Block Scheduling Revisited

By J. Allen Queen

All those with a stake in education must work to improve a scheduling format that offers great potential for student success. Mr. Queen provides some guidelines.

IN THE October 1997 Kappan, Kim Gaskey and I outlined the major steps for improving school climate through block scheduling, and these steps remain imperative for schools examining the possibility of moving to a block schedule. However, for schools that have been using some form of block scheduling, it is time to revisit the intention and direction of these alternative models.

From my own observations and analyses, I believe that a number of principals and teachers have limited the effectiveness of block schedules. While I find a majority of educators using block schedules remain loyal to the basic tenets of the model, some principals have limited understanding of the science of scheduling and lack specific skills in evaluating effective teaching practices. Moreover, a growing percentage of teachers do not follow pacing guides. And those same teachers tend to use lecture and teacher-directed discussion extensively and to limit the 90-minute class to approximately 60 minutes of actual instruction. Such problems have been exacerbated both by poor monitoring of teachers who are failing to implement the block model and by a grave lack of training for teachers new to the field and the model.

In order to make this reexamination of block scheduling most useful, I will look at why schools moved to block scheduling, analyze the benefits and pitfalls that educators have experienced, compare rates of student achievement, scrutinize the overuse of the lecture approach, and review effective instructional strategies. I will conclude with some specific recommendations to maximize the benefits of block scheduling in the future.

Why Schools Moved to Block Scheduling

The traditional high school structure remained essentially the same for most of the 20th century, with the exception of some experimentation with flexible class periods during the open education period in the late 1960s and early 1970s. In 1959, just prior to this period of experimentation, J. Lloyd Trump proposed eliminating the traditional high school schedule and instituting classes of varying lengths in accordance with the instructional needs of students. The Trump Plan allowed for a class to meet for a 40-minute lecture, a 100-minute lab, and a 20-minute help session each week, whereas other classes could be short periods of 20 or 30 minutes. Trump encouraged teachers using his design to experiment with a variety of instructional strategies.

Student schedules have often been based on tradition rather than on proven educational merit. In 1990, Michael Fullan reiterated the idea that the traditional high school schedule had become a powerful myth, ceremonially adopted whether or not it was efficient or effective. Even today, despite awareness of problems with the traditional schedule, the power it exerts causes some educators to resist any change in the schedule and others to choose to return to an unblocked format.
Of course, traditions in education are deeply embedded in our national experience, and generations of Americans have graduated from high schools that required the successful completion of a prescribed number of Carnegie units. Unfortunately, the essence of the Carnegie unit is accumulated seat time. This high school tradition was called into question in 1983, when *A Nation at Risk* reported that American students were academically lagging behind their counterparts in a number of other industrialized nations. In response, educators began to examine alternatives that might result in higher student achievement. Many educators came to see the restructuring of schools, including their schedules, as a central way of seeking improvement.

In 1993 Tom Donahoe argued that restructuring should include the formal rearranging of the use of time in schools in order to promote an active culture that would improve student learning. He believed that this would bring about the creation of new kinds of American schools. One year later, the National Commission on Time and Learning published its report, *Prisoners of Time*, which warned that schools must be reinvented to focus on learning, not time. The Commission recommended using block scheduling to give teachers the time to engage students in active instruction.

As early as 1984, John Goodlad had warned educators that the traditional school structure does not allow time for individualized instruction, for extended laboratory work, or for remediation and enrichment. He argued that an enormous amount of time and energy was being wasted by students moving from six to eight times a day and encouraged schools to redesign their schedules into larger blocks of time. Later, in 1990, Joseph Carroll proposed to change the class schedule to let students concentrate on one or two subjects at a time. With the Copernican Plan, Carroll believed high school teachers could concentrate more on individual students and so improve instruction and increase academic performance.

