Gaining Ground in the Middle Grades: Why Some Schools Do Better

A Large-Scale Study of Middle Grades Practices and Student Outcomes
Appendix B - Descriptive Statistics of the Middle Grades Study Schools

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APPENDIX B - Descriptive Statistics of the Middle Grades Study Schools

Figure B-1: Student Demographics/Background

This table compares average demographic and student background characteristics of participating schools and non-participating schools within the study’s two SCI bands (20th-35th and 70th-85th SCI percentile bands) and across all schools statewide serving middle grade students. The table lists means and standard deviations, noting any significant differences between participating and non-participating schools within each of the SCI bands.

Figure B-2: English Language Arts CSTs

This table compares average scores on the grades 6-8 English Language Arts California Standards Tests (CSTs) for participating schools and non-participating schools within the study’s two SCI bands (20th-35th and 70th-85th SCI percentile bands), noting any significant differences between participating and non-participating schools within the SCI bands.

Figure B-3: Mathematics CSTs

This table compares average scores on four grades 6-8 Mathematics California Standards Tests (CSTs) for participating schools and non-participating schools within the study’s two SCI bands (20th-35th and 70th-85th SCI percentile bands), noting any significant differences between participating and non-participating schools within the SCI bands.

Figure B-4: Cohort Size

This table compares the average cohort size of participating schools, non-participating schools, and all schools statewide that serve middle grade students, noting any significant differences between participating and non-participating schools within the study’s two SCI bands (20th-35th and 70th-85th SCI percentile bands).

Figure B-5: Grade Configuration

This table compares the grade configurations for participating schools, non-participating schools, and all schools statewide that serve middle grade students, noting significant differences between participating and non-participating schools statewide, as well as within each of the study’s two SCI bands (20th-35th and 70th-85th SCI percentile bands).

Figure B-6: District Types

This table compares the response rates of superintendents whose districts contained at least one participating school, by district type (e.g., elementary, unified, high, etc.).

Figures B-7- B-8: California Regions

This table compares the location of participating schools, non-participating schools, and schools serving middle grade students statewide, by California region, noting any overall significant differences (chi-square test) between participating and non-participating schools. Figure B-8 illustrates the regional participation.
### Figure B-1: Student Demographics/Background

<table>
<thead>
<tr>
<th></th>
<th>20th-35th Percentile of the SCI</th>
<th>70th-85th Percentile of the SCI</th>
<th>Statewide Totals 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Participating Schools n=144</td>
<td>Non-Participating Schools n=111</td>
<td>All Schools in the SCI Band n=255</td>
</tr>
<tr>
<td>Total Students, 6-8:</td>
<td>102,572</td>
<td>68,463</td>
<td>171,035</td>
</tr>
<tr>
<td></td>
<td>Total Students, 6-8:</td>
<td>Total Students, 6-8:</td>
<td>Total Students, 6-8:</td>
</tr>
<tr>
<td></td>
<td>Participating Schools n=159</td>
<td>Non-Participating Schools n=102</td>
<td>All Schools in the SCI Band n=261</td>
</tr>
<tr>
<td>Total Students, 6-8:</td>
<td>101,318</td>
<td>57,472</td>
<td>158,790</td>
</tr>
<tr>
<td></td>
<td>Total Students, 6-8:</td>
<td>Total Students, 6-8:</td>
<td>Total Students, 6-8:</td>
</tr>
<tr>
<td></td>
<td>Statewide Totals 2</td>
<td>Total Students, 6-8:</td>
<td>1,106,773</td>
</tr>
</tbody>
</table>

- **Average % African American**
  - Participating Schools: 10.0 (.13)  
  - Non-Participating Schools: 9.1 (.13)  
  - All Schools in the SCI Band: 9.6 (.13)  
  - Participating Schools: 4.9 (.05)  
  - Non-Participating Schools: 4.4 (.05)  
  - All Schools in the SCI Band: 4.7 (.05)  
  - Statewide Totals: 7.1 (.11)  

- **Average % Asian**
  - Participating Schools: 3.9 (.06)  
  - Non-Participating Schools: 4.3 (.07)  
  - All Schools in the SCI Band: 4.1 (.06)  
  - Participating Schools: 7.9 (.10)  
  - Non-Participating Schools: 12.4 (.19)  
  - All Schools in the SCI Band: 9.7 (.14)  
  - Statewide Totals: 8.0 (.13)  

