

## FLEXIBLE SCHEDULING

### In support of *This We Believe* characteristic:

- Organizational structures that support meaningful relationships and learning

### What is Flexible Scheduling?

Flexible scheduling is defined as creative use of the time in the school day in an attempt to match the instructional time and format to the learning needs of students. Flexible school schedules shift from a series of fixed-time (e.g., 40–50 minutes) instructional periods a day and toward substantially longer instructional periods (e.g., 75–150 minutes) characterized by more diverse teaching and learning activities (Bevevino, Snodgrass, Adams, & Dengel, 1999). Brown (2001, p. 2) noted that “a number of authors have used the terms block scheduling, flexible scheduling, alternative scheduling, and intensive scheduling interchangeably;” conversely, others use these and similar terms to describe clearly related but distinctly different alternatives to traditional fixed-period time arrangements of the school schedule. For the purposes of this research summary, the term “flexible scheduling” is used to encompass the full array of alternative scheduling options that may be adopted by middle grades schools.

Flexible scheduling patterns address the concern for more appropriate learning environments for students and respond to the need, not for schools to be more organized, but to be more flexible and creative in their use of time (Spear, 1992). It has become apparent to practitioners that the structure of the school schedule influences the degree to which middle grades schools respond to the developmental needs of their students (Williamson, 1998). Flexible scheduling allows schools to optimize time, space, staff, and facilities and to add variety to their curriculum offerings and teaching strategies (Canady & Rettig, 1995). Additionally, by allowing for larger time blocks, flexible scheduling reduces the amount of time that students spend out of class (e.g., time spent moving between classes), which allows for more instructional time and less time during which students are more indirectly supervised. Flexibility of the schedule also serves to ease the transition of students from the self-contained elementary environment to the highly departmentalized

high school environment. Teachers are able to use time wisely to improve their teaching strategies and enhance curricular integration (DeRouen, 1998; Seed, 1998). Teachers are directly involved with students and are the best judges of time requirements for learning activities. Blocks of time enable them to make choices and have more control over the learning environment.

With large blocks of time to facilitate involvement, students benefit from less fragmentation and more engagement in project-based learning and interdisciplinary activities, promoting skill application, interpersonal relations, and decision-making skills related to concrete, relevant problems (Vars, 1993). Similarly, Arhar (1992) found that flexible scheduling increased student engagement and achievement and positive social ramifications (Arhar, 1992).

### Types of Flexible Scheduling

While the flexibility of the school schedule is limited only by the creativity of the teachers and administrators in the school, various models have emerged as popular over time. Four such models are summarized here.

1. **Block Scheduling.** Most often used by interdisciplinary teams, blocks of time usually consist of two or more combined periods (Hackmann, 2002). In its simplest form, blocks are all the same length of time (e.g., 100 minutes). For example, in the common “4 X 4” (four-by-four) scheduling arrangement, students take only four classes in the first half of the year and four different classes in the second half of the year. In more creative arrangements, length of time devoted to each time block may vary based on the instructional needs of the teachers and students (e.g., core academic subjects may be assigned to longer blocks while advisory and electives are assigned to shorter blocks), and length of time devoted to any given block may vary from day to day. A common block arrangement in middle level schools consists of two blocks, one in the morning and one in the afternoon or, alternately, one before lunch and one after lunch.



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2. **Alternate Day Classes.** Sometimes referred to as an “A/B schedule,” this arrangement assigns classes on an every-other-day basis during the week. A student can take music on Mondays, Wednesdays, and Fridays (A schedule), and art on Tuesdays and Thursdays (B schedule), with the core academic classes meeting all five days. Or, a career class and a study skills class can meet on alternate days, taught by two teachers or the same teacher, depending on staffing requirements. In some middle grades schools, the use of the A/B alternate day schedule refers to students taking two core academic classes (i.e., mathematics, science) on one day and the other two core academic classes (i.e., language arts, social studies) on the alternate day.

3. **Rotating Schedules.** Following a master schedule of all classes in sequence, classes are held at different times each day, by rotating the classes one period later each day. This process enables students to have all subjects at various times of the day and can be implemented by teams or by an entire school.