In 1994 Gordon Cawelti argued that, by restructuring high schools, educators could bring about fundamental changes in the expectations, content, and learning experiences provided in the curriculum. He suggested that high school reform must take account of several components, including curriculum and instruction, school organizational patterns, community outreach, and improved technology. The component of school organizational patterns was analyzed more thoroughly and included such important elements as site-based management, teacher/advisee teams, block scheduling, school-within-a-school organization, and the extended school year. By 1994, Cawelti found in his national survey that 40% of schools in the U.S. were using some form of block scheduling. The number continued to grow nationally, with some states having more blocked schools than unblocked schools. For example, in 1998 the North Carolina Department of Public Instruction reported that 74% of North Carolina's secondary schools had converted to some form of block scheduling. In 1998 Kimberly Isenhour and I predicted that 75% of all high schools would use some form of block scheduling within the next few years.

In general, block scheduling organizes a course around one semester of 90-minute classes instead of two semesters of 50-minute classes. Various forms of block scheduling have been implemented: the straightforward four 90-minute periods per semester (4X4); a two-day rotating system, with students completing eight classes during the year (A/B or eight block); or two to three 90-minute blocks and variable or split 45-minute classes (modified block or FAN). These classes can be scheduled in various combinations, according to subject content or desired flexibility.
Most high schools that adopted the block schedule have enhanced the academic environment by increasing the number of courses that a student can complete in a four-year period. In the process, educators have increased graduation rates, lowered discipline referrals, and improved dropout rates. Moreover, since most students under a block schedule are limited to three or four courses per semester, far greater immersion in each subject is possible. Less time is spent in class changes. At the same time, improved school climate results in a more relaxed atmosphere, with greater student/teacher rapport. In many cases, the schedule change has become a tool for curriculum improvement.

However, as with any change, block scheduling has brought both positive and negative outcomes. The promises and pitfalls of block scheduling surfaced quickly.

**Promises and Pitfalls**

In 1998 Donald Hackmann and David Waters found several positive outcomes as a result of block scheduling. They discovered that students were able to take a broader array of courses. In addition, schools reported fewer disciplinary referrals, improved class attendance, increased numbers of students completing Advanced Placement courses, advanced mastery of subject content, and improved course grades. Similarly, Sharon Skrobarcek and her colleagues reported that students received more individual attention from teachers in the block design. In addition, they found that 75% of students reported that teachers varied instructional activities.

Robert Algozzine, Martin Eaddy, and I reached similar conclusions and reported that teachers were better able to engage students using an in-depth study process. We also found that teachers spent 70% of classroom time engaging students in interactive instruction. In our analysis of a school system over a four-year period, we found that 70% to 80% of teachers, students, and parents believed that block scheduling was successful and worth continuing. Our direct observations indicated that 84% of teachers were able to vary instruction effectively. As fears of school violence grew, 84% of teachers said they believed block scheduling had increased school safety. In the same study, the majority of students perceived that school discipline had improved by nearly 40%, while parents perceived an even higher rate.

Kimberly Isenhour and I categorized the advantages of block scheduling in our 1998 book, *The 4X4 Block Schedule*. Here are some of the advantages we found: 1) lengthened classes reduce the amount of instructional time spent on classroom administration; 2) lessons can be extended and maintained with greater continuity; 3) discipline improves in direct response to the reduced number of class changes; 4) a less fragmented schedule allows students to focus on fewer courses at one time; 5) teachers benefit from additional planning time; 6) when absent, students have fewer courses in which to make up work; 7) students who need remedial assistance or who fail a course during the first semester have the opportunity to repeat the course during the second semester; 8) advanced students have the opportunity for acceleration and enrichment; 9) most schools using block scheduling are able to offer a wider variety of elective courses; and 10) additional class time enables teachers to engage students in interactive learning.
In 1998 David Hottenstein surveyed 24 high schools in several states and discovered additional positive results of block scheduling. In order to have a baseline for data comparison, he collected data prior to the implementation of block scheduling. Once the block model had been put in place, Hottenstein surveyed teachers and administrators to measure any changes. He found that block scheduling was highly valued by teachers, students, and administrators and that it had a positive impact on school climate. Prior to block scheduling, only 33% of respondents supported extended class periods. Once implemented, however, 80% said that the longer classes were better than the shorter classes. In addition, most teachers had five to six preparations per semester before block scheduling was implemented but only two to three afterward. Teacher satisfaction with block scheduling increased from 52% to 87%. The same teachers overwhelmingly believed that the block format provided greater flexibility in scheduling. After implementation, 81% of teachers reported that block scheduling had positively affected student achievement, as compared to 38% who thought it would do so prior to implementation. Most teachers believed that the block schedule had helped students retain key concepts.

