

College-Readiness Differences in Reading and Math

for Asian Students in Texas

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### Research Question

The following research question was addressed in this study: What is the difference in the college-readiness rates in reading and in math for Asian high school students in Texas?

### Results

An examination of the standardized skewness coefficients (i.e., the skewness value divided by its standard error) and the standardized kurtosis coefficients (i.e., the kurtosis value divided by its standard error) revealed large deviations from normality. All four standardized coefficients were outside the bounds of normality of  $\pm 3$  (Onwuegbuzie & Daniel, 2002). Readers are referred to Table 1 for the specific values for these coefficients.

Because the data for both the college-readiness rates in reading and in math were not normally distributed, a nonparametric statistical procedure had to be utilized. Accordingly, a nonparametric Wilcoxon's dependent samples  $t$ -test (Huck, 2007) was utilized to address the research question. The Wilcoxon's dependent samples  $t$ -test yielded a statistically significant difference between Asian students' college-readiness rates in reading and in math,  $z = -13.92$ ,  $p < .001$ . The effect size associated with this difference, Cohen's  $d$ , was 0.42, small (Cohen, 1988). Asian students demonstrated statistically significantly higher college-readiness rates in math than in reading, 5.99% higher. Depicted in Table 2 are the means and standard deviations for Asian students' college-readiness rates in reading and in math.

## References

- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.
- Huck, S. W. (2007). *Reading statistics and research* (5th ed.). New York, NY: Addison Wesley.
- Onwuegbuzie, A. J., & Daniel, L. G. (2002). Uses and misuses of the correlation coefficient. *Research in the Schools*, 9(1), 73-90.

Table 1

*Standardized Skewness Coefficients and Standardized Kurtosis Coefficients for College-Readiness Rates in Reading and in Math for Texas Asian High School Students*

Variable	Standardized Skewness Coefficient	Standardized Kurtosis Coefficient
Reading Readiness Rates	-4.91	4.22
Math Readiness Rates	-6.37	3.36

Table 2

*Means and Standard Deviations for Texas Asian High School Students' College-Readiness Rates in Reading and in Math*

Variable	<i>M</i>	<i>SD</i>
Reading Readiness Rates	68.60	15.44
Math Readiness Rates	74.59	13.32

## Appendix A

### SPSS Statistical Output

**Statistics**

		Campus 2008 College Ready: Asian/Pacific Islander Math %	Campus 2008 College Ready: Asian/Pacific Islander Reading %
N	Valid	268	268
	Missing	1700	1690
Mean		74.59	68.60
Std. Deviation		13.321	15.445
Skewness		-.968	-.732
Std. Error of Skewness		.152	.149
Kurtosis		1.015	1.252
Std. Error of Kurtosis		.302	.297

**Test Statistics<sup>b</sup>**

	CPCRM08R -- Campus 2008 College Ready: Asian/Pacific Islander Math % Read - CAMPUS
Z	-13.924 <sup>a</sup>
Asymp. Sig. (2-tailed)	.000

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test