

# **ESL READINGSMART PROGRAM**

## **KATY ISD RESEARCH STUDY 2008-2009**

**Maydell Jenks, Director of Other Languages  
Mary Endress, Instructional Officer for Secondary ESOL  
Bilingual/English as a Second Language  
Katy Independent School District  
Katy, Texas**

**CLARA ROJAS, PRESIDENT ALLOY MULTIMEDIA  
ESL READINGSMART**

**VENITA R. HOLMES, DRPH  
AL GAVITO, MA  
HOUSTON CENTRAL RESEARCH ASSOCIATES**

## Number of ESL ReadingSmart Students Included in Data Analysis

ESL ReadingSmart provided a file with 921 Katy Independent School District (KISD) students with ESL ReadingSmart Achievement Test scores and number of lessons mastered and Katy ISD submitted a file with 648 ESL students with TELPAS and TAKS scores. In order to conduct the analysis the following subgroups were formed:

<b>Number of Katy ISD ESL Students Included in Research Study Analysis</b>					
Databases	Total	Matched Students	ReadingSmart Achievement Test 2009 (Lexiles)	TELPAS 2009	TAKS Reading Test 2009
ESL ReadingSmart File	921	467 (51%)	100 (21%)		
Katy ISD File	648	467 (72%)		333 (71%)	209 (45%)
Katy ESL Students matched with Test Scores N=467			ReadingSmart Achievement Test 2009 (Lexile and Usage)	TELPAS 2009	TAKS 2009
Progress or Gain			100 (21%)	333 (71%)	209 (45%)
Katy ESL Students who mastered 10 ESL ReadingSmart Lessons			ReadingSmart Achievement Test 2009	TELPAS 2009	TAKS 2009
Scatter Plot with Tread Line				97 (21%)	74 (16%)
Scatter Plot with Tread Line for Combined Lessons and Activities Mastered				93 (20%)	71(15%)
Correlation				96 (21%)	73 (16%)

ESL ReadingSmart file and the Katy database file were matched and 467 students appeared on both databases.

- 100 or 21% of the 467 ESL ReadingSmart students had ReadingSmart Achievement Test 2009 lexile scores.
- 333 or 71% of the 467 Katy ISD ESL students had 2009 TELPAS composite scores.
- 209 or 45% of the 467 Katy ISD ESL students had 2009 TAKS reading scale scores.

Katy ISD ESL students who mastered 10 ESL ReadingSmart Lessons and had test scores:

- ReadingSmart Achievement Test levels were available for 100 or 21% of the 467 Katy ESL students.
- TELPAS 2009 composite scores were available for 97 or 21% of the 467 Katy ESL students.
- TAKS 2009 reading scale scores were available for 74 or 16% of the 467 Katy ESL students.

## Katy Independent School District ESL ReadingSmart Program Research Study 2008-2009

### Katy Independent School District and ESL Reading Smart Program Background

Encompasses 181 square miles 20 miles west of downtown Houston in Harris, Fort Bend and Waller Counties. The district has 47 campuses including 29 elementary schools, 10 junior highs, 6 high schools, a career-technology center and an alternative center. Instructional quality guided by a comprehensive district wide curriculum management plan, which coordinates development, delivery and assessment of teaching throughout the district. It also has a highly advanced technology program which includes one to three computers in each classroom, stationary and wireless labs in each school, campus-based technology facilitators, distance learning capabilities, a fiber optic network linking every school and facility, and an automated curriculum management plan. Katy ISD is one of the fastest-growing school districts in Texas with an annual growth rate of about 5 to 6 percent projected through 2016.

In partnership with parents and community, the mission of the Katy Independent School District, as a premier district in the state of Texas, seeks academic excellence for each student to pursue a productive and fulfilling life through a balanced curriculum aligned with quality instruction and assessment of achievement.

