An Analysis of the Reorganization of H. Grady Spruce High School and Its Impact on James Madison and Lincoln High Schools: 2008-09

Karen L. Thierry, Ph.D.  EA09-510-4

At-a-Glance

As a result of being rated Academically Unacceptable for four consecutive years (2004-05 through 2007-08), H. Grady Spruce underwent reorganization in the 2008-09 school year. As part of this reorganization process, a new principal was hired and 75% of the staff were removed or reassigned to other district campuses. In addition, only incoming 9th grade students and 12th grade students who chose to remain at Spruce during their fourth year were accepted for the 2008-09 year. The incoming grade nine students chose from three different career pathways: engineering, business/finance, and health sciences. Also in 2008-09, most of the rising grades 10 and 11 students (with more than six course credits) from Spruce moved to James Madison and Lincoln High Schools.

Objectives

To understand the impact of the reorganization of Spruce on both the newly reorganized school itself and on Madison and Lincoln, demographic characteristics of students and teachers across these three schools were compared. Included in this analysis is a comparison of experience levels of teachers at Spruce post-reorganizing (2008-09) compared to pre-reorganizing (2007-08). Also, the 2009 Texas Assessment of Knowledge of Skills (TAKS) results for incoming grade nine students at Spruce was examined. Finally, the performance of former Spruce and non-former Spruce students at Madison and Lincoln on the 2009 TAKS was compared.

Teacher Demographic Comparison

In 2008-09 (post Reduction in Force), a lower percentage of teachers at Spruce were African American (43.5%) compared to previous years, and this percentage was comparable to the percentage of African-American teachers in the District (44.4%). Lincoln and Madison continued to employ the highest percentage of African-American teachers (81.9% and 76.5%, respectively). The percentage of Hispanic and White teachers at Spruce increased from previous years, with the percentage of White teachers (35.5%) at Spruce becoming more comparable to the District (41.1%). Between 2007-08 and 2008-09, the percentage of White teachers at Lincoln decreased but increased at Madison. The percentage of Hispanic teachers at Spruce in 2008-09 (14.5%) was higher than the percentage in the District (10%) and at Lincoln (3.6%) and Madison (0).

In 2008-09, Spruce had fewer teachers with no certifications (26%) than they did in 2007-08 (32%), although both of these percentages were higher than that of the District (14%). The majority of the teachers at Spruce had 1-2 certifications (53%), as did the District. With respect to state experience, in 2008-09, Spruce employed more teachers with between 6 and 10 years of experience (24%) compared to 2007-08 (20%), and this percentage was comparable to the district (21%). Also, in 2008-09, Spruce employed fewer teachers with less than 5 years of experience (36%) compared to 2007-08 (42%). However, Spruce

5-Year Examination of Spruce Academic Performance

From 2004 through 2008, Academic Excellence Indicator System (AEIS) data showed that Spruce consistently performed below the level of the state, district, and a comparison group (composed of 40 other Texas public schools that closely resembled the demographic characteristics of Spruce), especially in reading, math, and science (see Figure 1). Spruce also showed a consistent decline in their completion rate from 2004 through 2008 (83.4% to 53.6%, respectively) and evidenced lower completion rates than the state, district, and comparison group.

Figure 1. Percentage of Spruce students meeting standard on all TAKS subtests in comparison to state and district from 2003-04 through 2007-08.

Spruce
still had more teachers with no years of experience (15%) compared to the District (5%). Between 2007-08 and 2008-09, there was a decrease in the percentage of teachers at Spruce who were alternatively certified (2007-08: 35%; 2008-09: 21%), however, this percentage remained higher than that of the District (10%).

**Feeder School and Student Demographic Comparison**

Most of the students who attend Spruce tend to come from Comstock Middle School (which, as of 2009, is in Stage 3 School Improvement), whereas most of the students from Lincoln and Madison tend to come from Anderson and Dade Middle Schools (not in any school improvement stage).


From 2003-04 (18.1%) through 2007-08 (24.3%), there was a steady increase in the percentage of limited English proficient (LEP) students at Spruce, but no comparable increase in LEP students in the District or at Lincoln and Madison. This increase in LEP students coincided with an increase in Hispanic student enrollment at Spruce and across the District overall. However, again, there was no corresponding increase in LEP students within the District overall. In 2008-09, the LEP student enrollment (23.4%) at Spruce was similar to that of the previous year (2007-08).

In 2008-09, Lincoln (6.8%) and Madison (12.5%) doubled their percentage enrollment of LEP students, compared to the previous year (2.7% and 6.3%, respectively).

**2009 TAKS Performance of 2008-09 Spruce Students (9th grade only)**

In 2008-09, a total of 646 grade nine and twelve students were enrolled at Spruce with the majority of the grade nine students coming from Comstock (67%). Because of the reorganization at Spruce, its student enrollment in 2008-09 decreased by 60% compared to its enrollment in 2007-08. The student demographic characteristics of 2008-09 Spruce students were described in the previous section. Here, the focus will be on the 2009 TAKS performance of the incoming grade nine students at Spruce. These AEIS results showed that although Spruce was rated as Academically Unacceptable, this rating was due to a below-standard completion rate (54%). Spruce was actually at recognized levels in the TAKS subject areas, which included only Math and Reading for these 9th grade students. These scores represent a dramatic increase in performance compared to the previous year, particularly in Math, for which there was a 35 percentage-point gain in the all-students group (see Figure 2). A variety of teacher and student characteristics could explain such an increase in performance. A review of these characteristics indicated that there were no demographic or special population differences between the 2008-09 and 2007-08 Spruce students. There were some slight changes in teacher experience levels beginning in 2008-09 (given that 75% of the previous staff was removed). For instance, as noted in the teacher demographic comparison, in 2008-09 Spruce employed more teachers with state experience and certifications that were comparable to other teachers in the District.

