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Scheduling and Learning Time: Introduction

Center on Instruction

A recent report from the National Center on Time and Learning (NCTL) demonstrates a correlation between increased learning time and boosts in middle school and high school achievement. While the report shows positive trends, researchers acknowledge the exploratory nature of the data and emphasize the need for more definitive research in this area (Gewertz, 2009). Other research supports the effectiveness of well-designed programs that expand learning time by a minimum of 300 hours per school year (see Frazier & Morrison, 1998). However, extending learning time into before- and after-school hours can be difficult to implement effectively due to the complexity of integrating "extra" instruction with existing academic instruction during the school day (see James-Burdumy, Dynarski, & Deke, 2007).

Increased learning time, defined as increasing the length of the school day, week, or year schedule to significantly increase the total number of school hours devoted to academic and enrichment activities, is an area of high interest as states, districts, and schools strive to raise students' achievement. Many states and districts have considered various ways to increase the amount of time available to students for learning activities, including restructuring and extending the school day (and altering the school year structure), and providing full-day kindergarten and preschool programs. Schools and teachers have, for example, implemented block scheduling, reduced time spent in elective classes to create guided study halls that give students additional support, increased time spent in core academic classes, and reduced transition times both between and within classes.

Unfortunately, just increasing the amount of instructional time is not enough to achieve sufficient learning gains. Instruction provided during allocated time must be at an appropriate level and delivered in a way that is effective, efficient, meaningful, and motivating. Ultimately, the success of altering the school day to increase learning time will depend on how well teachers are trained to use the extra time.

The quality of instruction (including instructional time provided before and after school) can be enhanced by strategies that increase student time-on-task and engagement and by mastery learning techniques. Both of these strategy sets are similar in intent, and both provide students with instruction at appropriate levels, use assessment data to inform instruction, and differentiate instruction to increase student achievement. Coupling increased instructional time with quality instruction will help students become more active and motivated, with the potential to achieve greater learning gains.

Finally, adequate and structured instructional planning time is another component of developing and delivering quality instruction. Shared planning time for teams of teachers is useful for collaboratively analyzing student data, planning instruction, coordinating lesson plans, and working through common curricular "problem spots." This time can also be used to provide grade level, subject, or interdisciplinary team professional development.

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Restructuring and Extending the School Day

National High School Center

Schools, districts, and states are struggling to improve education and increase student learning and achievement. Some reform ideas have focused on increasing the time students spend in school and reorganizing school schedules. Currently, the 180 six-hour-day schedule used in most schools is not based on the needs and learning styles of students, but rather on a 19th-century agrarian system (Farbman & Kaplan, 2005). Many states and districts have considered ways to change the outdated way that time is spent in school by (1) transforming school day schedules; (2) extending the school day; and (3) altering the school year structure. Ultimately, though, these reforms must not focus on simply extending the time students are in school, but on increasing the time students engage in productive, academic learning (Silva, 2005).

Transforming Time Structure During the School Day

One strategy that schools are using to increase instructional time spent on core subjects such as reading and mathematics is block scheduling. Typically, block scheduling divides the school day into four periods of 80-100 minutes, and alternates subject matter by day or semester. As a result, students are engaged in learning for longer periods of time. Block scheduling has been effective in San Diego's Blueprint for Student Success program, where double and triple length reading classes boosted student achievement enough to narrow school achievement gaps by about 15% over two years (Public Policy Institute of California, 2005). However, the success of block scheduling depends on how well teachers are trained to use the extra time effectively. Some schools also use block scheduling for a "double dosing" of core subjects. Students may attend core classes for longer time periods than their other classes during the day in order to improve achievement (Kennelly & Monrad, 2007).

Other strategies that schools have used to increase academic achievement are to reduce time students spend in elective classes and to create guided study halls where students can receive additional support from instructors. Student advisories, where students meet with teachers to discuss schoolwork or more general concerns, can also replace study halls. The advisory period gives teachers time to develop relationships with students thereby helping to increase student engagement in school which is a vital part of student success (Pennington, 2006).

Extending the School Day

A study of high-performing high schools in Massachusetts found that all the top performing schools had expanded school days (The Rennie Center for Education Research and Policy, 2003). The most important aspect of extending the school day is to ensure that the extra time is spent in academic endeavors which engage students. Some strategies that schools have used are lengthening the time students spend in core academic classes, implementing transition programs or credit recovery classes, creating community partnerships in which students participate in internships or online or web-based classes, and offering after-school or supplemental education services (SES) for students.

For low-income or minority students, Title I SES can be particularly helpful. Poor and minority students are less likely than their more affluent peers to have education resources and learning experiences outside of school (Silva, 2007). SES, when implemented over extended periods of time and frequently monitored and evaluated, can provide opportunities to close the achievement gap between these students and their wealthier peers. SES can focus on building core academic skills, perhaps language acquisition for English language learners or credit recovery classes, areas for which there is not enough allotted time during the school day.