### ESL ReadingSmart Research Findings

#### Student Profile

- ESL Reading Smart File n = 921
- Katy ISD File n = 648
- Matched ESL Students n = 467
- Grades 6–12

During the 2008–2009, Katy Independent School District partnered with Alloy Multimedia to improve academic performance for English Language Learners (ELLs) in grades 6–12. Title III funds were used to purchase the **ESL ReadingSmart** Program focusing on improved student achievement on the Texas English Language Proficiency Assessment System – Reading (TELPAS) and Texas Assessment of Knowledge and Skills (TAKS). Students participated in the program during their ESL classes for one session a week. Each session was conducted for one hour.

#### ESL ReadingSmart Implementation

- Supplemental Reading Program
- Web-based
- Supports classroom instruction
- Supports state adopted objectives
- Materials for all ESL levels

#### ESL ReadingSmart Achievement Test Level Results n=100

- Average lexile score for 2008 was 564 and the average lexile score for 2009 was 467 revealing a loss of 37 lexile points.
- Thirty-two percent or 32 out of 100 Katy ESL students demonstrated a lexile gain from 2008 to 2009.
- The average lesson count (usage) for all (N=98) Katy ESL students was 35.9 lessons.

#### Research Instruments

- ESL ReadingSmart Achievement Test
- Texas English Language Proficiency
- Texas Assessment of Knowledge and Skills

#### Research Time Frame

- August 2008 – May 2009

#### Data Analysis

#### Scatter Diagrams and Regression Line Results 2008-2009

Frequency distributions are presented through scatter diagrams of plotted data. The figures demonstrate the relationship between the percent of students mastering lessons, activities, or an index of both mastered lessons & activities compared to TELPAS and TAKS.

The scatter plots reveal positive regression slopes. This means that as the number of lessons or activities mastered increases so does the TELPAS composite and TAKS score.

- ESL ReadingSmart average **lexile gain** is used to measure reading progress from one year to the next.
- ESL ReadingSmart average **lesson count** (usage) provides the number of lessons completed in a year.
- A graph called a **scatter diagram** provides one of the most useful ways of seeing whether, and to what degree (regression line –slope), two variables co-vary.
- **Correlation** is an interrelation between two or more sorts of conditions or events.
- A correlation study rarely indicates which variable influences which, or even whether either variable is influencing the other one directly. A correlation coefficient can never tell us anything about causality.

#### Correlation Study Results

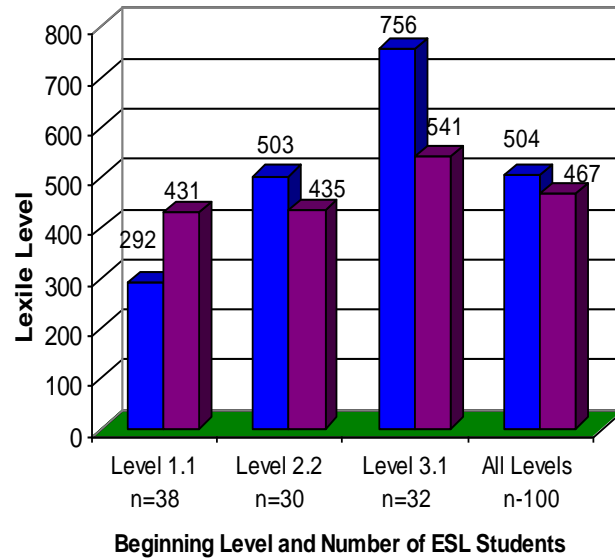
The Pearson or product-moment correlation coefficient for a particular set of data measures a specific of relationship: the linear correlation between two variables. The r measures the degree to which a straight line relating x and y can summarize the trend in a scatter plot.

- The correlation ( $r = .140$ ) between ESL ReadingSmart lessons mastered and TELPAS 2009 composite score was not significant.
- The correlation ( $r = .730$ ) between ESL ReadingSmart lessons mastered and TAKS reading 2009 scale score was significant at the 0.01 level (2-tailed). The magnitude of the correlation was large.

