Unlocking the Lockstep High School Schedule

We must view a schedule not simply as a barrier blocking the path to school improvement, but as an untapped resource that can be drawn on to solve problems and implement needed programs, Messrs. Canady and Rettig point out.

By ROBERT LYNN CANADY AND MICHAEL D. RETTIG

The traditional six- or seven-period schedule found in most American high schools is being subjected to intense scrutiny. Structures that were once thought to be unchangeable are beginning to undergo revision. Consider just a few of the possibilities that are now becoming reality in several of our nation’s high schools:

• Students and teachers can prepare for just three classes a semester rather than the typical five to seven.
• Students who quickly “get it” can move ahead; for example, a student could complete up to three consecutive math courses in one calendar year.
• Students can attend full-day vocational programs one day and academic programs the next.
• Students can participate in the equivalent of a summer school session during the regular academic year.
• Students can perform community service during regular school hours without having that interfere with the academic program.
• Teachers can venture away from lecture and discussion to more productive models of teaching, in class sessions that are 90 to 120 minutes long.

Surprisingly, each of these options is possible within the current financial and staffing constraints of most American high schools.

Our purpose in this article is to unlock the lockstep six- or seven-period high school schedule by offering practical alternatives. First we suggest a 75-75-30 plan — two 75-day terms in the fall and winter, followed by one 30-day spring term. The 75-75-30 plan was designed with the special problems of ninth-grade students in mind, but it can be adapted to other grade levels as well.

The 75-75-30 Plan

For many students the transition from middle school to high school is a rough one. Districts report high rates of failure for ninth-grade students. We have observed that many ninth-graders have difficulty preparing for six or seven different classes each day. Such problems prompted the invention of the following schedule, which addresses the particular needs of adolescents entering high school.

The school year is divided into three blocks of time — two 75-day terms (fall and winter) and a 30-day spring term. During each 75-day term the school day includes three 112-minute block classes, one 48-minute period (which remains constant for 180 days), 24 minutes for lunch, and 12 minutes for class changes, for a total of 420 minutes. We recommend that, during each of the 75-day terms, students enroll in two academic subjects and one of the following: physical education, one full-credit elective, or two half-credit electives. Each academic class is offered in double periods daily, as are physical education and full-credit electives. In addition, students may enroll in one “singleton” class, which meets for 48 minutes daily for the entire school year (see Table 1). For example, in the fall a student assigned to a given instructional group might attend English for periods 1 and 2, physical education for periods 3 and 4, lunch and a singleton class such as band during the 5/L period (singleton 5 with lunch periods before and after), and math/algebra for periods 6 and 7. During the winter term the same instructional group participates in a full-credit or two half-credit electives for periods 1 and 2, science for periods 3 and 4, lunch and the yearlong singleton in the 5/L period, and social science for periods 6 and 7. A total of 12 minutes of passing time is provided between classes and/or

Illustrations by Jem Sullivan
blocks of time. If the school day must be shorter or if more time is needed for lunches or class changes, block classes could be reduced in length.

The 30-day spring term would offer students the chance to study one or two subjects intensively. During the spring term students might choose to intensify and accelerate their studies in a favorite discipline, repeat a failed course, enroll in two half-credit electives, or enroll in one full-credit elective. Students might also take part in community service projects.

Each block class taught during the 75-day term provides 8,400 minutes of instruction; 112 minutes per day for 75 days is approximately 180 traditional 47-minute class periods. A single-period elective meets for 4,050 minutes (54 minutes per day for 75 days) and counts for one-half of a unit. One full-credit course taken during the spring term meets for 8,400 minutes (five 56-minute periods for 30 days). Or a student might choose to devote the instructional time of the spring term to two half-credit electives. In addition, students continue to participate in the yearlong singleton course. One 54-minute period serves as a preparation time for teachers and allows for research, study, or early release for students.

One way to understand this model is to work through several “What ifs?”

Table 1.

<table>
<thead>
<tr>
<th>Fall Term</th>
<th>Winter Term</th>
<th>Spring Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 Days</td>
<td>75 Days</td>
<td>30 Days</td>
</tr>
<tr>
<td>Block I 1 (periods 1 &amp; 2, 112 minutes)</td>
<td>English</td>
<td>Elective(s)</td>
</tr>
<tr>
<td>Block II (periods 3 &amp; 4, 112 minutes)</td>
<td>Physical Education</td>
<td>Science</td>
</tr>
<tr>
<td>Block III (periods 5, 48 minutes &amp; Lunch)</td>
<td>Band &amp; Lunch</td>
<td>Band &amp; Lunch</td>
</tr>
<tr>
<td>Block IV (periods 6 &amp; 7, 112 minutes)</td>
<td>Math</td>
<td>Social Science</td>
</tr>
</tbody>
</table>

What if a student wanted to accelerate in mathematics? The student could be assigned to one instructional group in the fall to complete one course and then be reassigned to a different group in the winter to complete the next course in sequence. Students scheduled for mathematics in the winter term could move ahead by completing the next course in the sequence during the spring term.

