

# RESEARCH BRIEF

Department of Research Services

Vol. 0209  
June 2003

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## Attitudes Toward School Climate By School Size

### Introduction

Large senior high schools are not necessarily associated with poor learning climates. This Brief inquires into the relationship between perceptions of school climate and the size of the school, as determined by the number of students enrolled. Parent, staff, and student survey responses from the 2001-2002 School Climate Surveys are examined by school. The percent of respondents agreeing (pooling responses for agree and strongly agree) with an item regarding the general climate of the school with respect to fostering a positive atmosphere for learning, is used to measure the perception of school climate. (The item is stated slightly differently for each group of respondents; the exact wording is given with the data displays.) The measure of school size is the number of students enrolled as of October, 2001. The comparisons are by educational level, and at each level, only schools of the same grade configuration are included. At the elementary level, only regular schools of the configuration PK or K through 5 are considered. For the middle level, only schools with a 6 to 8 configuration, and at the senior level grades 9-12, are included.

Description of the results of the comparison is by educational level—from elementary to middle to senior. Supporting regression statistics and scatterplot displays are attached. The schools examined are not a sample, but make up the population of schools of the types examined. Therefore, no significance tests were applied.

### Elementary Level

At the elementary level the regression coefficients (slopes) for all three groups are positive, indicating that for each group—parents, staff, and students—the perception of a positive school climate tends to increase with the size of the school. However, the coefficients are small in each instance, and the largest R squared (for the staff group) is less than 0.03, indicating that less than three percent of the variance in the perception of climate is accounted for by school size. Consequently, there appears to be no meaningful relationship between school climate and school size at the elementary level.

## **Middle Schools**

The regression coefficients for the surveyed groups at this educational level are mixed—one is positive, one is negative, and one is zero. The R squared is small, however, in every case, not exceeding four percent of the variance explained in any case. The conclusion must be that in no case does the result indicate any substantive significance.

## **Senior High**

An examination of the scatterplots for the senior high schools reveals that three schools stand apart as outliers: The New World School of the Arts, the Mast Academy, and Design and Architecture. All these schools are very small—at around 500 students about a third to a fourth the size of the smallest of the other high schools. Parents, staff, and students of these schools all agree in very high percentages that the climate in the schools is positive and promotes learning. In addition to their small size, the schools also differ from the average senior high in other ways. All are magnet schools whose students are all magnet students, and all have reputations for scholastic excellence.

This is in stark contrast to the relationship found for the remainder of the high schools. When the aforementioned outliers are omitted from the computations, the regression coefficients for all groups with respect to the senior high schools are positive, indicating that the percent agreeing that the school climate is positive increases with school size. The R squared for each group is relatively large. In regard to the smallest relationship, for the parent group ( $R^2 = 0.126$ ), school size accounts for an eighth of the variance in school climate perceptions. That for staff is slightly higher, and the  $R^2$  for the student group is 0.257, accounting for a fourth of the variance in school climate perception. With respect to those schools other than the indicated exceptions, then, there is a meaningful increase in the perception of a positive school climate, as school size increases.

## **Summary**

Regarding the relationship between perceptions of quality of school climate and the size of the school, there appears to be a meaningful relationship only at the senior high level, where the percent of agreement that a school has a positive climate that promotes learning, tends to increase with the size of the school. This is true for all groups—parents, staff, and students. Three senior high schools with very small enrollments are exceptions to this pattern, and all have distinctive characteristics other than size, that may account for their exceptionality in this regard. This finding runs counter to previous studies appearing in the national literature. A number of studies have reported that students attending small schools outperform and have a more positive opinion of their schools when compared to students attending large schools.