**What was the average lexile gain from 2008 to 2009 on the ESL ReadingSmart achievement test for Katy ESL students who mastered 10 ESL ReadingSmart Lessons?**

- Katy ESL students who began at level 1.1 demonstrated an average lexile gain of 139 lexiles from 2008 to 2009 on the ESL ReadingSmart Achievement Test.
- Katy ESL students who began at levels 2.2 demonstrated an average lexile loss of 68 lexiles.
- Katy ESL students who began at level 3.1 demonstrated an average lexile loss of 215 lexiles
- The total number of Katy ESL students demonstrated an average lexile loss of 37 lexiles from 2008-2009.

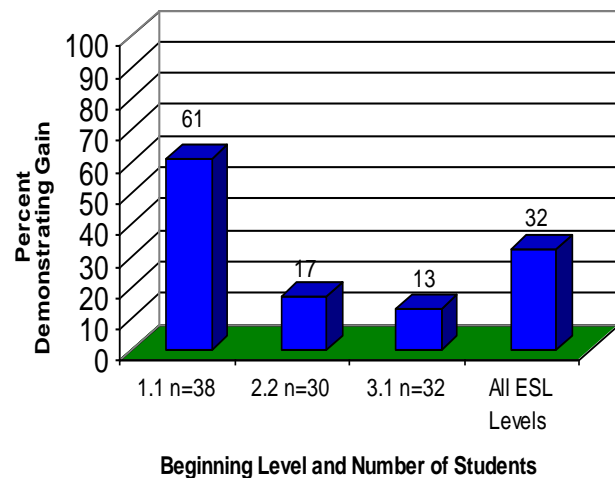
**Average Lexile Gain for Katy ESL Students Who Mastered Ten ESL ReadingSmart Lessons  
N=100**



**What was the lexile improvement from 2008 to 2009 in ESL ReadingSmart for Katy ESL students who mastered ten ESL ReadingSmart lessons?**

- Sixty-one percent or 23 out of 38 Katy ESL students who began at level 1.1 increased in lexile from placement to achievement test at the end of 2009.
- Five of 30 Katy ESL students or 17% who began at level 2.2 increased in lexile from pre to post test administration.
- Four of 32 Katy ESL students or 6% who began at level 3.1 increased in lexile from placement to achievement testing at the end of 2009.
- Thirty-two out of 100 Katy ESL students or 32% increased in lexile score from 2008 to 2009.

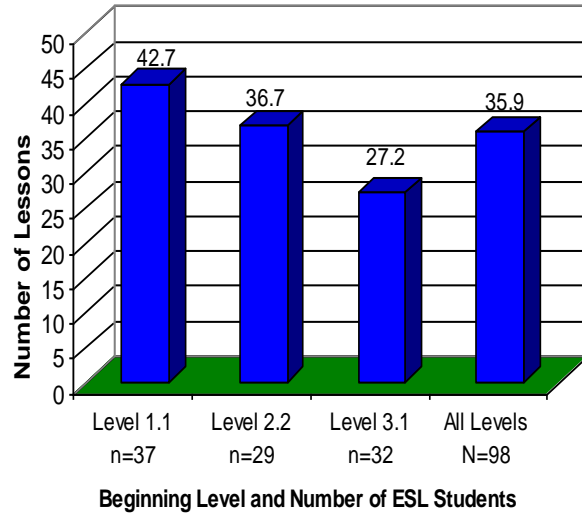
**Percent of Katy ESL Students Demonstrating Gain from Placement Test to Achievement Test 2008 to 2009  
N=100**



**What was the average lesson count (usage) from 2008 to 2009 for Katy ESL students who mastered 10 ESL ReadingSmart Lessons?**

- Katy ESL students who began at level 1.1 demonstrated the highest average number of lessons (42.7) and also demonstrated a lexile gain from 2008 to 2009 on the ESL ReadingSmart Achievement Test.
- Katy ESL students who began at levels 2.2 and 3.1 had an average lesson count of 36.7 and 27.3 but did not show a lexile gain from 2008 to 2009.
- The average lesson count (usage) for all Katy ESL students (N=98) was 35.9 and did not show a lexile gain from 2008 to 2009.

