous growth in students' overall reading performance from the beginning of the year (BOY) to the end of the year (EOY) on the Istation Early Reading English assessment. It is important to note that students generally started the program below the BOY target on this assessment, but their progress during the program accelerated over time. While students at all campuses continued to participate in the reading program, the data showed that, in general, the longer a campus remained competitive in the program, moving up in each round, the higher the reading performance at the end of the competition. For example, the overall reading performance of students on Final Four campuses grew an average of 11.1 points on the English reading assessment. While students' performance on the Istation Spanish assessment was on grade level at BOY for all groups, the Final Four student group made gains of 41.2 points on the Spanish reading assessment from BOY to EOY. There were positive student perceptions of the program relative to the value of reading, confidence in reading, and motivation to read at the end of the competition. There were limitations to the study, including the accuracy of the data measuring the time that students spent reading and which students actually participated in the competition. Nevertheless, these findings suggest that the NCAA Read to the Final Four Literacy program may have contributed toward improving reading achievement for at-risk students. Strategies that stimulate competition may help to ensure that students are reading on or above grade level by the end of third grade.

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Appendix A

NCAA Read to Final Four Literacy Program
68 Participating Schools by Elimination Round

Elimination Round	School	Number of Students	Percent of Students
Final Four	Browning ES	86	22.6
	Carrillo ES	97	25.5
	Dogan ES	103	27.1
	Janowski ES	94	24.7
	Total	**380**	**100.0**
4	Anderson ES	121	25.0
	Kennedy ES	106	21.9
	Marshall ES	193	39.9
	TIjerina ES	64	13.2
	Total	**484**	**100.0**
3	Brookline ES	157	17.5
	Elmore ES	125	14.0
	Fondren ES	69	7.7
	Highland Heights	90	10.0
	Hobby ES	132	14.7
	Patterson ES	159	17.7
	Port Houston ES	44	4.9
	Walnut Bend ES	120	13.4
	Total	**896**	**100.0**
2	Barrick ES	103	5.5
	Blackshear ES	69	3.7
	Bonham ES	183	9.7
	Codwell ES	80	4.2
	Cook ES	109	5.8
	Garden Villas ES	144	7.6
	Lewis ES	187	9.9
	Looscan ES	89	4.7
	Martinez, C. ES	76	4.0
	Montgomery ES	123	6.5
	Petersen ES	99	5.3
	Piney Point ES	175	9.3
	Scarborough ES	114	6.1
	Smith ES	113	6.0
	Tinsley ES	165	8.8
	Young ES	55	2.9
	Total	**1884**	**100.0**

