

A tale of two middle schools: The differences in structure and instruction

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The way teachers use instructional time and the consistency with which they implement instructional strategies are two important variables that can affect student achievement.

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"It was the best of times, it was the worst of times..." The famous opening phrase from Charles Dickens's *A Tale of Two Cities* might well describe the state of literacy-based school reform at many middle schools today. In our work as literacy professionals, we have been privileged to get to know a number of middle schools on a very intimate basis. We have regular conversations with the principals, spend countless hours in classrooms, and attend or present at numerous staff development sessions each year at these schools. One factor they all have in common is a commitment to continuous improvement and to engaging young adolescents in literacy at school and beyond (Faulkner, 2005). We have yet to meet a middle school educator who says he or she is satisfied with the status quo. In that regard, it is definitely "the best of times," because these educators' dedication to excellence bodes well for their communities.

And yet, it is also the worst of times. Middle schools find themselves under scrutiny because of a decline in achievement in the transition from elementary to middle school (Alspaugh, 1998;

Anderman, Maehr, & Midgley, 1999). More recently, some U.S. districts have dismantled middle schools in favor of K–8 buildings (e.g., New Orleans, Miami-Dade, and Boston, to name a few). Ironically, middle educators argue that if the principles of middle education (personalized learning environment, flexible time usage, a focus on coherent academic experiences) were truly realized, these achievement declines would diminish (Flowers, Mertens, & Mulhall, 2003).

These principles become all the more difficult to implement in middle schools that have grown to sizes that rival many U.S. high schools. These supersized schools are often located in urban communities with high rates of poverty (Fowler & Wahlberg, 1991). These factors also describe the types of middle schools we work with most often—very large, urban, and economically impoverished. Although the relative size of the school cannot be easily changed, we have learned that two other factors within the control of the school can make a difference in the literacy experiences of the young adolescents who attend them. Namely, how we use instructional time and the consistency with which we implement literacy-based instructional strategies. These variables can be the difference between personalized and coherent learning, instead of the hurried anonymity of "pre-high school."

This article represents a day in the life of two students who attend different middle

schools. We have worked closely with both of these schools for several years. Each school enrolls over 1,000 students, the majority of whom speak Spanish at home. Both schools have significant numbers of students who qualify for free lunch, a widely acknowledged measure of poverty. While these schools are in different states in the southwest of the United States, they are both focused on improving the academic achievement of a large student body that is at risk of school failure. We have each spent over 12 days per year, a total of 48 days, at each of these two schools and have collected observational, interview, and anecdotal data about the operation of the schools. See Table 1 for a comparison of the demographic data of the two schools.

In doing so, we have noticed differences between these two schools with very similar student

populations. Let us say from the outset that these are both amazing places. The faculty and staff are dedicated and hardworking professionals who have their students' interests at heart. The teachers are skilled in providing students access to rigorous content. The administrations are highly supportive of teachers and provide exceptional access to professional development. However, differences in achievement have persisted. Many literacy-based reforms had been implemented in these schools, and yet growth at one school did not mirror the efforts put forth by the staff. We decided to collect less traditional data in order to shed light on barriers as yet unidentified. This meant viewing school through the eyes of a student. See Table 2 for a comparison of the achievement data of the two schools. We acknowledge that these two schools are in different states and

Table 1
School demographics

	Einstein	Bell
Total student population	1,020	1,340
Percent free lunch	76	99
Percent Latino	77	75
Percent African American	5	10
Percent Asian Pacific Islander	1	12
Percent Native American	3	0
Percent Caucasian	14	3

Table 2
Accountability targets

	Einstein	Bell
Percent proficient 2002–2003	37.6	14.0
Percent proficient 2004–2005	30.1	27.9
Percent difference	-7.5	+16.9
Met AYP	No	Yes

thus use different assessments for student learning, so comparisons are crude. Regardless, the changes in achievement at these two schools using the systems they are responsible to for meeting Adequate Yearly Progress (AYP) are telling.

We shadowed individual students for an entire school day to understand their experiences. The students were randomly selected by the administrators, and were told that we were there to learn about the school. Participating students were assured that we would not report on their behavior to administration. We readily acknowledge that the presence of an observer fundamentally alters what is being observed (LeCompte, Schensul, Weeks, & Singer, 1999). However, our lens was trained on the arc of learning that occurs across a school day. What does middle school curriculum and instruction feel like as a student? We were about to find out, thanks to two students named Gabriel and Edgar (the names of students and schools are pseudonyms).