- **Average % Filipino**
  - Participating Schools: 3.0 (.05)  
  - Non-Participating Schools: 2.0 (.03)  
  - All Schools in the SCI Band: 2.6 (.05)  
  - Participating Schools: 3.2 (.04)  
  - Non-Participating Schools: 3.7 (.06)  
  - All Schools in the SCI Band: 3.4 (.05)  
  - Statewide Totals: 2.6 (.04)  

- **Average % Hispanic**
  - Participating Schools: 67.7 (.20)  
  - Non-Participating Schools: 69.0 (.23)  
  - All Schools in the SCI Band: 68.3 (.21)  
  - Participating Schools: 25.0 (.12)  
  - Non-Participating Schools: 24.2 (.15)  
  - All Schools in the SCI Band: 24.7 (.13)  
  - Statewide Totals: 46.1 (.29)  

- **Average % Pacific Islander**
  - Participating Schools: 0.8 (.01)  
  - Non-Participating Schools: 0.9 (.02)  
  - All Schools in the SCI Band: 0.9 (.01)  
  - Participating Schools: 0.7 (.01)  
  - Non-Participating Schools: 0.7 (.01)  
  - All Schools in the SCI Band: 0.7 (.01)  
  - Statewide Totals: 0.7 (.01)  

- **Average % White**
  - Participating Schools: 13.2 (.11)  
  - Non-Participating Schools: 12.4 (.14)  
  - All Schools in the SCI Band: 12.9 (.12)  
  - Participating Schools: 55.9 (.19)  
  - Non-Participating Schools: 51.7 (.26)  
  - All Schools in the SCI Band: 54.3 (.22)  
  - Statewide Totals: 54.4 (.28)  

- **Average % Socioeconomically Disadvantaged**
  - Participating Schools: 75.6 (.12)  
  - Non-Participating Schools: 78.3 (.14)  
  - All Schools in the SCI Band: 76.8 (.13)  
  - Participating Schools: 29.1 (.11)  
  - Non-Participating Schools: 31.3 (.15)  
  - All Schools in the SCI Band: 30.0 (.13)  
  - Statewide Totals: 54.1 (.29)  

- **Average % English Learners**
  - Participating Schools: 26.6 (.11)  
  - Non-Participating Schools: 27.6 (.13)  
  - All Schools in the SCI Band: 27.0 (.12)  
  - Participating Schools: 6.5 (.05)  
  - Non-Participating Schools: 8.7 (.09)  
  - All Schools in the SCI Band: 7.4 (.07)  
  - Statewide Totals: 18.0 (.15)  

- **Average % Reclassified Fluent English Proficient (RFEP)**
  - Participating Schools: 22.3 (.10)  
  - Non-Participating Schools: 23.0 (.12)  
  - All Schools in the SCI Band: 22.6 (.11)  
  - Participating Schools: 8.5 (.07)  
  - Non-Participating Schools: 10.1 (.10)  
  - All Schools in the SCI Band: 9.1 (.09)  
  - Statewide Totals: 16.6 (.12)  

- **Average % Parental Education - Less than High School**
  - Participating Schools: 27.5 (.13)  
  - Non-Participating Schools: 26.6 (.14)  
  - All Schools in the SCI Band: 27.1 (.13)  
  - Participating Schools: 5.0 (.03)  
  - Non-Participating Schools: 5.9 (.05)  
  - All Schools in the SCI Band: 5.3 (.04)  
  - Statewide Totals: 16.7 (.16)  

- **Average % Parental Education - High School Graduate**
  - Participating Schools: 26.0 (.08)  
  - Non-Participating Schools: 25.4 (.09)  
  - All Schools in the SCI Band: 25.7 (.08)  
  - Participating Schools: 14.6 (.07)  
  - Non-Participating Schools: 16.7 (.08)  
  - All Schools in the SCI Band: 15.4 (.07)  
  - Statewide Totals: 19.8 (.10)  

- **Average % Parental Education - Some College**
  - Participating Schools: 19.0 (.07)  
  - Non-Participating Schools: 16.7 (.07)  
  - All Schools in the SCI Band: 18.0 (.07)  
  - Participating Schools: 26.4 (.10)  
  - Non-Participating Schools: 26.7 (.10)  
  - All Schools in the SCI Band: 26.5 (.10)  
  - Statewide Totals: 20.3 (.11)  