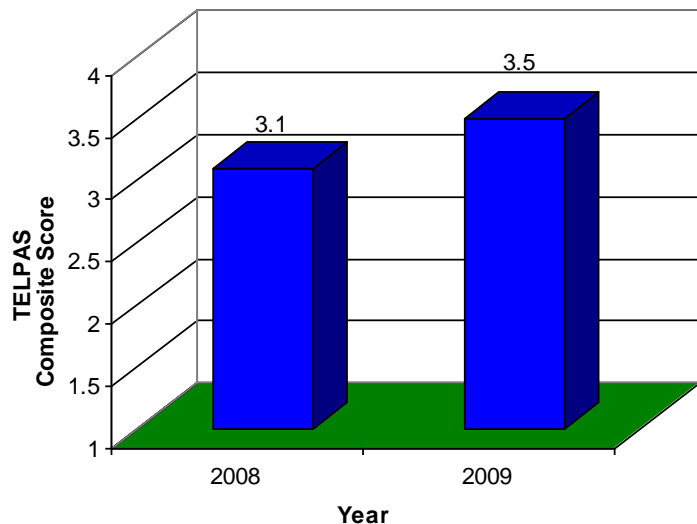
**Average Lesson Count by Level for Katy ESL Student Who Mastered Ten Lesson on the ESL ReadingSmart Achievement Test 2008-2009  
N=98**



**What was the improvement from 2008 to 2009 in TELPAS composite scores for Katy ESL students who participated in the ESL ReadingSmart Program?**

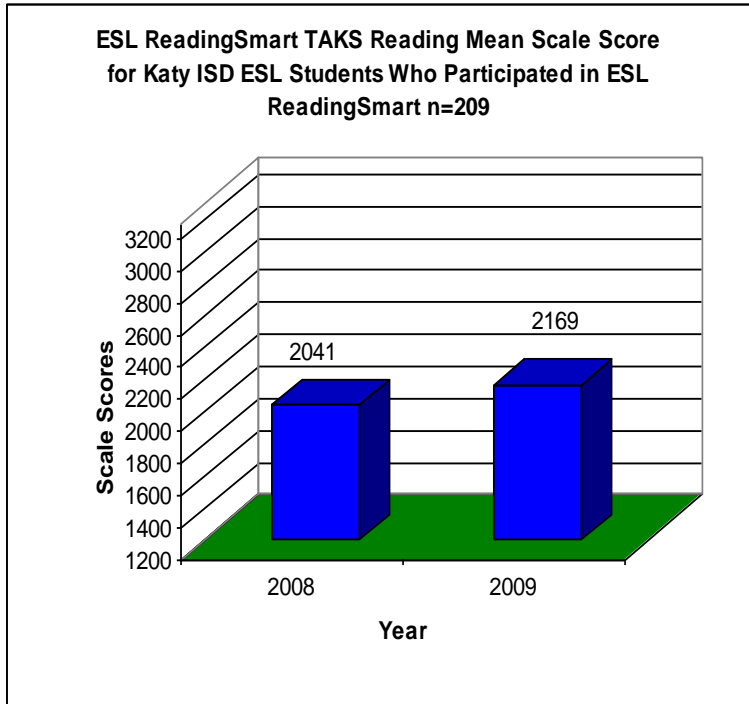
- The mean TELPAS composite score for Katy ESL ReadingSmart students increased from 3.1 in 2008 to 3.5 in 2009.
- The TELPAS mean composite score improved by .4 points from 2008 to 2009.

