

Evaluating Changes in Student, Staff and Parent Outcomes Following Extensive School Renovations

Executive Summary

The Wake County Public School System, in cooperation with the Council of Educational Facility Planners International (CEFPI), implemented a 2005-06 research project that examined the impact of large-scale renovations of school buildings on student achievement, attendance, and suspension rates. This study involved a large sample of schools (eighteen) and employed a longitudinal investigation into the impact of renovations on a range of student outcomes along with teacher and parent outcomes. This was achieved by comparing 2 year pre-renovation trends to 2 year post renovation trends to determine if there were consistent patterns of improvement across schools following renovations in comparison to pre-renovation data trends.

The findings from this study reflect the quantitative and qualitative data collection and analyses. Tables 1, 2, 3, & 4 demonstrate markedly higher percentages of students scoring at or above grade level and in most cases, scoring better SAT scores following renovations than was witnessed prior to renovations.

Table 1. Changes in Performance on the End of Grade Reading Exam

Grade	Pre-Renovation Average	Post-Renovation Average	Difference
3	76.88	82.59	5.72
4	76.94	81.94	5.01
5	82.31	89.06	6.75
6	73.67	77.12	3.45
7	77.33	80.30	2.97
8	84.67	87.33	2.67

Table 2. Changes in Performance on the End of Grade Mathematics Exam

Grade	Pre-Renovation Average	Post-Renovation Average	Difference
3	75.00	82.09	7.09
4	82.63	88.02	5.39
5	83.94	88.91	4.97
6	79.83	83.53	3.70
7	79.67	80.57	0.90
8	76.67	83.25	6.58

Table 3: Changes in Performance on the Selected End of Course Exams

Bio	Geo	Hist	ELP	Alg I	Physics	Alg II	PhySci	Eng I	Chem
-0.56	1.65	1.71	3.56	6.54	7.57	8.92	9.14	9.86	12.21

Note. Biology (Bio); Geometry (Geo); History (Hist); Economics, Legal, Political (ELP); Algebra I (Alg I); Algebra

Table 4: Changes in Performance on the Scholastic Aptitude Test

School	Verbal Scale			Math Scale			Total Scale		
	Pre	Post	Diff	Pre	Post	Diff	Pre	Post	Diff
2	529.5	528.0	-1.5	582.0	551.5	9.5	1071.5	1079.5	8.0
3	521.5	529.5	8.0	553.0	560.5	7.5	1074.5	1090.0	15.5
8	473.5	472.0	-1.5	489.0	490.5	1.5	962.5	962.5	0.0
9	580.5	574.5	-6.0	581.0	580.5	-0.5	1161.5	1155.0	-6.5
10	489.5	485.5	-4.0	495.0	502.0	7.0	984.5	987.5	3.0
11	531.5	540.5	9.0	550.0	565.0	15.0	1081.5	1105.5	24.0
16	505.5	506.0	0.5	517.0	515.5	-1.5	1022.5	1021.5	-1.0

Each year WPCSS administers a parent satisfaction survey. Several of the items from the survey as shown in Table 5 seemed to be of particular relevance for the purpose of the current study.

Table 5. Parent Satisfaction with School Facilities Pre-Renovation and Post-Renovation

Survey Question	Pre-Renovation	Post-Renovation	Change
My child’s school provides a high quality educational program.	67%	88%	21%
My child’s school is a safe place to learn.	78%	90%	12%
My child’s school grounds are clean and attractive.	73%	86%	13%
I feel comfortable visiting my child’s school.	87%	92%	5%

Note. There were eight schools that had parent survey data for both the pre-renovation and post-renovation periods. In every comparison, data were missing for one year of the two-year pre-renovation or post-renovation periods.

Included in the current study were two indices that are indicative of student health and student attitudes: average daily attendance and the number of out-of-school suspensions. For all schools in the study, the average of average daily attendance at each school rose 0.38% from 95.15% to 95.52% between the pre-renovation and post-renovation periods. High school attendance improved by 0.93% and middle by 0.86%, while elementary attendance declined by .29%. Additionally, the average number of out-of-school suspensions decreased by about 13 incidents per school from 357 to 344.

When taken together, the results of this study suggest there are noticeable positive changes from pre-renovation to post renovation for just about every indicator considered. When interviewed, school administrators report the positive impacts of renovations on facility, student, staff, and parent outcomes. And, the examination of quantitative data from the 18 schools that underwent sizeable renovations lends support to the sentiments expressed by the school administrators. The overall trends in the data showed positive changes in facility, student, and parent outcomes from pre-renovation to post-renovation.

With that conclusion, it should be noted that this study does have its limitations. Although the study presents data that suggest improvements in student achievement that resulted from renovations, there are no data that indicate causation. Furthermore, an examination of the overall student achievement trends in the district was not a part of this study; consequently, the increases witnessed are not considered in the context of the general long-term trends in the district as a whole. Another consideration would be possible changes in staff performance and levels of professional development over time, especially in consideration of the recent federal No Child Left Behind legislation with its requirements for highly qualified teachers. The impact of these factors on student achievement trends in the district is worthy of consideration.

No matter, this study is significant in what it has accomplished. There is sufficient evidence to suggest that renovations may lead to improvements in staff, student and parent outcomes.

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Note: This is an executive summary; a more detailed report is available