Welcome to Albert Einstein Academy

With Gabriel and 30 other students, we started our day in a music class. The teacher began the lesson by reviewing strings and chords. Following the lesson, we had time to practice on our guitars while the teacher provided individualized instruction. We were very interested in learning how to play the guitar and made a commitment to sign up for a class upon our return home. When the bell rang at the end of the 48-minute period, we moved to second-period science. Gabriel joined a new group of students, almost none of whom were in our music class. The students moved immediately into the second day of a lab. With little background knowledge because of our “absence” the day before, we asked a number of questions of the student group. As the class finished the lab, the teacher asked us to respond to the writing prompt projected on the overhead. We all got to work, writing away, until the bell rang.

Our third-period class was English, and the teacher began by reading a number of pirate ballads. We laughed at her dialect, tone, and inflection as she shared stories about the pirates of the Barbary Coast. Over time, we began to make connections among the poems, between the poems and the informational text she shared the day before (while we were “absent”), and between the poems and our life experiences. Then the bell rang and we were off again, this time to Spanish. By now we had forgotten our interest in guitars and were thinking about poems, pirates, and sea travel.

Prior to our arrival, the Spanish teacher had placed a graphic organizer on each student’s desk. As we arrived, we asked Gabriel what we were supposed to do with the piece of paper. He said, “They always having us do somethin’. I never know what.” We recognized a few students that we had seen in other classes. As the lesson unfolded, we used the graphic organizer to organize our vocabulary words. The graphic organizer was designed to demonstrate the relationships between the words we were learning. We learned a number of new Spanish words and made a commitment to enroll in a Spanish course upon our return home. By this period, we had totally forgotten about our momentary interest in guitars or our daydreams about pirates.

Gabriel had not stopped once to use the restroom, and we wondered if it was because he had adults following him around. We told him that if he needed to use the restroom, we wouldn’t follow him in. He said, “we only got three minutes,” and off to algebra we went. This fifth-period class was supposed to review ratios and determine the unknown. For example, $\frac{4}{9} = \frac{x}{12}$. The teacher began the class with an anticipatory activity, transitioned to a short reading designed to demonstrate why this information was important, and then posed a warm-up problem that he called a “do now.” We all worked on the problem at our desks. He invited three students to the board to demonstrate their individual ways of solving the problem. We were then provided with

a problem set, some manipulatives, and asked to work in small groups to solve the problems. As we did, the teacher circulated, listened in to our conversations, provided feedback to different groups, and took notes. Before the end of the 48-minute class, the teacher reviewed selected problems, shared some of the notes he took, and demonstrated solutions.

Thankfully, it was then time for lunch. We had decided earlier that day to follow Gabriel's schedule exactly, so we begged him for a bathroom break. He agreed and we used the faculty lounge. Then we visited one of the food kiosks on campus. Again, we were following his lead, and we ate a bag of chips and drank a soda. After lunch, we headed to our sixth-period history class.

In history, the teacher lectured from the overhead and provided students with a note-taking page on which to record their notes. The teacher used a number of visuals, graphs, and charts during her lecture and showed a short film at the end of the period.

As luck would have it, our final class of the day was physical education (PE). We changed in the faculty lounge while Gabriel changed in the gym. We had a very enjoyable game of volleyball until the bell rang. We have to say that, by the end of the day, we were exhausted physically and mentally, and we could not imagine doing the homework that had been assigned by each of our teachers. We also noted that Gabriel would have had relatively little peer support to complete his homework anyway. By our calculations, he had shared classes on this day with over 120 different classmates.

A day in the life of a student at Alexander Graham Bell School

We met Edgar outside of the school building and asked him where we were going. He answered, "House B." We acted like we didn't know what this meant and asked him to clarify this house

thing. He told us that all of his classes, except PE and electives, were in House B and that he had all of his classes with people in his house. He further explained that they had the same teachers the previous year because "the teachers go up with us," meaning that they loop as a cohort through eighth grade in this school.