**ESL ReadingSmart TELPAS Composite Scores for Katy ISD ESL Students  
n=333**



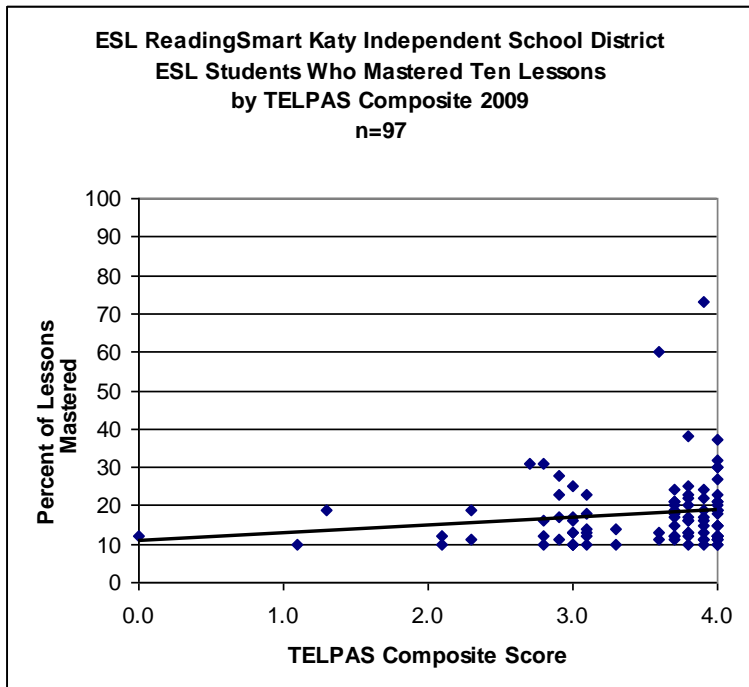
**What was the improvement from 2008 to 2009 in TAKS Reading Scale Scores for Katy ESL students who participated in the ESL ReadingSmart Program?**

- The mean TAKS reading scale score for Katy ESL ReadingSmart students increased from 2041 in 2008 to 2169 in 2009.
- The TAKS reading scale score improved by 128 points from 2008 to 2009.



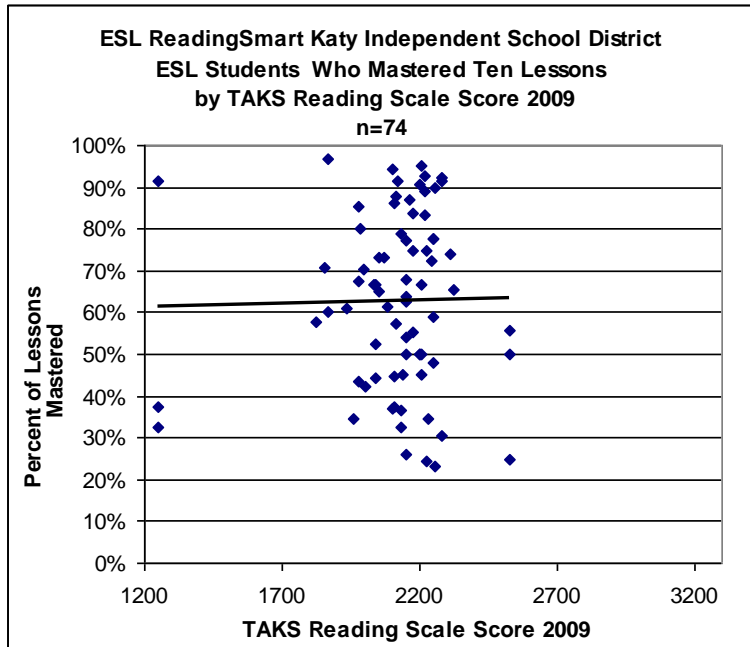
**Is there a relationship between Katy ISD ESL ReadingSmart students who mastered at least 10 lessons and their TELPAS scale score for 2009?**

- The results indicate that as the percent of lessons mastered increases so does the TELPAS composite score.
- The scatter plots for percent of lessons mastered to TELPAS composite score for 2009 reveals a positive regression line.