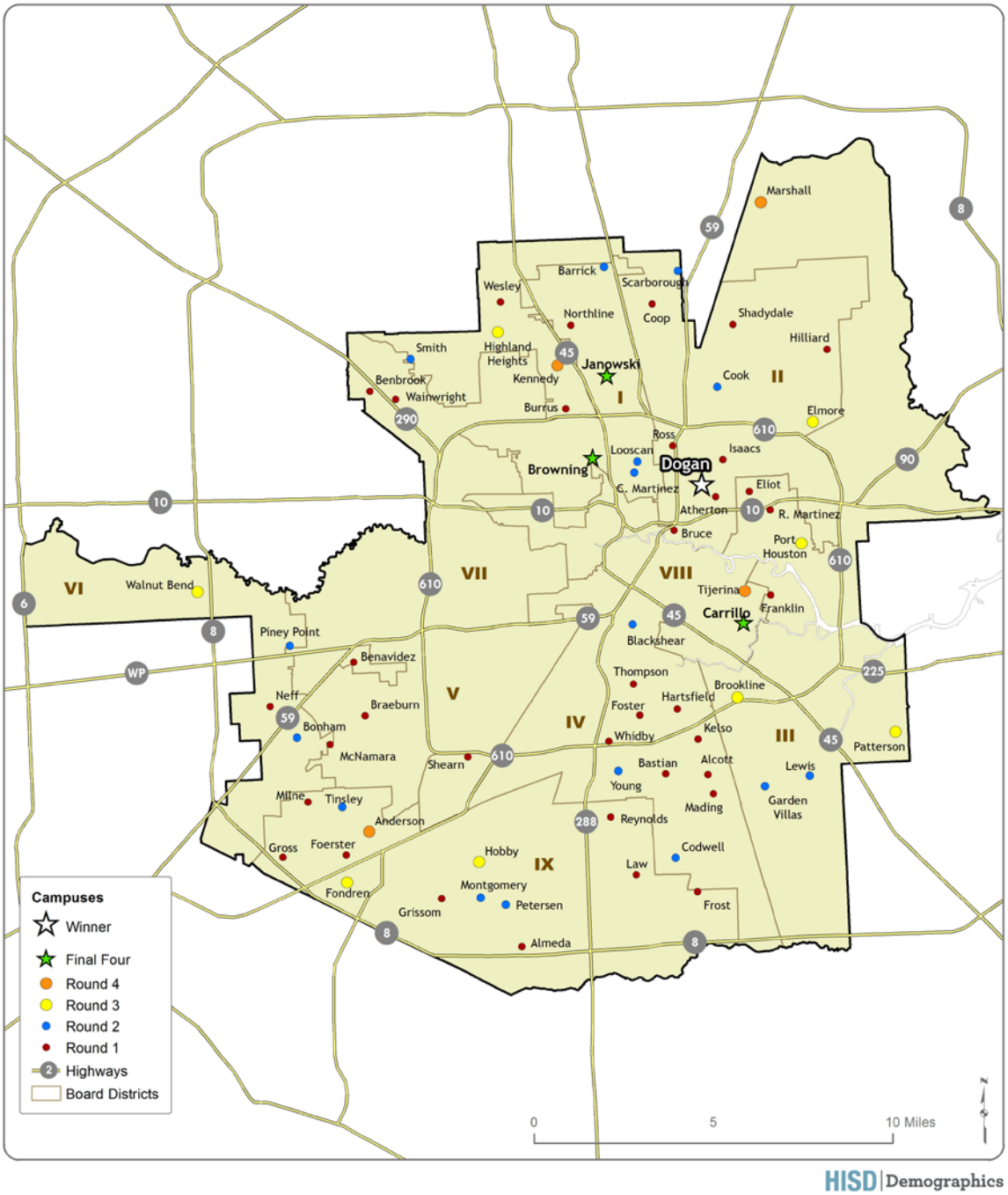
Appendix A cont'd

NCAA Read to Final Four Literacy Program
68 Participating Schools by Elimination Round

Elimination Round	School	Number of Students	Percent of Students
1	Alcott ES	57	1.6
	Almeda ES	136	3.8
	Atherton ES	87	2.4
	Bastian ES	91	2.5
	Benavidez ES	161	4.5
	Benbrook ES	96	2.7
	Braeburn ES	140	3.9
	Bruce ES	103	2.9
	Burrus ES	79	2.2
	Coop ES	127	3.5
	Eliot ES	95	2.6
	Foerster ES	115	3.2
	Foster ES	68	1.9
	Franklin ES	60	1.7
	Frost ES	114	3.2
	Grissom ES	86	2.4
	Gross ES	101	2.8
	Hartfield ES	49	1.4
	Hilliard ES	122	3.4
	Isaacs ES	58	1.6
	Kelso ES	72	2.0
	Law ES	135	3.8
	Mading ES	92	2.6
	Martinez R ES	78	2.2
	McNamara	145	4.0
	Milne	109	3.0
	Neff ES	196	5.5
	Northline ES	88	2.4
	Reynolds ES	89	2.5
	Ross ES	59	1.6
	Shadydale ES	156	4.3
	Shearn ES	82	2.3
	Thompson ES	85	2.4
	Wainwright ES	102	2.8
	Wesley ES	68	1.9
	Whidby ES	91	2.5
	Total	**3592**	**100.0**