4. **Dropped Schedule.** Students are scheduled for more classes than class periods, with one class being dropped on any given day. This schedule provides allotted times for advisory programs, electives, assemblies, and other curricular offerings beyond core academic requirements.

While all of these alternatives pose the opportunity for greater flexibility, it is important that teachers and administrators not become so enamored with any particular alternative that it becomes just as restrictive as the traditional six- to eight-period day (Brown, 2001; Hackmann & Valentine, 1998).

### Summary of the Research

While middle grades advocates for several decades have recommended flexible scheduling (cf. Alexander, Williams, Compton, Hines, Prescott, & Kealy, 1969; Beane, 1993; Curtis & Bidwell, 1977; Epstein & Maclver, 1990; Hackmann, 2002; Kindred, Wolotkiewicz, Mickelson, & Coplein, 1981; National Middle School Association, 1995, 2003), middle grades schools have been somewhat slow to jettison the traditional fixed-period day. The last two decades have shown a trend toward greater flexibility, however. In a national study, Valentine, Clark, Irvin, Keefe, and Melton (1993) reported that more than 90% of middle schools used traditional fixed time schedules, with seven instructional periods of 41 to 55 minutes per each period. These findings were corroborated by Epstein and Maclver (1990) and Alexander and McEwin (1989). Just a few years later, however, McEwin, Dickinson, and Jenkins (1996) found that 40% of sixth and

seventh grades and 27% of eighth grades surveyed had implemented some form of flexible scheduling, leading the researchers to conclude, “these data demonstrate the continued growth of team organizations with flexible control over daily schedules” (p. 38). In a similar 2003 study, McEwin, Dickinson, and Jenkins found one-third of fifth through eighth grades used some option other than self-contained or uniform periods. Meeks and Stepka (2004), in a statewide study, found that middle level principals in Arkansas overwhelmingly regarded flexible scheduling as a staff development need for their faculty, despite a number of years of implementation, noting, “Training is not needed just to implement middle level programs, but it is also needed to sustain and refine those changes” (p. 10).

Most exemplary middle schools use some form of flexible scheduling. In a survey of nominated exemplary middle grades schools (George & Shewey, 1994), 75% of the respondents indicated that flexible scheduling was moderately to well developed at their schools. In a study by Brown (2001) using structured interviews with 10 middle grades teachers involved in block scheduling, teachers reported a wider variety of instructional strategies that were more consistent with their students’ learning needs under block scheduling than they had used previously under traditional scheduling. Teachers also noted that they tended to cover slightly less content in greater depth under block scheduling. Brown concluded:

Teachers describe[d] implementing several changes in their instructional strategies that benefit students: providing greater opportunities for student reflection; designing activities that promote critical and creative thinking through extended opportunities for manipulation of concepts and principles; and use of more student-to-student collaborative learning experiences. (p. 9)

Increased flexibility in scheduling has also been linked to a decrease in disciplinary problems among middle grades students (Smith, Pitkin, & Rettig, 1998). Reports from individual schools have confirmed increases in the levels and amount of collaboration among teachers on teaching teams within a flexible scheduling environment (McLeod, 2005; Seed, 1998).

Interestingly, most of the research on flexible scheduling has been conducted at the high school level. Following his review of the literature, Brown (2001, p. 3) noted, “Few studies on the implementation and impact of alternative scheduling at the middle school level exist.” For example, studies at the middle level



investigating the effects of flexible scheduling on important student outcomes (e.g., achievement, critical thinking, motivation, self-esteem and other affective outcomes) are relatively limited. Lewis, Cobb, Winokur, Leech, Viney, and White (2003), however, did investigate instructional effects of middle level students in three scheduling arrangements (traditional, alternate day, and 4 X 4 block scheduling) across two studies. One study focused on science standardized achievement test scores and the other on language arts achievement test scores. Comparisons favored achievement of students in the flexible scheduling arrangements in both science and language arts, with lower achieving students, in particular, benefiting from flexible scheduling.

