

Appendix C

Technical Notes

I. SIGNIFICANCE

All comparisons made in the text were tested using two-tailed tests for significance at the .05 level unless otherwise specified. When multiple comparisons were made, a Bonferroni adjustment to the significance level was used.

II. SELECTION OF INDICATORS FOR CHAPTER 4 ON SCHOOL EXPERIENCES

Indicators that were plausibly related to the differences in education outcomes in chapter 2 were chosen based on their important relationship to education outcomes as expressed in the research and policy communities. Indicators that were relevant to the school experience were examined for schools by urbanicity, poverty concentration, and urbanicity and poverty concentration combined. The final list of indicators was paired down by eliminating indicators for one or more of the following reasons:

1. No significant differences in the extreme categories of urbanicity or poverty concentration were revealed. Data for the extreme categories were compared using *t*-tests. “No differences” means that these variables could not contribute to the differences observed in the chapter 2 outcomes. The lack of variation for some of these variables is discussed in the text.
2. Significant differences were found in the extreme categories of urbanicity and poverty concentration; however, given the constraints of this report, indicators that were considered less important than others, after reviewing the recent literature, were excluded. These indicators are sometimes discussed in the text, particularly when they show similar patterns as those for which data are presented. The strongest indicator of a group relative

to the same phenomenon was chosen to represent what the data showed about that area of inquiry.

3. The data available for an indicator would not support the analysis of variance methodology used in this report. Sample sizes were too small and/or the standard errors were too large when estimates were produced for urbanicity and poverty concentration combined.

The report examined data in three broad categories of the school experience: characteristics of schools, characteristics of teachers and staff, and student behavior. Some of the data that were initially examined to determine variations in the characteristics of schools but not shown in this report include the following:

- School facilities—types available
- School policies—graduation requirements, testing, control of decision-making, ability grouping of students
- Curriculum offerings and special programs available
- School climate—opinion data from students, teachers, and administrators on overall school climate, rules and discipline, the learning atmosphere, teacher morale

The following characteristics of teachers and staff examined for variation were not included in chapter 4:

- Pupil/teacher and pupil/staff ratios
- Teacher turnover rate
- School staffing patterns
- Number of years teaching in same school

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- Highest degree earned by teachers
 - Number of courses taken by teachers in primary and secondary field
 - Certification in primary and secondary field
 - Teacher benefits and pay incentives
 - Professional development of teachers
 - Instructional practices
 - Teacher expectations for student achievement
 - Ratings of teacher quality by students and administrators

In the area of student behavior, the following issues were analyzed in addition to those presented in the indicators section of this report:

- Average daily attendance/tardiness

- Student course selection
- Student effort on schoolwork and their ratings on difficulty of subject matter taught
- Outside reading
- Students' perceived locus of control and self-concept indicators
- Students' expectations for completing high school and for attending college
- Delinquency
- Illegal substance abuse
- Physical conflicts/abuse of teachers
- Theft and robbery in school

Data for indicators that are not presented in the text can be made available on request.