Edward Seifert and John Beck reported in 1994 that classes in the 4X4, A/B, or other modified schedules offered teachers and students many instructional advantages. The lengthened classes increased the amount of high-quality instructional time because teachers spent less time on procedures, routines, and management. In 1995 Canady and Rettig found that teachers in a 4X4 block schedule used less time for lesson reviews and closures than teachers in traditional or A/B schedules. They argued that block classes provided time for extended lessons for greater continuity. Teachers had more instructional time for extended laboratory investigation or classroom experiments. Canady and Rettig found that English teachers could guide students through the total writing process in one period and could provide time for peer-editing workshops. More guided practice and extra time were available for skill enhancement in music, art, and vocational classes. Field trips to locations close to the school could be taken during a single period.

While teachers were initially concerned about maintaining student interest and motivation during longer class periods, they soon discovered that traditional methods of teaching were indeed limited in effectiveness when used extensively in the block classes. Fortunately, Mary Gunter, Thomas Estes, and Jan Schwab reported in 1990 that teachers found that the added time allowed them to design differentiated lessons to maintain greater student interest. In addition, teachers realized that varied instructional strategies such as cooperative learning, inquiry method, group discussion, concept development, simulations, and seminars could actively engage students in the learning process. Students also reported that they appreciated the extra concentrated time to study fewer subjects. With a smaller number of classes, students had fewer quizzes, tests, and homework assignments during any one day. Teachers saved time by keeping records and grades for just half the number of students. The reduced time spent on forms and paperwork gave teachers more time for instructional planning.

Inevitably, students will be absent from class. In a block schedule, when students are absent, they have fewer classes in which to complete missed assignments. As a result, schools must establish homework policies and guidelines for missed instruction. What’s more, in a 4X4 block schedule, students who fail a class in the fall semester can take it again in the spring and remain with their agemates. Offering students a second chance
limits the need for summer school and improves student self-esteem. In addition, administrators have discovered that students are more likely to remain in school if they can keep pace with their agemates and graduate on time.

With respect to discipline, administrators can suspend a student for the first semester and that student can still earn four credits for the year. The 4X4 schedule gives school administrators greater flexibility with respect to punishment while also giving students a chance to recover from inappropriate behavior in a shorter period of time.

While many promises for success have been made, those who have implemented block schedules have discovered many pitfalls along the way. Block scheduling has been criticized for lower content retention from one level of a subject to the next and for the extensive time required for independent study outside of class. Handling transfer students from schools on a traditional schedule, the limited number of new electives offered, and the overuse of lectures have also been reported as problems.

In 1995 Donald Hackmann reported that the first year on block scheduling was the most challenging for teachers and principals. Many teachers were uneasy about teaching in longer blocks of time. Many veteran teachers complained that the first year of block scheduling was much like being a first-year teacher again. Clearly, careful planning is required in order for teachers to adapt successfully to the block schedule. Teachers learn quickly that block scheduling requires them to prepare lessons that engage students during longer periods of instructional time.

Thomas Shortt and Yvonne Thayer reported in 1998 that foreign language teachers continued to stress the importance of providing course sequencing in block schedules. These teachers worried that a long lapse between the first and second courses of a sequenced subject would be problematic and could hinder retention and seriously affect achievement. During the same year, Isenhour and I strongly encouraged administrators to schedule students to take two sequenced courses in one subject area during a single year in the block format. Careful planning during the scheduling process can limit the gap between the first and second courses of specific subjects.

In 1996 Michael Rettig and Robert Canady stated that teachers of performing arts programs, particularly band instructors, feared that limiting instruction to one semester could hurt the quality of performance. However, many band teachers noted improved quality when students with serious musical interests signed up in the program for the entire year. These teachers reported increased student participation in music as additional elective opportunities became available.