- **Average % Parental Education - College Graduate**
  - Participating Schools: 8.4 (.04)  
  - Non-Participating Schools: 7.4 (.04)  
  - All Schools in the SCI Band: 8.0 (.04)  
  - Participating Schools: 25.8 (.09)  
  - Non-Participating Schools: 23.7 (.08)  
  - All Schools in the SCI Band: 25.0 (.09)  
  - Statewide Totals: 15.9 (.11)  

- **Average % Parental Education - Graduate School**
  - Participating Schools: 3.0 (.02)  
  - Non-Participating Schools: 3.0 (.03)  
  - All Schools in the SCI Band: 3.0 (.03)  
  - Participating Schools: 14.3 (.07)  
  - Non-Participating Schools: 12.9 (.07)  
  - All Schools in the SCI Band: 13.7 (.07)  
  - Statewide Totals: 9.6 (.12)  

**Percentage of Students Continuously Enrolled**

- Percentage of Students Continuously Enrolled: 91.8 (4.17)  
  - Statewide Totals: 93.5 (8.00)  

* Statistically significant difference (p.<.05) between means of participating and non-participating schools within SCI band.

**Notes:**

1. All calculations except Percentage of Students Continuously Enrolled based on the sum of students tested in English Language Arts in 6th, 7th, and 8th grades. See footnote 3.
2. Percentages based on the number of students tested in a subgroup divided by the total number of students tested overall.
3. Percentage of ethnicity groups and parental education levels may not sum to 100 % because some students choose not to disclose data and not all categories are included.
4. A total of 53 Schools in the Full 70th-85th Percentile SCI band did not have a 6th grade.
5. A total of 69 Schools in the Full 20th-35th Percentile SCI band did not have a 6th grade.

**Tests by SCI band show only one significant difference (in the 20th-35th SCI band) between participating and non-participating schools.**

The EdSource sample of 303 participating schools is very similar to the 513 schools who did not participate as illustrated above.
<table>
<thead>
<tr>
<th>Grade 6 ELA</th>
<th>Participating Schools</th>
<th>Non-Participating Schools</th>
<th>All Schools in the SCI Band</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Schools</td>
<td>102</td>
<td>84</td>
<td>186</td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>337.6 (11.9)</td>
<td>336.0 (12.1)</td>
<td>336.9 (12.0)</td>
</tr>
<tr>
<td>Median</td>
<td>337.8</td>
<td>336.1</td>
<td>337.3</td>
</tr>
<tr>
<td>Range (Min-Max)</td>
<td>315.1-390.0</td>
<td>308.7-375.4</td>
<td>308.7-390.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade 7 ELA</th>
<th>Participating Schools</th>
<th>Non-Participating Schools</th>
<th>All Schools in the SCI Band</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Schools</td>
<td>144</td>
<td>108</td>
<td>252</td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>341.1 (10.0) *</td>
<td>338 (12.5) *</td>
<td>339.8 (11.2)</td>
</tr>
<tr>
<td>Median</td>
<td>340.7</td>
<td>338.0</td>
<td>339.2</td>
</tr>
<tr>
<td>Range (Min-Max)</td>
<td>318.1-367.1</td>
<td>307.0-393.8</td>
<td>307.0-393.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade 8 ELA</th>
<th>Participating Schools</th>
<th>Non-Participating Schools</th>
<th>All Schools in the SCI Band</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Schools</td>
<td>144</td>
<td>108</td>
<td>252</td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>335.9 (10.9)</td>
<td>335.3 (14.0)</td>
<td>335.6 (12.3)</td>
</tr>
<tr>
<td>Median</td>
<td>334.4</td>
<td>333.0</td>
<td>333.9</td>
</tr>
<tr>
<td>Range (Min-Max)</td>
<td>310.1-373.0</td>
<td>298.6-400.5</td>
<td>298.6-400.5</td>
</tr>
</tbody>
</table>

* Statistically significant difference (p.<.05) between means of participating and non-participating schools within SCI band.

The EdSource sample of participating schools is very similar to the non-participating schools as illustrated above. Tests by SCI band show that CST means of participating and non-participating schools differ on one outcome measure, ELA Grade 7 CST in the 20th to 35th Percentile of the SCI.

Notes:
1: SCI: School Characteristics Index. SCI percentile bands established from CDE's 2007 Base API data file: http://www.cde.ca.gov/ta/ac/ap/
2: CST means of non-participating schools are censored for schools where ten or fewer students were tested. N's also vary slightly due to year-to-year changes in grade configuration.