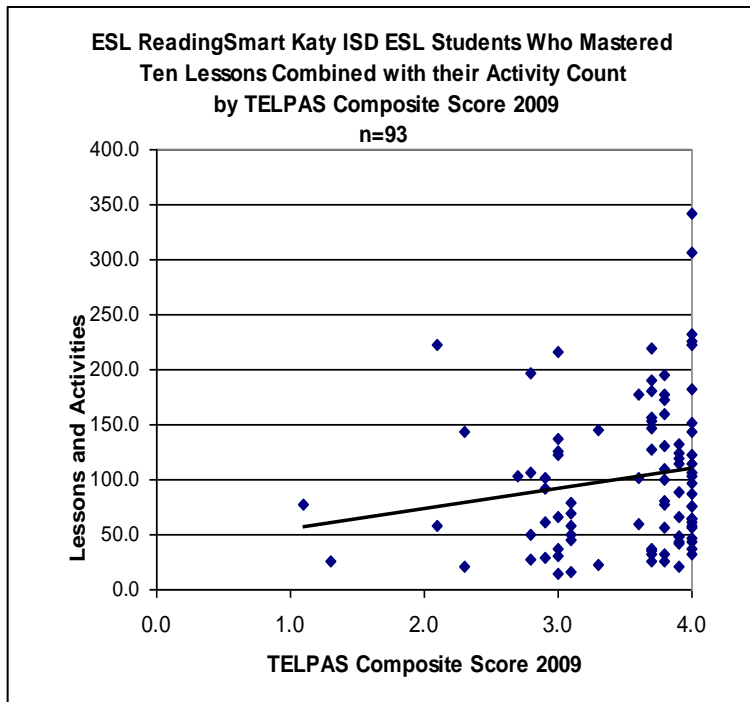
**Is there a relationship between Katy ISD ESL ReadingSmart students who mastered at least 10 lessons and their TAKS reading scale score for 2009?**

- The results indicate that as the percent of lessons mastered increases so does the TAKS reading scale score.
- The scatter plots for percent of lessons mastered to TAKS reading scale score for 2009 reveals a positive regression line.



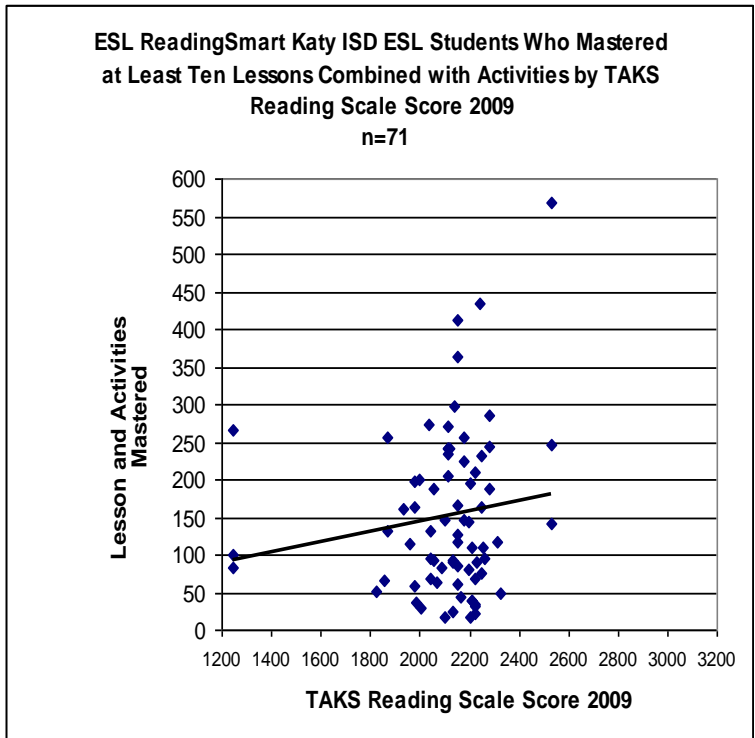
**Is there a relationship between Katy ISD ESL ReadingSmart students who mastered at least 10 lessons combined with their activity count on TELPAS composite score for 2009?**

- The results indicate that as the percent of lessons mastered and activity count increases so does the TELPAS composite score.
- The scatter plots for percent of lessons mastered and activity count combined to TELPAS composite score for 2009 reveals a positive regression line.