Advanced Placement (AP) courses that allow students to earn college credit while in high school also present challenges to block scheduled schools. Problems emerge when these courses are offered during the fall semester and the examination for awarding college credit is not administered until the end of spring semester. Many schools have invented unusual approaches for students in this situation. For example, some schools conduct after-school and Saturday review sessions prior to the testing. In other schools, students are allowed to take a related elective course during the semester following the AP course to enhance their knowledge in that area. Despite these and other accommodations, I believe that AP testing should be made available each semester. There are enough schools across the nation using the 4X4 block to warrant this change.
Shortt and Thayer found in 1995 that students transferring between schools during the school year also created scheduling concerns. For example, if a student moved from a traditional to a blocked school during the year, it was often difficult to match courses and schedules. Even so, researchers and educators have argued that the vast majority of students do not transfer between schools during the school year and that it has always been difficult to match schedules for transfer students regardless of scheduling practices.

Block scheduling has been attacked because it reduces total instructional time per class. However, since blocked classes meet one-half as many times as traditional classes, the total amount of time lost for such routine activities as taking attendance is also reduced by half. As a result, teachers have found that the total time lost is negligible and that coverage of course content is not greatly reduced. In fact, students in a two-semester course meet for 180 days for 50 minutes each, for a total of 9,000 minutes of instructional time. Students in a 4X4 block course for a semester meet for 90 days for 90 minutes, for a total of 8,100 minutes of instructional time. If 10 minutes of each class is devoted to administrative functions at the beginning and end of the period, then 1,800 minutes are lost under the traditional schedule (180 days x 10 minutes), and 900 minutes are lost under the 4X4 block (90 days x 10 minutes). Using these numbers, a teacher has 7,200 minutes of instruction under either format.

While the perceived loss of instructional time has been one of the most frequent complaints about block scheduling, Skrobarcek and her colleagues found that much instructional time is wasted in block scheduling if teachers fail to vary the learning activities and teaching strategies. Isenhour and I found overuse of lectures in 30% of blocked classes, and this problem led to numerous student complaints about longer class periods becoming boring. As Jenny Burrell, Stephanie McManus, and I recommended, block scheduling requires a change in planning for instruction. It is important to note that merely changing the amount of time students spend in class through block scheduling does not guarantee school success. Appropriate changes in instructional practices and the effective use of class time have been found to be essential to the success of block scheduling.

Walter Hart reported on the use of instructional time from 26 block scheduled (4X4) and 26 traditionally scheduled high school classes. To effectively compare the use of instructional time, he developed and used an observation instrument to code the type of instructional activity teachers used at five-minute intervals. The instructional categories of passive, individually active, group active, and management were measured by raters using the instrument.

Hart found no differences between 4X4 block scheduled and traditionally scheduled classes with regard to how teachers used instructional time. However, he did find differences in the rates of instruction that occurred within both settings. The most common type of instruction in both settings was individually active instruction, which occurred during 47.29% of the observation intervals in the 4X4 setting and 55.94% of the observation intervals in the traditional setting. Surprisingly, in this study teachers in traditionally scheduled schools were using more interactive instruction in their shorter class periods than teachers in block scheduled schools in their longer class periods. This
suggests that the teachers in the block setting were not prepared to take full advantage of the extended time available to them and their students.

**Block Scheduling and Student Achievement**

Block scheduling was not designed to affect student achievement directly. However, in many studies conducted nationally, the focus has been on how block scheduling influenced the academic achievement of students. In 1997 Toby York compared 10th-grade mathematics, reading, and writing scores in Texas high schools using block scheduling with scores in schools using traditional scheduling.\(^{29}\) No statistically significant differences were found. While block scheduling did not improve test scores, the loss of total course time had no significant negative effect on academic achievement.

The North Carolina Department of Public Instruction recently compared the performance of block scheduled and traditionally scheduled schools on its end-of-course testing program. There were no significant differences in test scores in either organizational model.