## Recommendations

While flexible scheduling is gradually becoming more commonplace in middle grades schools, a large percentage of schools are opting for self-contained environments or fixed-time instructional periods. Flexible scheduling options allow teachers greater flexibility in planning, foster interdisciplinary teaching, and provide opportunities to effectively serve the needs of students. As McEwin and associates (2003, p. 50) have noted, "All middle schools should adopt some form of flexible block scheduling that provides teachers with multiple opportunities to make sound decisions regarding curriculum and instruction for young adolescents they teach." The further adoption of flexible scheduling practices should be accompanied by additional research on the effects of varying scheduling arrangements on young adolescents' academic achievement, social and emotional development, and psychological well-being.

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## ANNOTATED REFERENCES

Brown, D. F. (2001). Middle level teachers' perceptions of the impact of block scheduling on instruction and learning. *Research in Middle Level Education Annual*, 24, 121–141. Retrieved May 31, 2006, from [http://www.nmsa.org/portals/0/pdf/publications/RMLE/rmle\\_vol24.pdf](http://www.nmsa.org/portals/0/pdf/publications/RMLE/rmle_vol24.pdf)

This qualitative study focused on perceptions of 10 middle grades teachers from two middle schools regarding the effects of block scheduling. Specifically, the author explored participants' perceptions of the ability of the 4 X 4 block schedule, as implemented, to meet the needs of their students and their perceptions regarding the effects of the block schedule on their instructional decision making. Interview transcripts were analyzed using constant comparative analysis. Nine of 10 participants indicated they had altered instruction (e.g., used more cooperative learning, problem solving, and computer-based activities). Similarly, 9 participants indicated the implementation of the block schedule had positively affected their students learning (e.g., strengthened students' understanding of concepts, increased students' success as they moved from grade to grade). All participants indicated they had modified the curriculum as a result of block scheduling (e.g., reduced breadth of content coverage, increased depth of coverage), and half noted that they had altered their assessment strategies (e.g., focused less on rote memorization and more on problem solving).

Lewis, C. W., Cobb, R. B., Winokur, M., Leech, N., Viney, M., & White, W. (2003). The effects of full and alternative day block scheduling on language arts and science achievement in a junior high school. *Educational Policy Archives*, 11(41). Retrieved June 2, 2006, from <http://epaa.asu.edu/epaa/v11n41>

Using an ex post facto design, this study examined academic performance of middle grades students taught in 4X4 block, alternate day, and traditional scheduling arrangements. Two studies, one examining science performance (n = 340) and one examining language arts performance (n = 111) were conducted. Achievement was measured on a standardized test. Small to moderate statistically significant effects were found for instructional format and for the instructional format by achievement level interaction, with differences favoring students in the flexible scheduling arrangements. Examination of mean performance data indicated that lower achieving students, in particular, benefited from the flexible scheduling designs. While results should be replicated across other similar studies, the favorable outcomes of flexible scheduling are promising and have interesting implications for educational policymaking, in light of the high stakes testing environment that currently exists in the United States.



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McEwin, C. K., Dickinson, T. S., & Jenkins, D. M. (2003). *America's middle schools in the new century: Status and progress*. Westerville, OH: National Middle School Association.

This is the latest in a series of longitudinal descriptive studies focusing on programs and practices in middle grades schools. Results are compared with findings of studies conducted in 1968, 1988, and 1993. Data for the present study were collected in 2001 from 1,798 schools across the United States. Respondents provided data on a host of programs and practices, including, but not limited to, school enrollment, team organization, scheduling plans, time allocation, electives offered, advisory programs, sports, instructional strategies, and grouping practices. As to scheduling plans employed, data indicated a slight decline overall in percentage of schools using flexible scheduling arrangements as compared to the 1993 data. For example, only 34% of middle grades schools used flexible scheduling in fifth grade in 2001 compared to 40% in 1993. Similar results were found for grades six (33% compared to 46%) and seven (34% compared to 39%). Only in grade eight did instance of flexible scheduling increase (34% compared to 29%).

## RECOMMENDED PRACTITIONER RESOURCES

Burke, P. H. (2005). Scheduling: Flexible interdisciplinary block schedules. In V. A. Anfara, Jr., G. Andrews, & S. B. Mertens (Eds.), *The encyclopedia of middle grades education* (pp. 323–327). Greenwich, CT: Information Age Publishing.

George, P. S., & Alexander, A. M. (2003). *The exemplary middle school* (3rd ed.). Belmont, CA: Wadsworth. [See especially Chapter 8.]

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