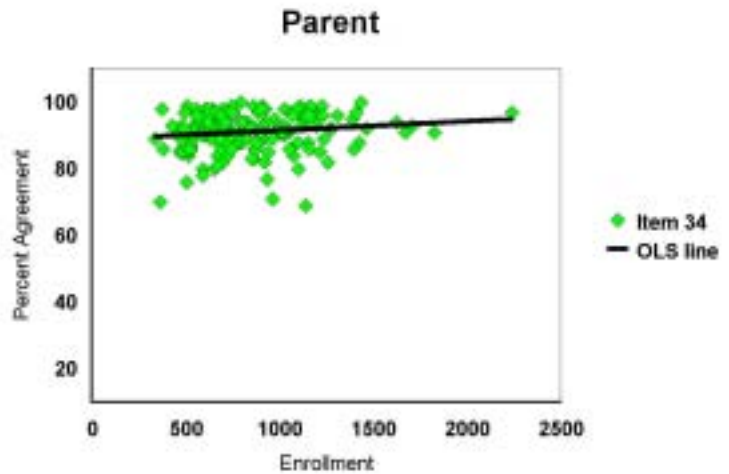
## ELEMENTARY LEVEL

Item 34. The overall climate or atmosphere in my child's school is positive and helps my child learn.

Regression Output:

Constant	88.88
Std. Err of Y Est	5.823
R Squared/Correlation	0.02 0.141
No. of Observations	174
Degrees of Freedom	172

X Coefficient(s)	0.003
Std Err of Coef.	0.001

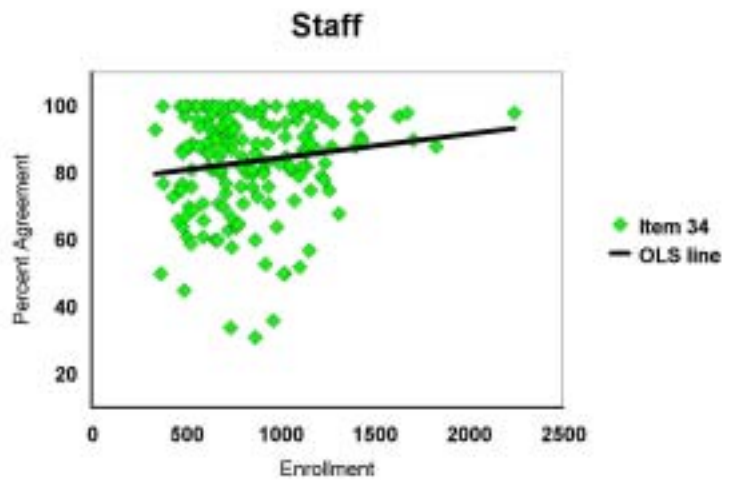


Item 34. The overall climate or atmosphere in my school is positive and helps students learn.

Regression Output:

Constant	77.43
Std. Err of Y Est	14.84
R Squared/Correlation	0.022 0.148
No. of Observations	171
Degrees of Freedom	169

X Coefficient(s)	0.007
Std Err of Coef.	0.004

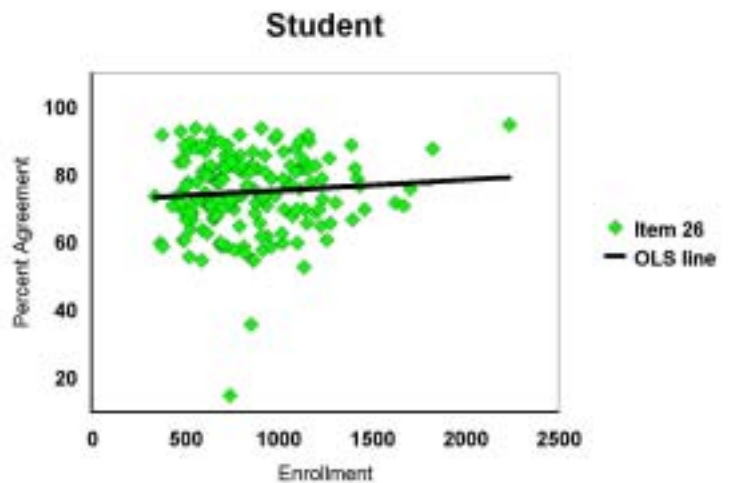


Item 26. The overall climate or feeling at my school is positive and helps me learn.

Regression Output:

Constant	72.48
Std. Err of Y Est	11.4
R Squared/Correlation	0.007 0.083
No. of Observations	174
Degrees of Freedom	172

X Coefficient(s)	0.003
Std Err of Coef.	0.003



## MIDDLE LEVEL

Item 34. The overall climate or atmosphere in my child's school is positive and helps my child learn.