Appendix B

Map of NCAA Read to the Final Four Literacy Program Schools



Appendix C

Reading Log

READING LOG

Name: _____ **School:** _____

No.	Date	Name of Text	Minutes	Number of Pages Read
1.				
2				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				

Appendix D
Istation Early Reading and Espanol Ability Indexes

Description of Instructional Tiers

- **Tier 1**: Students performing at grade level
- **Tier 2**: Students performing moderately below grade level and in need of intervention
- **Tier 3**: Students performing seriously below grade level and in need of intensive intervention

Early Reading English

Overall Reading | Listening Comprehension | Letter Knowledge | Phonemic Awareness | Alphabetic Decoding | Comprehension | Vocabulary | Spelling | Text Fluency

	Pre-K			Kindergarten			1st Grade			2nd Grade			3rd Grade		
Assessment Month	Tier 3	Tier 2	Tier 1	Tier 3	Tier 2	Tier 1	Tier 3	Tier 2	Tier 1	Tier 3	Tier 2	Tier 1	Tier 3	Tier 2	Tier 1
August	< 151	151-158	> 158	< 169	169-177	> 177	< 190	190-199	> 199	< 209	209-218	> 218	< 223	223-232	> 232
September	< 154	154-161	> 161	< 171	171-180	> 180	< 192	192-201	> 201	< 210	210-219	> 219	< 224	224-234	> 234
October	< 157	157-164	> 164	< 174	174-183	> 183	< 194	194-203	> 203	< 211	211-221	> 221	< 225	225-235	> 235
November	< 160	160-167	> 167	< 177	177-187	> 187	< 196	196-206	> 206	< 212	212-223	> 223	< 226	226-237	> 237
December	< 163	163-170	> 170	< 181	181-190	> 190	< 198	198-208	> 208	< 213	213-225	> 225	< 227	227-238	> 238
January	< 165	165-173	> 173	< 184	184-193	> 193	< 200	200-210	> 210	< 214	214-226	> 226	< 228	228-239	> 239
February	< 167	167-175	> 175	< 186	186-195	> 195	< 202	202-212	> 212	< 216	216-228	> 228	< 229	229-240	> 240
March	< 169	169-177	> 177	< 188	188-197	> 197	< 204	204-214	> 214	< 217	217-229	> 229	< 230	230-241	> 241
April	< 171	171-179	> 179	< 190	190-199	> 199	< 206	206-216	> 216	< 219	219-230	> 230	< 231	231-242	> 242
May	< 173	173-181	> 181	< 192	192-201	> 201	< 207	207-218	> 218	< 220	220-231	> 231	< 232	232-243	> 243
June	< 173	173-181	> 181	< 192	192-201	> 201	< 207	207-218	> 218	< 220	220-231	> 231	< 232	232-243	> 243
July	< 173	173-181	> 181	< 192	192-201	> 201	< 207	207-218	> 218	< 220	220-231	> 231	< 232	232-243	> 243

Espanol (Spanish)

Overall Reading | Vocabulary | Listening Comprehension | Reading Comprehension | Text Fluency | Phonemic and Phonological Awareness | Written Communication