![Figure 2. Comparison of 2008 and 2009 TAKS results at Spruce High School.](image-url)

Another important factor potentially related to the increase in performance concerns academic enrichment activities that occurred at the middle school from which most of these 9th grade students came (i.e., Comstock). In the previous academic year at Comstock (and at other schools), a Mathematics Achievement Project, involving student tutoring and teacher coaching, was implemented (see Johnson-Smith, 2008 for more details on this project). At the end of the academic year (2007-2008), Comstock evidenced a 12 point gain on Math TAKS passing rates compared to the previous year (2006-2007). These students who participated in this enrichment at Comstock as 8th graders may have thus entered Spruce in 2008-09 with better Math skills which could account for their 2009 Math TAKS results. A comparison of the 2008 and 2009 Math TAKS scale scores of these students who attended Spruce in fact showed similar performance levels (2008: $M = 2124$; 2009: $M = 2155$).

**2008-09 Transition Support and AEIS Performance of Former Spruce and Non-Former Spruce Students at Madison and Lincoln**

Of the students who were in grades 9 ($N = 447$) and 10 ($N = 297$) at Spruce in 2007-08, most moved to either Lincoln ($N = 196; 26\%$) or Madison ($N = 205; 28\%$) in 2008-09. With respect to the total student
enrollment at Lincoln and Madison in 2008-09, Madison had more former Spruce students (41%) than did Lincoln (28%). Former Spruce students at Madison and Lincoln were provided with similar support opportunities based on need as non-former Spruce students, which included tutoring, counseling, and extra-curricular activities. In addition, at the start of the academic year at Madison, former Spruce students and their families were welcomed to the campus by sending them a letter of introduction and inviting them to an orientation (held especially for Spruce students) which introduced administrators, faculty, and staff and explained the mission and rules of Madison. Also, in order to understand the academic skills of former Spruce students, teachers at Madison gave students formal and informal assessments.

A comparison of the 2009 TAKS performance of the former Spruce students and the non-former Spruce students at Madison and Lincoln follows. For Madison, using the AEIS Accountability Subset, passing rates in the four subject areas (English, Math, Social Studies, and Science) were examined both including former Spruce students and excluding these students. Including all students, AEIS results showed that Madison was ranked as Academically Acceptable. As Figure 3 indicates, their lowest passing rates without the Texas Projection Measure (TPM) were in Math (all students = 52) and Science (all students = 51). Without TPM, these rates were below the 55% standard for Math and just above the 50% standard for Science. Within the student groups, the lowest performance levels were evidenced by the Hispanic group in both Math (44%) and Science (39%).

Figure 3. 2009 TAKS performance of Madison High School, grades 9-11: Including former Spruce students.

When the former Spruce students were excluded from the results (see Figure 4), the passing rates (all student group) slightly increased in Reading and Social Studies (by 3 and 5 percentage points, respectively). A greater passing rate increase was evidenced for Math (All students: +7; Hispanic: +12), which was enough to place all of the student groups above the 55% Math standard. A more dramatic increase in passing rates was found for Science (all students: +10; Hispanic: +17), which placed all student groups, including Hispanic, above the 50% standard.

The performance of the former Spruce students (N = 154) was next examined for the two subjects where more marked differences in passing rates were evidenced: Math and Science. Here, the Math and Science passing rates of former grade 10 and 11 Spruce students were compared to the passing rates of non-former grade 10 and 11 students at Madison. As Figure 5 indicates, in both Math and Science, non-former Spruce students at Madison evidenced higher passing rates than did former Spruce students, whose rates were below standard in both subjects.

Figure 4. 2009 TAKS performance of Madison High School, grades 9-11: Excluding former Spruce students.

Figure 5. 2009 math and science TAKS performance of former and non-former Spruce students at Madison High School (10th and 11th grades only).

Because Lincoln had fewer former Spruce students than Madison, less dramatic differences in TAKS performance levels were expected at this school. In 2009, Lincoln was also rated as Academically Acceptable and performed similarly to Madison in the four subject areas. As indicated in a previous analysis by Hall (2009), differences in 2009 TAKS passing rates when former Spruce students at Lincoln were
included versus when they were excluded were minimal. For instance, in Math, there was a net gain of about 2 percentage points when former Spruce students were excluded from TAKS results.

**2008-09 Attendance Rates of Former Spruce and Non-Former Spruce Students at Madison and Lincoln**

Because the 2009 completion rate data are currently unavailable, attendance rate was used as an alternate indicator of students’ on-track status. As Table 1 shows, comparable attendance rates were found for former and non-former Spruce students at both schools.

**Table 1**

<table>
<thead>
<tr>
<th></th>
<th>Former Spruce</th>
<th>Non-Former Spruce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madison</td>
<td>90.8</td>
<td>91.5</td>
</tr>
<tr>
<td>Lincoln</td>
<td>89.4</td>
<td>92.4</td>
</tr>
</tbody>
</table>

**Recommendations**

- For former Spruce students attending Madison, further enrichment in the upcoming years should be provided in core subject areas, particularly in Math and Science.

- Monitor the percentage of LEP students in all three schools. Previous analysis (Hall & Yang, 2008) suggested that for Adequate Yearly Progress results, this student group evidenced lower levels of performance, particularly in Math, compared to other groups, and this pattern was evident across schools in various stages of No Child Left Behind improvement.

- The 2008-09 TAKS results for incoming 9th grade students at Spruce show marked improvement in math and reading. Those factors contributing to this improvement should be more clearly identified to ensure future success of students at Spruce.

**References**


For more information, contact Karen Thierry at 972-925-3591.