### Average California State Test Scores (CST) of Participating Schools, Non-Participating Schools, and All Schools in Study's Two SCI Bands

**Figure B-3: Mathematics CSTs**

<table>
<thead>
<tr>
<th>Grade 6 Math</th>
<th>20th-35th Percentile of the SCI</th>
<th>70th-85th Percentile of the SCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Students, 6-8:</td>
<td>Total Students, 6-8:</td>
<td>Total Students, 6-8:</td>
</tr>
<tr>
<td>102,572</td>
<td>68,463</td>
<td>171,035</td>
</tr>
<tr>
<td><strong>Participating Schools</strong></td>
<td><strong>Non-Participating Schools</strong></td>
<td><strong>All Schools in the SCI Band</strong></td>
</tr>
<tr>
<td>Number of Schools</td>
<td>102</td>
<td>84</td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>334 (17.9)</td>
<td>332.1 (18.6)</td>
</tr>
<tr>
<td>Median</td>
<td>332.0</td>
<td>331.4</td>
</tr>
<tr>
<td>Range (Min-Max)</td>
<td>296.1 - 409.0</td>
<td>290.9-405.6</td>
</tr>
</tbody>
</table>

**Grade 7 Math**

| Number of Schools | 144 | 108 | 252 |
| Mean (SD) | 334 (18.2) | 333.1 (18.2) | 333.6 (18.2) | 359.8 (18.9) | 361.7 (22.7) | 360.6 (20.4) |
| Median | 332.5 | 331.4 | 331.9 | 359.4 | 358.3 | 358.4 |
| Range (Min-Max) | 287.1 - 397.7 | 294.9-392.4 | 287.1-397.7 | 307.9 - 440.4 | 319.5 - 421.1 | 307.9 - 440.4 |

**Grade 8 General Math**

| Number of Schools | 109 | 81 | 190 |
| Mean (SD) | 301.6 (25.9) | 307.1 (26.6) | 303.9 (26.2) | 325.2 (29.8) | 331.6 (25.7) | 327.5 (28.5) |
| Median | 301.7 | 309.4 | 302.9 | 327.5 | 333.7 | 330.8 |
| Range (Min-Max) | 222.4 - 356.7 | 239.6 - 387.2 | 222.4-387.2 | 250.8-402.4 | 257.1-400.0 | 250.8-402.4 |

**Grade 8 Algebra**

| Number of Schools | 141 | 104 | 245 |
| Mean (SD) | 336.7 (38.9) | 343.2 (39.6) | 339.4 (39.2) | 372.6 (40.8) | 377.4 (42.4) | 374.4 (41.4) |
| Median | 327.7 | 343.1 | 332.8 | 366.5 | 376.4 | 368.5 |
| Range (Min-Max) | 254.5 - 490.8 | 269.9 - 457.0 | 254.5-490.8 | 286.6 - 475.3 | 283.2-528.2 | 283.2-528.2 |

The EdSource sample of participating schools is very similar to the non-participating schools as illustrated above. Tests by SCI band show that the overall participating schools Math CST means do not significantly differ from the overall non-participating schools means.

Notes:
1. SCI: School Characteristics Index. SCI percentile bands established from CDE's 2007 Base API data file: http://www.cde.ca.gov/ta/ac/ap/
2. CST means of non-participating schools are censored for schools where ten or fewer students were tested.
## Average Cohort Size for Participating Schools, Non-Participating Schools, Plus All Schools Statewide Serving Middle Grades

<table>
<thead>
<tr>
<th>Figure B-4: Cohort Size</th>
<th>20th-35th Percentile of the SCI Band</th>
<th>70th-85th Percentile of the SCI Band</th>
<th>Statewide Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Participating Schools n=144</td>
<td>Non-Participating Schools n=111³</td>
<td></td>
</tr>
<tr>
<td>Total Students, 6-8:</td>
<td>102,572</td>
<td>68,463</td>
<td></td>
</tr>
<tr>
<td>Mean (SD) Cohort Size, Grades 7-8</td>
<td>296 (168)</td>
<td>254 (187)</td>
<td></td>
</tr>
<tr>
<td>Median Cohort Size, Grades 7-8</td>
<td>296</td>
<td>246</td>
<td></td>
</tr>
<tr>
<td>Range Cohort Size (Min-Max), Grades 7-8</td>
<td>16 - 633</td>
<td>3 - 733</td>
<td></td>
</tr>
<tr>
<td>Total Students, 6-8:</td>
<td>101,318</td>
<td>57,472</td>
<td></td>
</tr>
<tr>
<td>Participating Schools n=159</td>
<td></td>
<td>261 (197)</td>
<td>256 (183)</td>
</tr>
<tr>
<td>Non-Participating Schools n=102</td>
<td></td>
<td>222 (186)</td>
<td></td>
</tr>
<tr>
<td>Total Students, 6-8:</td>
<td>257</td>
<td>139</td>
<td>249</td>
</tr>
<tr>
<td>Range Cohort Size (Min-Max), Grades 7-8</td>
<td>8 - 834</td>
<td>13 - 689</td>
<td>0 - 1140</td>
</tr>
</tbody>
</table>