	Pre-K			Kindergarten			1st Grade			2nd Grade			3rd Grade		
Assessment Month	Tier 3	Tier 2	Tier 1	Tier 3	Tier 2	Tier 1	Tier 3	Tier 2	Tier 1	Tier 3	Tier 2	Tier 1	Tier 3	Tier 2	Tier 1
August	< 597	597-610	> 610	< 645	645-660	> 660	< 732	732-760	> 760	< 822	822-860	> 860	< 883	883-917	> 917
September	< 600	600-611	> 611	< 655	655-666	> 666	< 745	745-774	> 774	< 828	828-860	> 860	< 883	883-917	> 917
October	< 600	600-611	> 611	< 662	662-672	> 672	< 745	745-774	> 774	< 828	828-862	> 862	< 888	888-925	> 925
November	< 600	600-611	> 611	< 665	665-677	> 677	< 749	749-787	> 787	< 828	828-871	> 871	< 888	888-930	> 930
December	< 614	614-626	> 626	< 669	669-682	> 682	< 760	760-796	> 796	< 833	833-883	> 883	< 896	896-943	> 943
January	< 616	616-627	> 627	< 671	671-686	> 686	< 769	769-806	> 806	< 848	848-895	> 895	< 907	907-954	> 954
February	< 618	618-629	> 629	< 675	675-691	> 691	< 778	778-814	> 814	< 849	849-899	> 899	< 910	910-958	> 958
March	< 620	620-630	> 630	< 679	679-698	> 698	< 785	785-822	> 822	< 854	854-907	> 907	< 915	915-966	> 966
April	< 622	622-633	> 633	< 683	683-705	> 705	< 792	792-829	> 829	< 863	863-915	> 915	< 919	919-972	> 972
May	< 623	623-634	> 634	< 689	689-713	> 713	< 797	797-834	> 834	< 870	870-924	> 924	< 926	926-974	> 974
June	< 623	623-634	> 634	< 689	689-713	> 713	< 797	797-834	> 834	< 870	870-924	> 924	< 926	926-974	> 974
July	< 623	623-634	> 634	< 689	689-713	> 713	< 797	797-834	> 834	< 870	870-924	> 924	< 926	926-974	> 974

Appendix E

Reading Motivation and Learning Survey

	Strongly Agree	Agree	Disagree	Strongly Disagree
Practice				
1. Today is a nice day.	☺☺	☺	☹	☹☹
2. I like to go to school on Sundays.	☺☺	☺	☹	☹☹
I. Self-efficacy				
1. I understand what I read.	☺☺	☺	☹	☹☹
2. I do not understand hard books.	☺☺	☺	☹	☹☹
3. I do well in reading.	☺☺	☺	☹	☹☹
4. I cannot read well no matter how hard I try.	☺☺	☺	☹	☹☹
5. I read easy books when reading is too hard.	☺☺	☺	☹	☹☹
6. I ask other people for the answer rather than read for myself.	☺☺	☺	☹	☹☹
7. When reading gets too hard, I stop reading.	☺☺	☺	☹	☹☹
8. I like to read.	☺☺	☺	☹	☹☹
II. Learning				
9. I try to understand new words when I read.	☺☺	☺	☹	☹☹
10. I think about what I already know when I read new books.	☺☺	☺	☹	☹☹
11. I use a dictionary when I do not understand new words.	☺☺	☺	☹	☹☹
12. I ask other people for help when I do not understand a new word.	☺☺	☺	☹	☹☹
13. I think about the things that I read.	☺☺	☺	☹	☹☹
14. I try to find out why I make mistakes when I read.	☺☺	☺	☹	☹☹
15. I try to read words that I do not understand.	☺☺	☺	☹	☹☹
16. When I am confused about what I read, I try to figure it out.	☺☺	☺	☹	☹☹
III. Value				
17. Learning how to read is important because I can use it in my daily life.	☺☺	☺	☹	☹☹
18. Learning how to read is important because it helps me to think.	☺☺	☺	☹	☹☹
19. Reading helps me to solve problems.	☺☺	☺	☹	☹☹
20. It is important for me to talk about what I read with other people.	☺☺	☺	☹	☹☹
21. It is important to for me to be curious when I read.	☺☺	☺	☹	☹☹
IV. Performance				
22. I read to get a good grade.	☺☺	☺	☹	☹☹
23. I read to do better than other students.	☺☺	☺	☹	☹☹
24. I read so that other students think that I am smart.	☺☺	☺	☹	☹☹
25. I read so that the teacher pays attention to me.	☺☺	☺	☹	☹☹
V. Academic				