What if a student who took English in the fall term failed the class? The student could be assigned to repeat the subject in a new section of the course offered during the winter term; this class would be in lieu of an elective. During the winter term one teacher would be assigned to teach a section of English that could include repeaters. Another teacher would teach a section of mathematics that could also include repeaters from the fall term. A conscious effort should be made during the scheduling process to assign students who are at risk of failing either mathematics or English to sections of the course that are offered during the fall term. Students repeating classes could make up missed electives or a failed science or social studies course during the 30-day spring term.

What if a student transferred from a school that had been using a traditional six- or seven-period day? Transfer students could be assigned to an instructional group that follows a standard seven-period schedule. At least one section per core subject could be maintained to accommodate transfers, and the actual number of sections included would be adjusted, based on the school’s recent statistical history of incoming transfer students. A different approach to the transfer problem might be to create an Instructional Resource Center staffed by an English/social science teacher and a math/science teacher and supported by appropriate computer hardware and software. The center would also employ a computer technician who would be available to assist both teachers and students. Individualized education programs including time assigned to the resource center could be designed for transfer students. A resource center would also prove advantageous to students who have missed school and need to catch up.

The 75-75-30 plan offers a number of benefits:

- It facilitates variety in the use of instructional approaches. Because teachers are granted longer blocks of instructional time, they are encouraged to break away from over-reliance on lecture/discussion as the primary (often only) model of teaching. A math teacher might deliver direct instruction for 25 to 30 minutes, review concepts in cooperative learning...
groups, travel to the computer lab for reinforcement with appropriate software, and provide individual students with personalized reteaching, practice, or enrichment—all within the same block.

- Students see fewer teachers each term, and teachers see fewer students. By working with a smaller number of students each term, teachers have more opportunities to develop rapport and to identify students’ strengths and weaknesses. Teachers can attend better to the needs of 60 to 80 students daily than they can to the needs of 120 to 160 students daily. Conversely, students must adjust less frequently to their teachers’ differing styles of instruction and classroom management.

- Discipline problems are reduced. In most high schools, throngs of students are discharged into the hallways at the end of each period. This phenomenon creates a problem of supervision for school administrators and teachers because many discipline problems occur during these transitions. Because classes change less frequently in the block schedule, there are fewer opportunities for student misbehavior.

- Instructional time is increased. Research has shown that a great deal of instructional time is lost in secondary classrooms. One study found that instructional activities accounted for an average of only 28 minutes (54.2%) of each 55-minute class period. Two factors account for an increase in instructional time in the 75-75-30 plan. Most obviously, less class passing time is necessary. If three class changes of four minutes each are eliminated each day, an hour of instructional time is gained each week. When multiplied by a 36-week school year, more than a full week of instructional time is gained. In addition, there are fewer time-consuming class beginnings and endings. Reducing the number of class beginnings and endings is most important for classes that require considerable time for setup and cleanup, such as laboratory sciences, fine arts, technology classes, home economics, and physical education.

- Teachers and students are able to focus on fewer subjects. Teachers have fewer preparations, and students have fewer homework assignments to juggle each evening.

- "Summer school" can be offered to all students at no additional cost to the students or the school district. Many school districts charge tuition for summer school and require students to pay for transportation. Consequently, many low-income students, who often need to attend summer school, cannot. This plan provides the equivalent of a summer session as part of the regular school calendar: namely, the 30-day spring schedule. Because the spring session is within the time frame of standard teachers' contracts, no major additional expenses are incurred by the district.

- Possibilities for acceleration are provided during the regular school year. Conceivably, students can complete three consecutive courses in one calendar year; one course could be taken during each of the three terms.

- Students can repeat a failed course during the regular school year. In traditionally scheduled high schools students must wait until summer or the beginning of the next school year to repeat a class. Thus, during the second term, many students who realize that it is mathematically impossible to pass a course stop working and become behavior problems. The 75-75-30 plan permits two possibilities for repeating courses during the regular school calendar: during the winter term and during the end-of-the-year spring term.

The 75-75-30 model was designed for an actual high school in which many ninth-grade students were failing English and/or mathematics. To provide greater opportunities for at-risk students to complete these courses, the English and mathematics classes were paired to make it possible to offer three opportunities during the regular school year for students to complete a course. Our preference, however, is to pair mathematics with science in one term and English with the social sciences in another.