Our first class was history with 36 students in the room. The teacher opened the lesson with a writing prompt written on the dry-erase board. As we responded to the prompt about our rights under the U.S. Constitution, the teacher took roll from his seating chart. He then collected the papers and began a shared reading while students took notes using a Cornell note page (a note-taking strategy in which a page is split into rows and columns). He paused regularly during his shared reading to "think aloud." He noted difficult words, made connections, and asked questions of the text as he read. He then asked students, in groups of four, to get into their reciprocal teaching groups and finish the section of the textbook he had started. We asked Edgar how to do reciprocal teaching, and he explained that each person in the group had a role: summarizer, questioner, clarifier/visualizer, or predictor (e.g., Palincsar, 1984). He then joined the group and began reading to himself. After a few minutes, the conversation among these four students began, and they used the four reciprocal teaching strategies to discuss a section of the text. The conversation was lively and engaged, and on several occasions they assisted one another in figuring out concepts that gave them difficulty in a passage about common good. The students continued using reciprocal teaching until we reached the end of the assigned section. We noticed that the teacher had reviewed the writing prompts and had joined in on several of the group conversations. As the reciprocal teaching came to an end, the teacher asked us to select a graphic organizer (pointing to the range of choices hanging on the wall) and to summarize the information from the text. Edgar's group chose a concept web to describe the rights discussed in the reading. For the closing activity of the 90-minute period,

the teacher identified words from our earlier writing samples that we all needed to know, including *constitution*, *draft*, *articles*, *rights*, and *powers*.

During our nine-minute passing period and nutrition break before second period, we got a snack. Edgar chose an egg burrito and chocolate milk. While the combination might not have been our first choice, it was nice to have some protein. While we were eating, we asked Edgar how he knew reciprocal teaching. We said that we were impressed at how quickly everyone got to work and understood what they were supposed to do. He looked at us as if we had suddenly grown another head and said, “We do that all the time, every week. Since sixth grade. All the teachers do it. That’s how we read.”

When the bell rang, we returned to House B and went to our English class. About half of the students in the English class had been with us in history. This teacher also began the class with bellwork (an opening writing prompt) and then engaged us in shared reading while we took notes on Cornell style pages. The lesson was focused on tone as a literary device. Several times during the shared reading, the teacher stopped and thought aloud or asked questions about the change in tone based on the author’s choice of words.

Following the reading, we focused on vocabulary featured in the passage. We were asked to sort a series of words based on a number of characteristics, including spelling patterns, meanings, affixes, and tone. The vocabulary lesson lasted just over 10 minutes at which time we moved into a writers’ workshop. The class was focused on the genre of biography/autobiography, and students were in different places with their writing. Edgar wanted peer feedback so we sat in a specific area of the room in which students provided one another with compliments and critiques (e.g., Simmons, 2003). Other students in the room were engaged in independent reading, conferences with the teacher, or collaborative group work.

Following our 90-minute English class and a 5-minute passing period, we moved into our third-period class: family and consumer sciences. The teacher began the class with a bellwork activity that served as an anticipation guide. She had written 10 statements about smoking, and we were asked to agree or disagree with each statement. She then read aloud from an informational book about the hazards of smoking and showed a short film while we took notes using Cornell-style pages. Next, she led a class discussion on the rights and responsibilities of smokers. She knew that her students were studying the Constitution and made a connection to this new knowledge. We were then divided into groups and given different tasks. Two groups were asked to create posters (graphic organizers) about the hazards of smoking. Another two groups conducted an Internet search using a Webquest (Dodge, 1995). The final two groups were invited to create a skit for performance that would inform and persuade the audience about the dangers of smoking. Each group had a chance to share their work prior to the end of the period. Before we left, we were asked to review the statements from the beginning of the class and revise our answers based on the information from the class.

As we walked to the lunch area, we asked Edgar when we would have PE (thinking that it would be at the end of the day again). He explained that he didn’t have PE today because it was a “green day.” We asked what that meant and he said that he attends PE every other day and that his PE class switched with family and consumer sciences this term. We also learned that PE alternated with art for Edgar during the previous term.

Following our lunch—a bowl of tortilla soup, cornbread, and a soda with about 12 other students—we went to Algebra for our fourth and final class of the day. As we entered the room, predictably by now, there was a writing prompt on the overhead projector. The teacher read the prompt, which included a short story and a word problem, before asking us to complete the problem. The problem was one of inequality, and stu-

dents were asked to write, in words, how they solved the problem. When students were invited to share, they were asked not to give away the answer but to tell the class how they solved the problem. The class continued with a short lecture during which time students took Cornell-style notes and then math clinic, as the teacher called it. The math clinic resembled the writing workshop that we participated in earlier. There were a number of centers around the room with specific tasks that the students needed to complete. Each center had the materials necessary for completion of the task and students worked in groups of three to complete them. During this time, the teacher called specific students to a teacher center and reviewed the opening problem and their thinking.