**Is there a relationship between Katy ISD ESL ReadingSmart students who mastered at least 10 lessons combined with their activity count on TAKS scale score for 2009?**

- The results indicate that as the percent of lessons mastered and activity count increases so does the TAKS reading composite score.
- The scatter plots for percent of lessons mastered and activity count to TAKS reading scale score for 2009 reveals a positive regression line.



**Was there a significant correlation between lessons mastered and TELPAS scale scores for Katy ISD ES students who were instructed with ESL ReadingSmart during the 2008-2009?**

- The correlation ( $r = .140$ ) between lessons mastered and TELPAS 2009 composite score was not significant.
- There was not a correlation between ESL ReadingSmart lessons mastered and TELPAS composite score possibly because the TELPAS measures listening, speaking, reading and writing and ESL ReadingSmart measures only reading.
- The TELPAS composite score is made up of a four point scale which may not have sufficient range to discriminate.

Correlations			
		Mastered Lessons	TELPAS Comp Score 2009
Mastered Lessons GREATER THAN 10	Pearson Correlation	1.000	.152
	Sig. (2-tailed)		.140
	N	96.000	96
TELPAS Comp Score 2009	Pearson Correlation	.152	1.000
	Sig. (2-tailed)	.140	
	N	96	96.000

**Was there a significant correlation between lessons mastered and TAKS reading composite score for Katy ISD ES students who were instructed with ESL ReadingSmart during the 2008-2009?**

- The correlation ( $r = .730$ ) between lessons mastered and TAKS 2009 reading scale score was significant at the 0.01 level (2-tailed).
- The magnitude of the correlation was large.

Correlations			
		TAKS RD 2009 Scale	Mastered Lessons
TAKS RD 2009 Scale	Pearson Correlation	1.000	.041
	Sig. (2-tailed)		.730
	N	73.000	73
Mastered Lessons GREATER THAN 10	Pearson Correlation	.041	1.000
	Sig. (2-tailed)	.730	
	N	73	96.000
**. Correlation is significant at the 0.01 level (2-tailed).			

### Summary

The purpose of this study was to determine if there was a performance gain on the ESL ReadingSmart achievement test lexile scores; TELPAS composite scores and TAKS scale scores from 2008 to 2009 for Katy ESL students who participated in the ESL ReadingSmart program. In addition, the study included scatter plots and correlation analysis for Katy ESL students who mastered at least ten lessons on the 2009 TELPAS composite scores and 2009 TAKS scores.

Katy ISD ESL students (32% or 32 out of 100) demonstrated a lexile gain from 2008 to 2009 on the ESL ReadingSmart achievement test; TELPAS mean composite score improved by .4 points from 2008 to 2009 and TAKS reading scale score improved by 128 points from 2008 to 2009. The scatter plots reveal positive regression slopes. This means that as the number of lessons or activities mastered increased so did the TELPAS composite score and TAKS reading scale score.

Based on correlation analysis performed on the ESL ReadingSmart Katy students who completed 10 lessons and had TELPAS composite scores and TAKS scale scores for 2008 and 2009, the correlation was not significant for TELPAS but was significant for TAKS. TELPAS was not significant possibly because it measures listening, speaking, reading and writing while the ESL ReadingSmart lessons address only reading. The TAKS reading analysis was significant at the .01 level which demonstrated there was a positive relationship between the two variables as number of lessons mastered increased then the TAKS reading scale scores increased.

The educational implications of the study are:

1. Increased usage of ESL ReadingSmart lessons will improve the percent of ESL students who demonstrate a gain in ESL ReadingSmart achievement test performance; TELPAS composite scores and TAKS scale scores.
2. TAKS reading scale scores by lessons mastered revealed a positive correlation which indicates that as one increased the other also increased. ESL teachers need assure that students use the ESL ReadingSmart program often and complete or master as many lessons as possible.