One option, which may be advantageous to schools that offer traditional summer school opportunities for remediation and acceleration, is to place the spring term between the other two terms (75-30-75). Such an arrangement offers the advantage of providing students with an earlier opportunity to retake and complete a failed course and regain the pace of their classmates.

If the primary goal of the schedule were to facilitate the implementation of an outcomes-based education program, a three-week block of time could be placed at the end of each 75-day term (75-15-75-15). Such an arrangement would provide 15 days every term for remediation for those who had not completed one or more courses successfully. Enrichment activities, community service projects, and half-credit electives would be available to other students during these time periods. A variation of this plan could be implemented on the quarter system, with 40 days of instruction and five days for reteaching, remediation, retesting, and/or enrichment each quarter. Students would enroll in the same academic subjects during the first and third quarters and the second and fourth quarters to avoid instructional droughts that would last an entire semester.

**ALTERNATE-DAY BLOCK SCHEDULE**

A simpler way to free high schools from the tyranny of six or seven 50- to 60-minute periods is to move to an alternate-day block schedule. In this model it is possible to offer seven classes by conducting three double-block periods of 104 minutes on an alternate-day basis and one single-block period of 52 minutes every day. For example, in a 410-minute school day, a particular student might attend double periods of English 10 (block I), French III (block II), and PE 10 (block IV) on day 1. On day 2 the student would attend double periods of geometry (block I), biology (block II), and fine arts II (block IV). During block III the
student would have a single period of band each day. Block III is 30 minutes longer than a typical single period to facilitate two lunch periods — one at the beginning of the block and one at the end. Four minutes are provided between blocks for class changes.

When holidays or teacher workdays intervene after day 1, the school simply operates on day 2 when school resumes.

Although this schedule eliminates the restructured terms of the 75-75-30 plan, it still offers many of the same advantages. Longer blocks of time encourage teachers to vary their instructional techniques. Students must attend and prepare for a maximum of four classes a day, and teachers never have more than three preparations daily. Increased instructional time and fewer discipline problems result from fewer class changes, class beginnings, and class endings.

In addition, the alternate-day block schedule offers financial and instructional benefits for vocational education programs. On day 1 vocational education students can be scheduled for their academic subjects; they can then spend all of day 2 at the vocational school. The school might realize cost savings in transportation from such a schedule. One superintendent in South Carolina estimated that $100,000 in transportation expenses could be saved each year if the four high schools in his district moved to this plan. Also, students do not need to spend lengthy amounts of time riding the bus, cleaning up, and changing clothes.

Some instructors — specifically those in foreign languages, instrumental music, and sometimes mathematics — protest that daily instruction is necessary to provide an optimal program in their disciplines. One way to accommodate this need is by assigning such classes to block III, which meets daily. Another possibility involves running the traditional six- or seven-period schedule three days a week and double periods twice weekly. In this model every class meets four times weekly, with one of the four meetings being a double period (see Table 2). Such a compromise provides science, technology, and arts classes one double period each week to accomplish laboratory experiments or time-consuming projects. These longer blocks are scheduled on consecutive days (day 2 and day 3) rather than on alternate days in order to simplify the setup and cleanup of instructional equipment.

Still another possibility would be to provide three periods that meet daily and four that meet every other day for a double block. Lunch periods can be scheduled before and after singleton periods 3, 4, and 5 (see Table 3). This model meshes well with traditional half-day vocational programs. Students traveling to the vocational center for the morning will return to the base school for lunch, fourth period, fifth period, and, on alternate days, sixth period or seventh period (both double blocks). Afternoon vocational students would have a double block of first or second period and then periods three, four, and lunch before leaving the base school for the vocational center.

### Table 2

<table>
<thead>
<tr>
<th></th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block I (104 minutes)</td>
<td>Par. 1</td>
<td>Par. 2</td>
<td>Par. 1</td>
<td>Par. 2</td>
<td>Par. 1</td>
</tr>
<tr>
<td>Block II (104 minutes)</td>
<td>Par. 3</td>
<td>Par. 4</td>
<td>Par. 3</td>
<td>Par. 4</td>
<td>Par. 3</td>
</tr>
<tr>
<td>Block III &amp; Lunch (82 minutes)</td>
<td>Par. 5</td>
<td>Par. 6</td>
<td>Par. 5</td>
<td>Par. 6</td>
<td>Par. 5</td>
</tr>
<tr>
<td>Block IV (104 minutes)</td>
<td>Par. 7</td>
<td>Par. 8</td>
<td>Par. 7</td>
<td>Par. 8</td>
<td>Par. 7</td>
</tr>
</tbody>
</table>