### Regression Output:

Constant	72.96
Std. Err of Y Est	9.746
R Squared/Correlation	0.000 0.002
No. of Observations	49
Degrees of Freedom	47

X Coefficient(s)	0.000
Std Err of Coef.	0.004

Item 34. The overall climate or atmosphere in my school is positive and helps students learn.

### Regression Output:

Constant	61.34
Std. Err of Y Est	16.9
R Squared/Correlation	0.033 0.182
No. of Observations	49
Degrees of Freedom	47

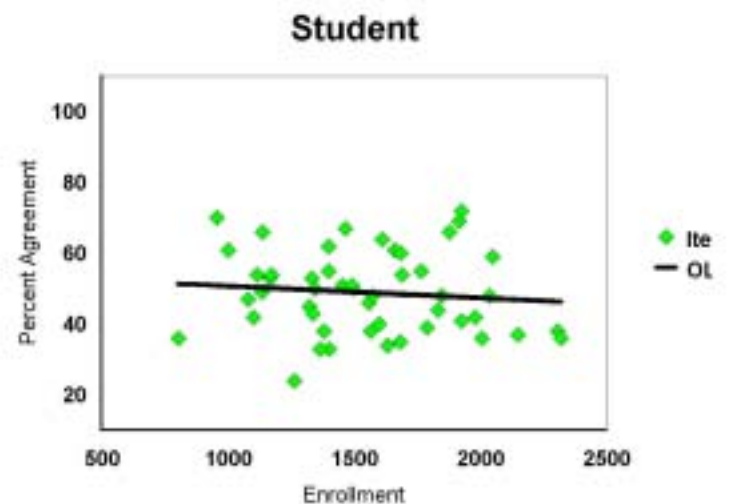
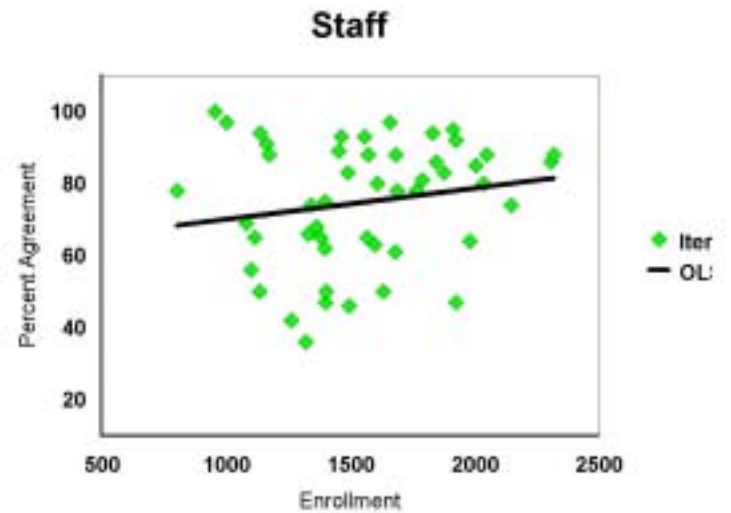
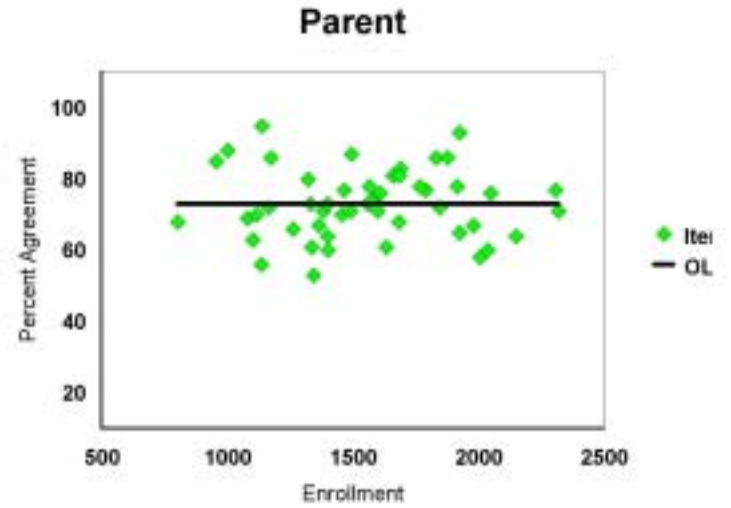
X Coefficient(s)	0.009
Std Err of Coef.	0.007

Item 26. The overall climate or feeling at my school is positive and helps me learn.