As our day ended and we were saying thank you and goodbye to Edgar, he said, "Where are you going? We got XDC." We asked him what that meant, and he told us that he participates in the after-school program. The first 90 minutes is focused on academic work, and Edgar wanted to go to English for tutoring. Following the academic classes are the "fun classes. Today I'm going to rock wall climbing!"

Noticing differences— Structure and instruction

We were struck by the similarities and differences between these two schools. Both schools are filled with teachers who understand content literacy strategies and who care deeply about the success of their students. Both schools are proud of their accomplishments and have leaders who support the teachers. And, both schools have a diverse student population that arrives every day with a complex range of strengths, gifts, and needs.

We were also interested in the differences. First, it was hard not to notice the difference in the structure. Einstein school was on a seven-period day while Bell was on a 4x4 block schedule. As such, the students at Einstein had to change classes every 48 minutes, had very short passing periods, and had to master a significant

amount of information every day. Gabriel attended classes with over 120 different students, reducing his opportunity to form working relationships and friendships. The teachers at Einstein were required to teach six classes of 30 students each day, or a total of 180 students per day. The teachers were provided a preparation period that lasted 14% of the school day.

In contrast, the students at Bell attended four classes per day, and teachers taught three periods per day. The students are further organized into smaller cohorts, referred to on this campus as a house system. On the day we followed him, Edgar attended classes with 47 other classmates. Of these, nearly 30 had been in his cohort since sixth grade. In addition, the students have longer passing periods, which can calm the campus and provide students with time to eat and use the restroom. The teachers have 25% of their day allocated to preparation or planning, and, while their class sizes are larger, they see only 108 students a week.

These efforts by Bell to slow down the day while providing smaller cohorts of classmates and a team of instructors are endorsed by the National Middle School Association (1995). Furthermore, the National Association of Secondary School Principals called for "small units in which anonymity is banished" (2006, p. 24). Schedules such as the one used at Bell make a difference for teachers, as well. The increased planning time (25% daily vs. 14% at Einstein) and lower total number of students (108 vs. 180 at Einstein) mean that the conditions are in place to foster teacher collaboration and differentiation of instruction.

Compare two comments made by English teachers from the two schools: An Einstein teacher said, "I feel like I'm running all day. I barely have time to design my lessons, much less grade all those papers." A Bell teacher said, "My 'paper load' is way down, with only about 100 students. I find myself giving more assignments and better feedback to my students."

It is clear that the use of time in a middle school matters. As such, a closer examination of the schedule at Bell is in order. All students at Bell take a 90-minute English class for the entire

school year. All students also take a 90-minute math class for the entire school year. In addition, students take a term-long history course that alternates at the semester with science. In other words, half of the school is in science in the fall and half of the school is in social studies. In February, they switch. As the final class, regardless of which period it is, students are on an alternating schedule between PE and their electives for the year. As a result, 25% of the instructional time and school year is devoted to English language arts, 25% of the instructional time and school year is devoted to math, and 12.5% of the instructional time is devoted to science, social studies, PE, and electives. The increased attention to literacy and math instruction is common in reform recommendations for schools with an at-risk population (e.g., Harrison, 1993; Schoenbach, Greenleaf, Cziko, & Hurwitz, 1999; Shafer, 1998).

Second, the use of instructional strategies was very different between the two schools. While many of the teachers at Einstein used quality, research-based content literacy instructional strategies, they were unpredictable. From the students' perspective, teachers used different instructional strategies at different times. Students were required to adjust to these differences in their routines while learning new content.

This is not to say that all classes have to operate in a lock-step, scripted fashion. But rather, as evidenced by Bell, some schoolwide and consistent instructional strategies seem to create a level of predictability for students. As they learn these content literacy strategies, they become transportable, meaning that students take their knowledge of the strategy with them from class to class. The success of schoolwide literacy strategies has been documented (Fisher, Frey, & Williams, 2002; Levine, Cooper, & Hilliard, 2000). As one of the math teachers at Bell noted, "they already know the strategies so they focus more on the content than my process." This was echoed by Edgar, who said, "we get the drill, we know what to do when we come in. No surprises. That makes me feel like I'm good at school."