### Table 3

<table>
<thead>
<tr>
<th></th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 1</th>
<th>Day 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block I (104 minutes)</td>
<td>Par. 1</td>
<td>Par. 2</td>
<td>Par. 3</td>
<td>Par. 4</td>
</tr>
<tr>
<td>Block II (104 minutes)</td>
<td>Par. 5</td>
<td>Par. 6</td>
<td>Par. 5</td>
<td>Par. 6</td>
</tr>
<tr>
<td>Block III (104 minutes)</td>
<td>Par. 7</td>
<td>Par. 8</td>
<td>Par. 7</td>
<td>Par. 8</td>
</tr>
</tbody>
</table>

DECEMBER 1993 313
COMBINED PLAN

The 75-75-30 plan and the alternate-day block schedule have positive attributes. Another possibility to consider is to combine the two plans into a schedule that offers some advantages of each. Because two teachers of related subjects assigned the same two groups of students on alternate days for a term, interdisciplinary teaming arrangements, common in middle schools, are supported by this hybrid model.

For a fall term of 75 days an English teacher could be assigned 25 students for the first five periods of day 1, and another 25 students for the same periods on day 2. Mirroring the English teacher’s schedule, a social studies teacher could be assigned the same two groups of students on opposite days. If the teachers decided to work as a teaching pair, the first five periods of the day could be scheduled flexibly. For example, they could teach each of their two groups every day for 2½ periods; they could instruct single groups for five periods on alternate days; they could occasionally work with both groups together. Also, the teachers could choose to work with one group consecutively for a predetermined period time, such as three weeks, and then exchange. The remaining two periods each day would be scheduled for teacher planning and the students’ electives.

During the winter term of 75 days, the two groups of students would be assigned classes such as algebra and science, which follow the same five-period format suggested for the fall term. One elective course would be completed during the 30-day spring term.

IF WE VISITED our childhood hometowns, most of us would find many changes — new buildings in place of familiar landmarks, interstate highways instead of two-lane roads, malls where the corner store once did business, and a more multicultural population living on Ozzie and Harriet’s old block. In spite of these differences, we probably would find the local high school schedule unchanged.

We believe that schools continue to operate with last year’s or even last generation’s schedule because few practical alternatives have been explored. To respond to the changing needs of high school students, the secondary school schedule needs renewed attention. We must view a schedule not simply as a barrier blocking the path to school improvement, but an untapped resource that can be drawn on to solve problems and implement needed programs. The models we have described only hint at the power of scheduling as a resource. With open minds and equal doses of creativity and technical expertise, school administrators, teachers, and students can harness power to escape the paralysis of the lockstep high school schedule.

1. Asheboro High School in Asheboro, North Carolina; Governor Thomas Johnson High School in Frederick, Maryland; and Amherst, Orange, and Pulaski County High Schools in Virginia are examples of schools that implemented block schedules in which the number of classes assigned to students and teachers each semester is reduced. At these schools, students may enroll in four full-credit courses, and teachers teach only three courses per semester.


3. Students who choose not to enroll in a singleton class may use this period for clubs, activities, or assisted study with designated teachers. For schools without the resources to fund what is the equivalent of a seven-period schedule, this singleton could be eliminated. To facilitate the offering of classes that are more appropriately scheduled yearlong, one of the three 112-minute block courses could be divided into two 54-minute yearlong singletons with four minutes of passing time between.


5. Seifert and Beck, op cit.

6. So much instructional time was saved at Atlee High School in Mechanicsville, Virginia, through the implementation of a double-block schedule that mathematics teachers reported completing the traditional curriculum nearly four weeks earlier in the school year than when they had operated with the seven-period schedule.

7. We are convinced that the grading and promotional practices used by many teachers and schools constitute an impediment to the progress of some students; however, these practices persist. (See Robert Lynn Canady and Phyllis Riley Hotchkins, “It’s a Good Score! Just a Bad Grade,” Phi Delta Kappan, September 1989, pp. 68-71.) The 75-75-30 model offers opportunities for the timely progress of students who have failed a class. We are concerned however that “build-in” opportunities for students to repeat courses during the school year may encourage teachers to fail more students. We urge administrators and teachers to use these flexible schedules to give students opportunities to strengthen their skills and knowledge base, so that they may ultimately attain a higher degree of academic success in high school, and not to regard them as a conscience-easing excuse to fail more students.

8. Atlee High School implemented this schedule during the 1991-92 school year.

DECEMBER 1993 314