26. I am happy when I get a good score on a reading test.	☺☺	☺	☹	☹☹
27. I am pleased about my work in reading.	☺☺	☺	☹	☹☹
28. I am pleased when I read hard words.	☺☺	☺	☹	☹☹
29. I am happy when the teacher likes my ideas during reading.	☺☺	☺	☹	☹☹
30. I am happy when other students like my ideas during reading.	☺☺	☺	☹	☹☹
VI. Environment				
31. The NCAA contest was exciting.	☺☺	☺	☹	☹☹
32. The teacher made the NCAA contest interesting.	☺☺	☺	☹	☹☹
33. The teacher did not make me read in the NCAA contest.	☺☺	☺	☹	☹☹
34. The teacher paid attention to me during the NCAA contest.	☺☺	☺	☹	☹☹
35. The NCAA contest was challenging.	☺☺	☺	☹	☹☹
36. Students talked about what they read during the NCAA contest.	☺☺	☺	☹	☹☹

What do you "**like**" about the reading contest?

_____

What do you "**not like**" about the reading contest?

_____

_____

This survey was modified from: Pintrich, P.R., Smith, D.A.F., Garcia, T., & McKeachie, W.J. (1991) and Tuana, H.-L., Chin, C. & Shieh, S.-L. (2005).

Appendix F

Explanation of Reading Motivation and Learning Survey Scales

1. *Self-efficacy*. Students believe in their own ability to perform well in reading learning tasks.
2. *Active learning strategies*. Students take an active role in using a variety of strategies to construct new knowledge based on their previous understanding.
3. *Reading learning value*. The value of learning reading is to let students acquire problem-solving competency, experience the inquiry activity, stimulate their own thinking, and find the relevance of reading with daily life. If they can perceive these important values, they will be motivated to learn to read.
4. *Performance goal*. The student's goals in learning to read are to compete with other students and get attention from the teacher.
5. *Achievement goal*. Students feel satisfaction as they increase their competence and achievement learning to read.
6. *Learning environment stimulation*. In the class, learning environment surrounding students, such as curriculum, teachers' teaching, and pupil interaction influenced students' motivation in learning to read.

Note: The SMTSL questionnaire was aligned to other surveys on students' motivation, values, and learning in education (Pintrich, Smith, Garcia, and McKeachie, 1991); and documented evidence of content, construct, and criterion-related validity. In the SMTSL, the discriminative validity ranged from 0.09 to 0.51, showing the independence of each scale and overlapping with other scales. The instrument has been adapted for use in various cultural settings (Dermitzaki, I., Stavroussi, P., Vavougios, D., and Kotsis, 2013).

Appendix G
NCAA Read to the Final Four Third-grade Student Population Compared to All HISD Third-grade Students

	NCAA Read to the Final Four Third-grade Student Population 2015–2016 N = 7,236 (68 Schools)		**All of HISD Third-grade Student Population 2015–2016** N= 18,523	
	n	**%**	**n**	**%**
Gender				
Male	3694	51.1	9403	50.8
Female	3542	48.9	9120	49.2
Economically Disadvantaged	6518	90.1	14571	78.7
LEP	3428	47.4	8405	45.4
Gifted/Talented	967	13.4	3820	20.6
Special Ed	494	6.8	1176	6.3
At Risk	4101	56.7	9245	49.9
Dyslexia	69	1.0	183	1.0
Ethnicity				
African American	2509	34.7	4488	24.2
Asian	74	1.0	683	3.7
Hispanic	4499	62.2	11667	63.0
Native American/Indian	16	0.2	36	0.2
White	114	1.6	1438	7.8
Bi-racial	18	0.2	197	1.1
Pacific Islander	6	0.1	14	0.1

Appendix H
Demographic Characteristics of Targeted Student Population by Elimination Round