### Regression Output:

Constant	54.18
Std. Err of Y Est	11.58
R Squared/Correlation	0.011 -0.11
No. of Observations	49
Degrees of Freedom	47

X Coefficient(s)	-0.00
Std Err of Coef.	0.005

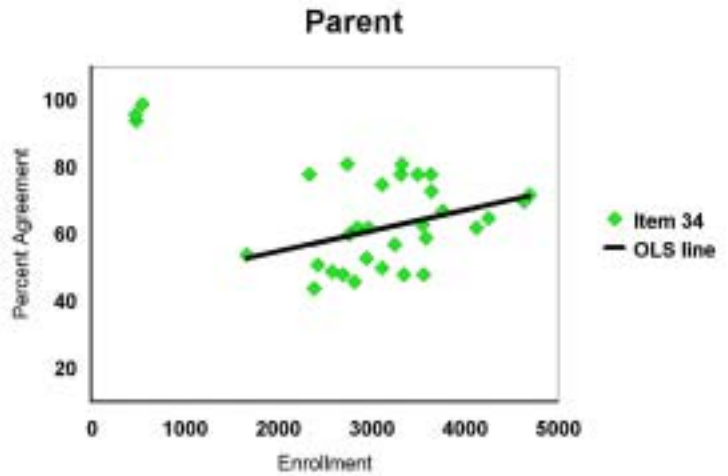


## SENIOR HIGH LEVEL

Item 34. The overall climate or atmosphere in my child's school is positive and helps my child learn.

Regression Output:

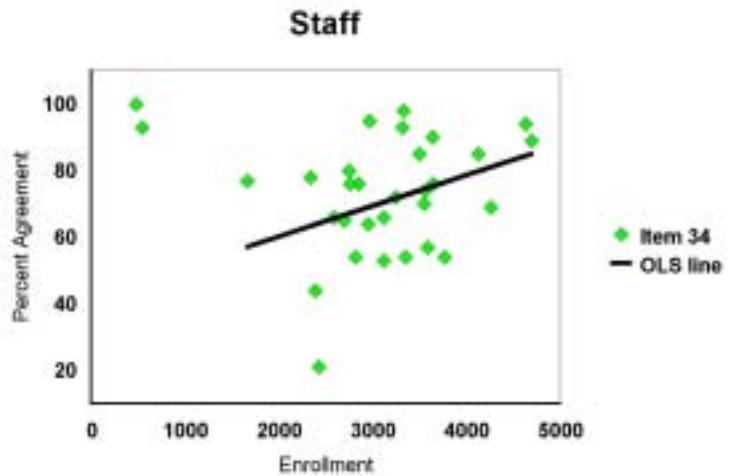
Constant	42.53	
Std. Err of Y Est	11.4	
R Squared/Correlation	0.126	0.355
No. of Observations	29	
Degrees of Freedom	27	
X Coefficient(s)	0.006	
Std Err of Coef.	0.003	



Item 34. The overall climate or atmosphere in my school is positive and helps students learn.

Regression Output:

Constant	41.8	
Std. Err of Y Est	16.41	
R Squared/Correlation	0.134	0.366
No. of Observations	29	
Degrees of Freedom	27	
X Coefficient(s)	0.009	
Std Err of Coef.	0.004	



Item 26. The overall climate or feeling at my school is positive and helps me learn.

Regression Output:

Constant	16.42	
Std. Err of Y Est	11.52	
R Squared/Correlation	0.257	0.507
No. of Observations	29	
Degrees of Freedom	27	
X Coefficient(s)	0.01	
Std Err of Coef.	0.003	