In a published case study of a California high school, David Mutter, Elaine Chase, and Randolph Nichols found that block scheduling had positive effects on student achievement.\(^{30}\) They reported that 60% of the school's departments experienced reduced student failure rates. Thirty-four percent of the students who failed courses were able to repeat the courses immediately during the second semester and so directly improve their chances for success. In addition, students were earning better grades.

Shortt and Thayer analyzed the impact of block scheduling in the Virginia schools.\(^{31}\) They found that only 1% of teachers and 5% of principals thought block scheduling had a negative impact on standardized test scores. An analysis of the data revealed that students in block scheduled schools outperformed students in traditional schools on standardized test scores.

One high school in Pennsylvania tracked the impact of block scheduling on student achievement.\(^{32}\) Data were compared over a five-year span, from two years prior to implementing the block schedule to three years after. The researchers found little difference in student scores on the PSAT: math scores remained basically the same, while verbal scores increased by one point. However, SAT math scores showed a four-point decrease, while SAT verbal scores posted a 12-point increase. The distribution of grades improved, with the percentage of A's and B's increasing from 60% to 66% in all grades. The failure rate at the school dropped from 13% to 12%. In addition, the percentage of students who earned a 3 or higher on AP exams improved from 52% to 61%. The dropout rate fell from 16% to 12%.

Martha Day, Claire Ivanov, and Stephen Binkley found that instructional time improved at a Tennessee high school using block scheduling.\(^{33}\) The teachers used more active instructional strategies and limited their use of lecture. Teachers found that students could be briefed before and after activities during a block class period. In the traditional schedule, teachers voiced concern that many students had forgotten the content by the next day; this problem was less apparent in the block schedule.
Schroth and Dixon compared math achievement scores from several block and traditionally scheduled schools with similar demographics. Using national achievement test scores, they found slightly higher performance in schools with a block schedule.34

Problems with appropriate use of class time and its impact on student achievement have remained unresolved. In 1994 Julia Anderson found that educators using a block schedule needed to vary their strategies to maximize instructional time and time-on-task if they were to have a positive impact on student performance.35 It is imperative that teachers use class time in block scheduled schools for active instruction that includes a variety of teaching techniques and activities as well as appropriate assessments to monitor student success. Daniel Cunningham and Sue Ann Nogle reported that the most useful instructional practices in block classes included warm-up games, cooperative learning groups, large-group discussions, interactive lectures coupled with discussion, peer teaching, guided practice activities, discovery method, creative projects, and the use of games and puzzles.36

**Overuse of the Lecture Method**

As I've suggested above, probably the major problem in block scheduling today is the limited use of appropriate instructional strategies. Much of the research examining block schedules has pointed to the fact that, in extended class periods, teachers are better able to employ a variety of instructional strategies that address the learning needs of students. Some of these instructional strategies are more difficult to use in a traditional class of 50 to 60 minutes. However, the lecture method remains the most widely used instructional strategy in high schools today. Indeed, under increasing pressure to improve test scores, teachers have resorted more and more to the lecture method as the best way to cover the curriculum.37 I have heard hundreds of educators complain that they must lecture because there is not enough time to use interactive methods with students and because there is too much content to cover in preparation for state-mandated tests.

Unfortunately, I believe these teachers are missing an opportunity to help students gain a better understanding of course content. Simply zipping through course content by lecturing passive learners may be easier for teachers and students. However, students retain little, and their ability to apply what they have learned is alarmingly low. The appropriate use of block classes can go a long way toward solving these problems.

Joseph Murphy warned in 1992 that, to be effective, new schedules would require the use of different instructional strategies.38 Of course, this raises the dual question of the preparation of prospective teachers and the professional development of current teachers.

Researchers for the North Carolina Department of Public Instruction gathered data on the selection of instructional strategies, as identified by teachers and students in block scheduled schools.39 However, they provided no comparative data on instructional strategies used in block versus traditionally scheduled schools.