	Round 1 36 Schools N = 3592		Round 2 16 Schools N = 1884		Round 3 8 Schools N = 896		Round 4 4 Schools N = 484		Final 4 4 Schools N = 380	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Gender										
Male	1866	51.9	949	50.4	436	48.7	254	52.5	189	49.7
Female	1726	48.1	935	49.6	460	51.3	230	47.5	191	50.3
Economically Disadvantaged	3292	91.6	1683	89.3	791	88.3	407	84.1	345	90.8
LEP	1545	43.0	976	51.8	477	53.2	276	57.0	217	57.1
Gifted/Talented	406	11.3	281	14.9	139	15.5	38	7.9	103	27.1
Special Ed	249	6.9	118	6.3	63	7.0	42	8.7	22	5.8
At Risk	1853	51.6	1114	59.1	562	62.7	562	62.7	262	68.9
Dyslexia	35	1.0	12	0.6	14	1.6	6	1.2	1	0.5
Ethnicity										
African American	1528	42.5	576	30.6	241	26.9	125	25.8	39	10.3
Asian	56	1.6	10	0.5	1	0.1	6	1.2	1	0.3
Hispanic	1935	53.9	1268	67.3	624	69.6	337	69.6	335	88.2
Native American/Indian	8	0.2	5	0.3	0	0.0	3	0.6	0	0.0
White	47	1.3	23	1.2	29	3.2	10	2.1	5	1.3
Bi-racial	13	0.4	2	0.1	0	0.0	3	0.6	0	0.0
Pacific Islander	5	0.1	0	0.0	1	0.1	0	0.0	0	0.0

Appendix I
Descriptive Statistics of ISIP™ Early Reading Ability Results by Elimination Round

ISIP™ Early Reading Descriptive Statistics						
Elimination Round		**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Final Four	BOY	167	163.15	278.40	231.3034	18.99312
	MOY	167	153.88	304.10	237.8670	21.34268
	EOY	167	129.08	296.14	242.0665	22.08744
		167				
Round 4	BOY	197	191.37	278.20	231.8834	14.78641
	MOY	197	181.19	281.16	236.1094	17.54391
	EOY	197	162.13	281.87	239.2020	18.16302
		197				
Round 3	BOY	537	170.19	283.26	231.3910	16.91836
	MOY	537	137.46	311.45	236.2647	20.17574
	EOY	537	145.57	314.05	239.2756	22.35238
		537				
Round 2	BOY	994	165.00	275.93	228.0674	16.79980
	MOY	994	127.81	283.06	233.3818	19.62800
	EOY	994	165.73	297.17	237.5260	19.45207
		994				
Round 1	BOY	1857	163.16	337.34	228.7515	17.46564
	MOY	1857	159.11	295.67	234.0447	19.18982
	EOY	1857	126.86	298.06	236.8354	20.25810
		1857				

Appendix J
Paired T-test Analyses of ISIP™ Early Reading Ability Results by Elimination Round

ISIP™ Early Reading Paired Samples Statistics

Elimination Round	Test Administration	Mean	N	Std. Deviation	Std. Error Mean
Final Four	EOY	242.0665	167	22.08744	1.70918
	BOY	231.3034	167	18.99312	1.46973
Round 4	EOY	239.2020	197	18.16302	1.29406
	BOY	231.8834	197	14.78641	1.05349
Round 3	EOY	239.2756	537	22.35238	.96458
	BOY	231.3910	537	16.91836	.73008
Round 2	EOY	237.5260	994	19.45207	.61698
	BOY	228.0674	994	16.79980	.53286
Round 1	EOY	236.8354	1857	20.25810	.47010
	BOY	228.7515	1857	17.46564	.40530

ISIP™ Early Reading Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference				
Elimination Round		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Final Four	EOY & BOY	10.763	13.76010	1.06479	8.66084	12.86539	10.108	166	.000
Round 4	EOY & BOY	7.318	12.26982	.87419	5.59461	9.04265	8.372	196	.000
Round 3	EOY & BOY	7.884	14.63305	.63146	6.64415	9.12505	12.486	536	.000
Round 2	EOY & BOY	9.458	11.13188	.35308	8.76575	10.15149	26.789	993	.000
Round 1	EOY & BOY	8.083	12.89815	.29931	7.49688	8.67092	27.008	1856	.000

Appendix K
Descriptive Statistics of ISIP™ Español Reading Ability Results by Elimination Round

