Demonstrating Student Progress on Learning Today Assessments for Special Education Students

July 2010

Introduction

The purpose of this analysis is to investigate the extent to which Special Education students demonstrate learning gains on math and reading scores on the Learning Today assessments. This study explores the math and reading gain scores of more than three hundred students in grades 1 through 5. The sample is 71% male and 29% female, 55.5% English as a Second Language (ESL) students and 45.5% non-ESL students, and all have a Special Education designation.

Procedure

Students were given the Learning Today assessments in reading and math twice each during the course of the academic year, once prior to use of the Learning Today program (pre-test), and once after using the program (post-test). The pre-assessments were completed between September to November 2009; and the post assessments were completed

between April to June 2010. From these tests, gain scores were calculated for each student by subtracting the pre-test score from the post-test score. These gain scores were then analyzed to determine if the observed gains were statistically significant, both at the aggregate level and separately for each grade level.

Summary of Results

The following tables and charts summarize the results of these analyses. As shown in Table 1, the average gain score for all of the students in mathematics was 10.25 with a standard error of 2.15; and for reading the average gain score was 12.65 with a standard error of 2.21. This indicates that these Special Education students demonstrated a statistically significant improvement in both math and reading from the pre-test period to the post-test period.

Table 1. Descriptive Statistics for Gain Scores For All Grades Combined

|	N	Mean	S.E.	STD
Math Gain Score	323	10.25**	2.15	38.68
Reading Gain Score	393	12.65**	2.21	43.74

** indicates statistically significant at p<.01

N = Sample size; Mean = Average Score; S.E. = Standard Error; STD = Standard Deviation

While the mean scores show significant improvement, it is should be noted that there is much variation in individual improvement. Charts 1 and 2 below show the variation in gain scores within the sample. This indicates that while the average gains were positive and significant, the rate of gain for these students in both math and reading was quite variable, with some students showing reductions from pre-test to post-test. This is not unexpected, as student growth is quite variable across students.

average gains in both math and reading were greater in the lower grades, specifically grades 1, 2, and 3, than they were in the higher grades, grades 4 and 5.

Chart 1. Math Gain Score Distribution
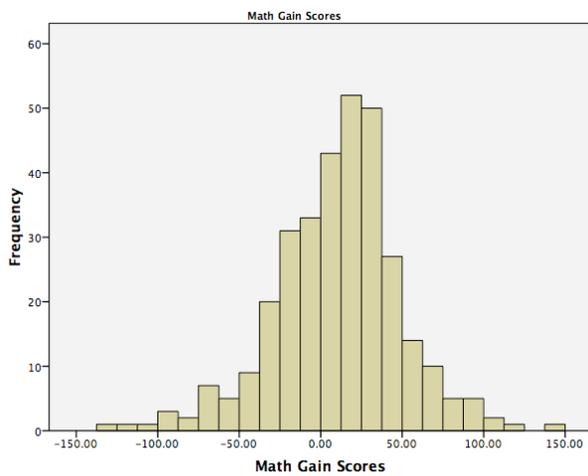
The variation in gain scores was also noticeable across grades. As is shown in Table 2, the

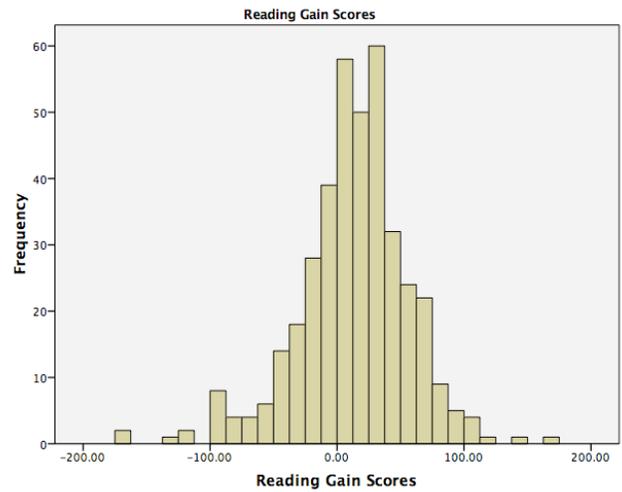Chart 2. Reading Gain Score Distribution

Table 2. Average Gains by Grade Level

Grade Level	First	Second	Third	Fourth	Fifth
Math Gain Score	20.79**	9.88**	14.97**	1.20	6.33
Reading Gain Score	14.00**	17.87**	17.71**	11.45**	-0.81

** indicates statistically significant at $p<.01$.

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