More recently, in the largest study ever conducted on instructional strategies used in block scheduled and traditionally scheduled classrooms, Elaine Jenkins found that, regardless of the scheduling format, there were no significant differences in most subject
areas among the types of instructional strategies used. Under the aegis of the North Carolina Department of Public Instruction and the University of North Carolina, Charlotte, Jenkins found that the teachers from the blocked schools overwhelmingly stated that they had not received sufficient training to use a variety of instructional strategies effectively. In contrast, high schools in Lincoln County, North Carolina, have been using the block schedule for several years, and their success can be attributed to effective initial and continuing staff development. Some schools, such as Garringer, Independence, and Myer's Park high schools in Charlotte, have focused on extensive training of first-year teachers.

Two schools that have recently started block scheduling are Stebbins High School in Riverside, Ohio, and Sherrard High School in Sherrard, Illinois. Staff members of schools interested in adopting block scheduling should visit these two model schools to examine their initial training and review their detailed staff development plans.

Ed Corley found in a 1997 Illinois study that veteran classroom teachers (those with 15 to 20 years of classroom experience) in schools that had positive reputations for preparing students for college were complacent about their teaching strategies. These teachers saw no need to change their instructional approach since they judged themselves to be effective. Conversely, Don Adams and Mary Salvaterra found that some teachers in specific subjects discovered that most instructional strategies were easier to implement in a block schedule. The teachers surveyed stated they used a variety of instructional methods and changed strategies as often as four times per class. Of course, teachers who said they used a variety of instructional strategies during longer class periods had also done so during shorter periods. This study found, too, that teachers from some school districts used significantly more instructional strategies than those from other school districts. This phenomenon was found to be related directly to the amount and quality of staff development prior to the change to a block schedule and to the continued training opportunities that were provided by the school districts.

Robert Algozzine, Martin Eaddy, and I found that, when staff development was provided appropriately, there was an increase in the variety of teaching strategies used in block scheduling. More specifically, we discovered that, once prepared, two-thirds of teachers consistently used a variety of interactive instructional strategies. Similarly, Joseph Khazzaka found that 77% of high school teachers surveyed agreed that they had received adequate staff development and implemented a variety of teaching strategies in the block schedule.

Clearly, a large percentage of teachers in block scheduled schools still rely heavily on lectures and do not experiment with different instructional activities. Schools using a block schedule cannot be successful when as many as one-third of the teachers are not using interactive methods or are wasting instructional time by not making use of the last 30 minutes of class. I believe that block scheduling will not achieve its promise until teachers adopt instructional techniques that take advantage of the extended time blocks to create improved learning opportunities for students.

**Effective Instructional Strategies for Block Scheduling**

Robert Algozzine, Martin Eaddy, and I determined the most important teaching skills for success in a block class:
• the ability to develop a pacing guide for the course in nine-week periods, which includes weekly and daily planning;
• the ability to use several instructional strategies effectively;
• the skill to design and maintain an environment that allows for great flexibility and creativity;
• the desire and skill to be an effective classroom manager; and
• the freedom to share the ownership of teaching and learning with the students.45

In follow-up studies and observations, Algozzine, Isenhour, and I found that, while it was important that all teachers master these skills, beginning teachers needed special attention from mentors and principals. This was most evident in the area of effective classroom management.46

In the process of revisiting block scheduling, it became apparent to me that principals and staff development personnel are crucial and must provide initial and continuing training for teachers to master instructional strategies. Adams and Salvaterra in 1997 and Michael Thorneburg in 1998 found that staff development prior to the implementation of block scheduling was required for success, but they also found that continuous instruction was equally important.47

In 2000 Jenny Burrell, Stephanie McManus, and I identified and reviewed several instructional strategies that are suitable for blocked classes.48 However, we admit that, just as a 90-minute lecture is inappropriate, a 90-minute discussion session is probably too long too. We found that teachers should change activities every 10 or 15 minutes. This will prevent student boredom, encourage class interaction, and force teachers to focus on the needs of diverse learners. Instruction in these block periods should begin with a review, include a variety of activities, and conclude with an adequate summary. Some instructional strategies that should be part of staff development for teachers instructing in the block schedules are described below. They are described in more detail in The 4X4 Block Schedule, by Kimberly Isenhour and me.49

**Cooperative learning.** Cooperative learning can be a very useful teaching method and classroom management tool. A block schedule allows for group meetings, various grouping structures, and team presentations. Groups can be created by random selection or by a prescribed mix established by the teacher. Cooperative groups can also be formed by the students for specialized activities. For optimum benefit, groups should stay together for at least four weeks. However, many class activities will require quick group formation. Frequent rotations in group membership can reduce problems with personalities, and friends can be team members at some point during a course.