The EdSource sample of participating schools is very similar to the non-participating schools as illustrated above. Tests by SCI band show no significant differences on overall average cohort size.

### Notes:
1. For a complete discussion of the calculation of Statewide Totals, see the section “Determining the Schools Eligible to Participate in the Study” in the Initial Research Report.
2. As a measure of school enrollment, EdSource calculated and controlled for cohort size, or the average grade enrollment in 7th and 8th grades ([Percent of enrollments in grades 7 and 8 multiplied by school enrollment] divided by 2)
3. One school was omitted from this calculation as it no longer serves students in grades 7-8

Data Source: CDE - API: http://www.cde.ca.gov/ta/ac/ap/ [Enrollment (ENROLL) and Percentage of Enrollments in grades 7-8 (PEN_78)]
### Figure B-5: Grade Configuration

<table>
<thead>
<tr>
<th>Grade Configuration</th>
<th>Participating Schools</th>
<th>Non-Participating Schools</th>
<th>Statewide Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-8</td>
<td>73 (48%)</td>
<td>78 (52%)</td>
<td>466</td>
</tr>
<tr>
<td>7-8</td>
<td>80 (69%)</td>
<td>36 (31%)</td>
<td>316</td>
</tr>
<tr>
<td>6-8, Other</td>
<td>150 (60%)</td>
<td>99 (40%)</td>
<td>944</td>
</tr>
</tbody>
</table>

* Statistically significant difference between participating and non-participating schools (p. <.05).

### Notes:

1. Grade Configuration of Participating Schools derived from EdSource Principal Survey.
2. Grade Configuration of Non-Participating Schools derived from California Basic Educational Data System (CBEDS): http://www.cde.ca.gov/ds/sd/cb/reports.asp

For a complete discussion of the calculation of Statewide Totals, see the section "Determining the Schools Eligible to Participate in the Study" in the Initial Research Report.

Data Source: EdSource Principal Survey and CBEDS as noted above
The final survey pool yielded 184 districts—including 7 CMOs. In total, 157 districts responded—including 5 CMOs; 27 districts did not respond.

Data Source: EdSource Superintendent Survey
### Participating and Non-Participating Schools by California Region, Plus All Schools Statewide Serving Middle Grades

<table>
<thead>
<tr>
<th>Figure B-7: California Regions</th>
<th>Pooled Sample</th>
<th>Statewide Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Participating Schools n=303</td>
<td>Non-Participating Schools n=213</td>
</tr>
<tr>
<td>Northern (Santa Cruz, Santa Clara, Merced, Madera, Mono, and all other counties northward)</td>
<td>37% (n=111)</td>
<td>41% (n=87)</td>
</tr>
<tr>
<td>Central (areas between designated northern and southern areas)</td>
<td>9% (n=28)</td>
<td>8% (n=16)</td>
</tr>
<tr>
<td>Southern California (San Luis Obispo, Kern, San Bernardino, and all other counties southward)</td>
<td>54% (n=164)</td>
<td>52% (n=110)</td>
</tr>
</tbody>
</table>

The 303 participating schools in the EdSource sample are located in similar regions as non-participating schools and all schools serving middle grades students statewide.

Note:
1. For a complete discussion of the calculation of Statewide Totals, see the section "Determining the Schools Eligible to Participate in the Study" in the Initial Research Report.
The sample of middle grade schools in this study reflect the geographic diversity of California.
EdSource is an independent, impartial, not-for-profit organization whose sole mission is to clarify complex education issues and to promote thoughtful decisions about public school improvement. Founded in California in 1977, EdSource is a respected source of information for K–14 education policy, data, and research.