Extending/Altering the School Year

Research suggests that low-income students experience significant learning loss over the summer months, compared with children from higher income families who have access to travel, camps, and other enrichment activities (Pennington, 2006). Year-round schools may help to reduce the negative effects of summer learning loss; however, the structure must increase total school hours and not simply reorganize the traditional school year length over a 12-month period (Silva, 2007). Summer programs help engage students in unique ways, such

as through internships or leadership programs. The Knowledge is Power Program (KIPP) schools have reported increased academic achievement among their predominantly minority and urban students, using a lengthened school year and a mandatory 3-4 week summer school session (Pennington, 2006). Furthermore, many summer programs focus on helping to ease the transition from middle to high school, a critical time for students. Finally, a few high schools have employed "J terms," a January or June term lasting approximately three weeks. The most common areas of focus for J term courses are academic recovery, multi-disciplinary projects, internships, or a combination of academic and multi-disciplinary classes. These activities are beneficial to all students, particularly low income and minority students.

Action Principles

For State

1. Help districts build capacity to address various aspects of extended learning time including: enlisting support from teachers' unions; providing funding for extended learning time initiatives; developing resources for professional development on the effective use of additional or newly structured learning time; and monitoring extended learning time initiatives.

For District

1. Create buy-in for extended school days from parents, teachers, students, and the community.
2. Allocate and increase funds to support extended learning time.
3. Provide professional development to ensure that teachers use extra time effectively.
4. Create local partnerships with businesses, organizations, etc., to support the extended time initiative.
5. Determine how the district will monitor progress of the extended learning time initiative.

For School

1. Implement professional development to aid teachers in using extra school time effectively.
2. Determine how to restructure the school day so that the students who need the most support are given more instructional opportunities.
3. Create a plan for monitoring the progress of the extended learning time initiatives as well as for continuous improvement.

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Increasing Time-on-Task and Student Engagement

Center on Instruction/National High School Center

Time-on-task refers to the amount of time students spend attending to school-related tasks (Prater, 1992), such as following directions and engaging in learning activities. Time-on-task is also sometimes referred to as "engaged time." Studies indicate that up to 50% of the school day is spent on non-instructional activities in general and special education classrooms (Good, 1983; Thurlow et al., 1983), leaving ample room for improvement in the area of time management. While there is some relationship between time-on-task (or engaged time) and student achievement, simply increasing the amount of time available for instruction is not enough to achieve learning gains. Time allocated for instruction must be appropriate; that is, at the appropriate instructional level for students and delivered in a way that is effective, efficient, meaningful, and motivating to students. It is important to keep in mind that most studies have measured *allocated time* (time students are required to be in class), and only a small number of studies have attempted to measure *engaged time* (time students participate in learning activities) and *academic learning time* (time when true learning occurs) (Aronson, Zimmerman, & Carlos, 1998). However, findings from those studies tend to support a moderate relationship between engaged time and achievement and an even larger relationship between academic learning time and achievement (see Cotton & Wikelund, 1990).

Action Principles

For State

1. Enhance teacher understanding and use of strategies designed to increase student time-on-task by providing high-quality professional development concentrated on features of effective instruction, instructional management, and classroom management. Though research is inconclusive about the most effective ways to increase instructional time within the classroom, most researchers agree that improving teachers' time management techniques is a good starting point (Hossler et al., 1988).
2. Embed specific information on time-on-task, student engagement, and academic learning time within teacher preparation programs at institutions of higher education.

For District

1. Reinforce and extend professional development provided by the SEA. This can be done through instructional coaches who work directly with teachers, model strategies taught during professional development sessions, and offer frequent feedback to teachers.

For School

1. Improve time management, increase the proportion of time spent on academic subjects, and adopt alternative academic calendars to maximize the amount of time available for student learning (Aronson, Zimmerman, & Carlos, 1998).
2. Actively engage students in learning at appropriate levels of difficulty throughout the day (Aronson, Zimmerman, & Carlos, 1998; Fisher, 2009; Prater, 1992). This applies to independent seatwork in particular, which consumes much of the academic time in classrooms, especially at the higher grade levels (Rock & Thread, 2009).
3. Monitor student performance through formative and summative assessment and use student data to inform instructional decision-making and ensure appropriate levels of instruction (Aronson, Zimmerman, & Carlos, 1998).
4. Differentiate instruction by using various grouping formats, modifying assignments, allowing students to respond in multiple ways, and using other effective instructional strategies such as reteaching and providing examples.

5. Utilize classroom and behavior management strategies that reduce transition times between activities and disruptions during instructional time (Prater, 1992).

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