For the most efficient use of time while grouping, teachers make sure in advance that students understand the objective of their work together as well as the grading procedures that will be used. Group members should have individual sets of responsibilities and be held accountable for them in all activities. The teacher and students can evaluate performance using self, peer, and teacher assessment in a cooperative evaluation model.

Cooperative learning can be structured in a variety of ways to suit a block schedule. However, inappropriate use of cooperative groups can lead to increased discipline problems and may result in excessive competition between students and groups. I
believe that the most effective grouping structure is the “jigsaw.” In a jigsaw, each student is assigned to a small group or team to collectively research a specific task and then returns to the total group to enlighten other group members. Each student is individually responsible for learning new material from other group members. Jigsaw is organized so that a student meets with an “expert” group first to learn the assigned tasks and then returns to the “home” group to teach or share what was learned.

Another approach used in cooperative learning is the project group. Groups are assigned a specific project to complete or a specific problem to solve. Project groups conclude with a presentation to the class that often includes written documentation of the project. I find that this type of group works well with the case method.

Case method. I encourage teachers to use the case method to stress introspection, higher-order thinking, and individual accountability. Using this method also creates the type of layered class structure needed in a block schedule. Once the initial narrative or case has been presented to the class, individual students sign contracts for their roles in the case study. Groups negotiate with the teacher about final presentations, seek assistance with student research, and meet for daily discussions. Portfolios can be developed on an individual or a group basis. Many different activities can be incorporated into a case, which allows the teacher to easily vary instructional activities in the block. For example, a case study on Thomas Jefferson in a history class can include individual research projects, a jigsaw sharing of expert knowledge, group presentations on contemporary leaders, and Socratic seminars on several of Jefferson’s accomplishments.

Socratic seminar. Popularized by Mortimer Adler’s 1982 book, The Paideia Proposal, Socratic seminars use a group discussion model that can easily be incorporated into a block class. Each member of the class reads a selection from the material provided by the teacher prior to the seminar. The teacher avoids directing the discussion. Instead, the teacher’s role is to record the participation and degree of preparedness of each participating student. Students are instructed to explore their ideas about a particular topic and question other members of the class in an open discussion. Students thrive in these seminars, once they discover that their opinion is valued and that the teacher is not searching for specific “right answers.” The teacher usually asks the first question, though a student experienced with the seminar format can also do so. Teachers avoid evaluation, redirect the discussion when it strays too far afield, and clarify disagreements that threaten to stall the discussion.

Synectics. In the early 1960s, William Gordon developed an approach that, through the use of analogy, enabled students to associate a new topic with prior experience.50 The teacher asks students to describe the similarities between a given topic (the concept) and some unrelated item (the analogue). For example, a biology teacher might ask her students to describe the similarities between the parts of an animal cell and the parts of a city. After reviewing these similarities, students are asked to “become” the concepts and analogues by using first-person statements of feeling. The teacher may elicit such statements as “I feel strong when my cell membrane keeps out impurities.” If obvious differences exist between the topic and the comparative element, the teacher can address these differences while being careful not to destroy the links previously made. Finally, students create their own new analogies to enable them to better retain the
original concepts. This method serves well as a review activity and can be a valuable tool in assisting students to retain facts and concepts.