ISIP™ Español Descriptive Statistics						
Elimination Round	**Test Administration**	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Final Four	BOY	83	810.09	1043.30	935.6325	45.53928
	MOY	83	822.14	1080.00	981.9208	49.30249
	EOY	83	787.81	1080.00	976.8210	60.07077
Round 4	BOY	123	774.30	1041.36	947.6662	49.95669
	MOY	123	719.25	1067.59	978.7785	63.31566
	EOY	123	681.52	1080.00	983.0629	65.46882
Round 3	BOY	241	758.90	1044.32	931.7056	49.05284
	MOY	241	741.50	1080.00	960.7941	65.52582
	EOY	241	737.83	1077.54	972.0220	67.06939
		241				
Round 2	BOY	411	784.86	1051.03	928.8027	44.27245
	MOY	411	732.39	1072.05	954.2874	59.16064
	EOY	411	710.05	1076.17	968.9511	60.25423
Round 1	BOY	577	767.31	1055.81	932.4568	50.42492
	MOY	577	728.51	1080.00	956.9958	63.15226
	EOY	577	669.82	1080.00	967.9344	64.07579

Appendix L
Paired T-test Analyses of ISIP™ Español Reading Ability Results by Elimination Round

ISIP™ Español Paired Samples Statistics					
Elimination Round	**Test Administration**	**Mean**	**N**	**Std. Deviation**	**Std. Error Mean**
Final Four	EOY	976.821	83	60.07077	6.59362
	BOY	935.632	83	45.53928	4.99859
Round 4	EOY	983.062	123	65.46882	5.90312
	BOY	947.666	123	49.95669	4.50444
Round 3	EOY	972.022	241	67.06939	4.32032
	BOY	931.705	241	49.05284	3.15977
Round 2	EOY	968.951	411	60.25423	2.97212
	BOY	928.802	411	44.27245	2.18380
Round 1	EOY	967.934	577	64.07579	2.66751
	BOY	932.456	577	50.42492	2.09922

ISIP™ Español Paired Samples Test									
		Paired Differences							
					95% Confidence Interval of the Difference				
Elimination Round		**Mean**	**Std. Deviation**	**Std. Error Mean**	**Lower**	**Upper**	**t**	**df**	**Sig. (2-tailed)**
Final Four	EOY-BOY	41.18843	51.80820	5.68669	29.87580	52.50107	7.243	82	.000
Round 4	EOY-BOY	35.39675	36.45265	3.28682	28.89015	41.90335	10.769	122	.000
Round 3	EOY-BOY	40.31643	44.63123	2.87495	34.65307	45.97979	14.023	240	.000
Round 2	EOY-BOY	40.14839	41.99684	2.07155	36.07621	44.22058	19.381	410	.000
Round 1	EOY-BOY	35.47752	40.76656	1.69713	32.14420	38.81085	20.904	576	.000

Appendix M
Independent t-test Comparing Final Four and All Other Students Relative to Perceptions of Reading Motivation and Learning

Independent t test Group Statistics					
	Group	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Self-efficacy	Final Four	308	2.467	.4732	.0269
	Other Students	2743	2.431	.4871	.0093
Active Student Learning	Final Four	320	3.338	.3856	.0215
	Other Students	2834	3.319	.4434	.0083
Reading Learning Value	Final Four	340	3.508	.4849	.0263
	Other Students	3102	3.462	.4606	.0083
Performance Goal	Final Four	337	3.225	.5900	.0321
	Other Students	3067	3.150	.5966	.0107
Learning Environment	Final Four	324	3.329	.4254	.0236
	Other Students	3015	3.293	.4458	.0081

						95% Confidence Interval of the Difference	
	t	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Diff.**	**Lower**	**Upper**
Self-efficacy	1.247	3049	.212	.0364	.0291	-.0208	.0936
Active Student Learning	.733	3152	.463	.0189	.0258	-.0317	.0695
Reading Learning Value	1.737	3440	.082	.0460	.0265	-.0059	.0978
Performance Goal	2.192	3402	.028	.0749	.0342	.00791	.14202
Learning Environment	1.386	3337	.166	.0359	.0259	-.01490	.0868