The issue of competence, especially competence with school and literacy, has been documented as one of the factors necessary for students to become successful at school (e.g., Smith & Wilhelm, 2002). One of the ways we can help students feel competent is to ensure that school routines, including how they demonstrate their understanding and knowledge, are predictable. This is vital at the middle school level, when students are particularly vulnerable to the transitions between grades. Harter, Whitesell, and Kowalski (1992) found that middle school students reported heightened focus on their own academic competence and that this correlated to motivation. Stated another way, young adolescents who perceived a decline in their competence experienced a decline in motivation as well.

Final thoughts

While there are many variables we cannot change, especially when it comes to the learning needs and achievement of our urban youth, there are a number of variables that are under our control. The way we use instructional time and the consistency with which we implement instructional strategies are two of the variables that we have direct influence over. The implications for literacy learning and achievement are clear. As middle school teachers and leaders, we can choose to change these variables and ensure our students' success.

Having read the descriptions of the classroom observations and our discussion, it is probably no surprise that Bell has done better on state achievement tests. While Einstein is improving on specific subsets of the state accountability test, Bell has the highest change in achievement for any middle school in the district. The teachers attribute the change in achievement to the structure and their instruction—and we agree.

REFERENCES

- Alspaugh, J.W. (1998). Achievement loss associated with the transition to middle school and high school. *Journal of Educational Research*, 92, 20–25.

- Anderman, E., Maehr, M., & Midgley, C. (1999). Declining motivation after the transition to middle school: Schools can make a difference. *Journal of Research and Development in Education*, 32, 131–147.
- Dodge, B. (1995). Webquests: A technique for Internet-based learning. *Distance Educator*, 1(2), 10–13.
- Faulkner, V. (2005). Adolescent literacies within the middle years of schooling: A case study of a year 8 homeroom. *Journal of Adolescent & Adult Literacy*, 49, 108–117.
- Fisher, D., Frey, N., & Williams, D. (2002). Seven literacy strategies that work. *Educational Leadership*, 60(3), 70–73.
- Flowers, N., Mertens, S.B., & Mulhall, P.F. (2003). Lessons learned from more than a decade of middle grades research. *Middle School Journal*, 35(2), 55–59.
- Fowler, W.J., Jr., & Wahlberg, H.J. (1991). School size, characteristics, and outcomes. *Educational Evaluation and Policy Analysis*, 13, 189–202.
- Harrison, J.S. (1993). Strategies for the heterogeneous math class. *Middle School Journal*, 24(4), 10–16.
- Harter, S., Whitesell, N.R., & Kowalski, P. (1992). Individual differences in the effects of educational transitions on young adolescents' perceptions of competence and motivational orientation. *American Education Research Journal*, 29, 777–807.
- LeCompte, M.D., Schensul, J.J., Weeks, M.R., & Singer, M. (1999). *Researcher roles and research partnerships*. Walnut Creek, CA: Altamira.
- Levine, D.U., Cooper, E.J., & Hilliard, A., III. (2000). National urban alliance professional development model for improving achievement in the context of effective schools research. *Journal of Negro Education*, 69, 305–322.
- National Association of Secondary School Principals. (2006). *Breaking ranks in the middle: Strategies for leading middle level reform*. Reston, VA: Author.
- National Middle School Association. (2003). *This we believe: Successful schools for young adolescents* (Position paper). Westerville, OH: Author.
- Palincsar, A.S., & Brown, A.L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. *Cognition and Instruction*, 1, 117–175.
- Schoenbach, R., Greenleaf, C., Cziko, C., & Hurwitz, L. (1999). *Reading for understanding: A guide to improving reading in middle and high school classrooms*. San Francisco: Jossey-Bass.
- Shafer, P. (1998). Three ways to improve math scores. *Principal*, 78(2), 24, 26–27.
- Simmons, J. (2003). Responders are taught, not born. *Journal of Adolescent & Adult Literacy*, 46, 684–693.
- Smith, M.W., & Wilhelm, J.D. (2002). "Reading don't fix no Chevys": *Literacy in the lives of young men*. Portsmouth, NH: Heinemann.