Concept attainment. In the concept attainment model, initially developed by Jerome Bruner in the early 1960s, teachers prepare and present a series of positive and negative examples in order to lead students to a definition of a concept and its essential attributes. After presenting the students with the first set of examples, students brainstorm a list of similarities between the positive examples and formulate a definition of the concept. The teacher then presents the students with a second set of examples on which the students can test their predictions. Gradually, the students attain the final concept and develop a greater understanding of it than if they were merely expected to memorize it from a lecture or book. Bruce Joyce, Marsha Weil, and Emily Calhoun are continuing to advance different formats of this model.51

Inquiry method. With the inquiry method, the teacher presents students with a problem to solve using the scientific process. Students gather data by posing yes/no questions to the teacher and use the results to formulate a theory about or solution to the problem presented. Typically, as Paul Eggen and Donald Kauchak argue in Strategies for Teachers, inquiry is using facts and observations to solve problems.52 The teacher then directs the students to test their theories and discuss the steps used to solve the problem. Inquiry is an attention-getting approach that is useful as an anticipatory set and often works well at the beginning of an extended period. Teachers using inquiry can become masters at asking thought-provoking questions. Inquiry can lead to group or individual study and may serve as the motivational element for a case study.

Simulations. Simulations can be used in a block class to create the effect of a real situation or experience. Students participate in simulations of the real world by solving problems, completing developed packages of materials, or taking part in organized role-playing. Because of the extended time in a block class, students can use short field trips to related sites as a part of simulations without being absent for an entire school day. Games are often included in the simulation family. While it takes more time to plan, design, and implement a simulation, the increased student motivation and involvement can be well worth the investment.

Recommendations for the Future

Below I list recommendations that I believe are important to maximize the positive impact of block scheduling.

1. Teachers must develop and follow monthly, weekly, and daily pacing guides.

2. Teachers must master a minimum of five instructional strategies to engage students directly in the learning process and should aim to master seven or eight.

3. Teachers should pace each lesson by changing grouping patterns, varying presentations, and using different instructional activities every 10 to 15 minutes. In most cases a teacher should use a minimum of three instructional strategies during any class period.
4. Teachers should incorporate alternative and authentic assessment practices when evaluating students.

5. Teachers must use the entire class period for instruction. Every day.

6. Teachers should strive to be creative and flexible in assigning activities and should incorporate outside assignments into regular classroom activities.

7. Teachers should monitor individual students consistently to be sure of total student participation in small and large groups.

8. Successful block teachers should mentor, formally or informally, beginning teachers and veteran teachers having difficulty with instruction in block scheduling.

9. Principals or staff development personnel must provide initial and continuing staff development for all teachers throughout the year on the topics of curriculum and instructional alignment, instructional pacing and strategies, and time management.

10. Principals must develop a monitoring team to verify that all teachers are using pacing guides and various instructional strategies effectively.

11. Principals must take appropriate disciplinary action with teachers who are unwilling to follow the basic principles and procedures necessary in block scheduling.

12. Principals should work with less effective teachers in developing and implementing an instructional improvement plan.

13. Superintendents should contact colleges of education in their region and demand that block scheduling methods be included in teacher and principal training programs.

14. Superintendents should require that, before schools move to a block format, principals and teachers spend from one to two years in staff development.

15. Boards of education should ensure that all stakeholders -- including students, teachers, parents, administrators, and community organizations -- have the opportunity to be involved in investigating, planning, designing, implementing, and evaluating the block schedule.

In essence, the success of block scheduling depends greatly on the professionals who implement it. It is imperative that the teachers, principals, students, and parents give the same level of attention and effort to block scheduling as they would to any other school schedule. Using a variety of instructional methods effectively will help students learn at an optimal level. Thoughtful planning, organization, implementation, and evaluation are also imperative to the success of a block schedule. Readers can obtain more detailed information about all aspects of block scheduling by visiting my website (www.blockscheduling.com), which I update weekly. All those with a stake in education must work to improve a scheduling format that offers great potential for student success.


15. Queen and Isenhour, op. cit.


18. Canady and Rettig, op. cit.


24. Hackmann, op. cit.

25. Skrobarcek et al., op. cit.; and Queen and Isenhour, op. cit.


29. Toby York, "A Comparative Analysis of Student Achievement in Block and Traditionally Scheduled High Schools" (Doctoral dissertation, University of Houston, 1997).


31. Shortt and Thayer, "Block Scheduling."

32. Hottenstein, op. cit.


34. Schroth and Dixon, op. cit.


43. Queen, Algozzine, and Eaddy, op. cit.


48. Queen, Burrell, and McManus, op. cit.

49. Queen and Isenhour, op. cit.


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