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EXTENDED SCHOOL YEAR

At a Glance

Extended school years are being considered by districts around the country as educators search for new ways to raise student achievement. The addition of time to the school calendar is also supported by President Barack Obama, who recently stated that American students don't spend enough time in school. This Information Capsule addresses research conducted on extended school years and their impact on student achievement. Although studies have produced inconclusive results on the universal benefits of extended school years, researchers have reached agreement on three key points: quality of time is more important than quantity of time; low income and low ability students benefit most from extended school years; and no relationship has been found between scores on international tests of academic achievement and the amount of time students spend in school. This report also reviews concerns related to extended school years, including their prohibitive cost and their potentially negative impact on businesses that are dependent on the traditional school year. In addition, guidelines districts can follow to increase the likelihood that their extended year programs will produce achievement gains are summarized.

President Barack Obama and Secretary of Education Arne Duncan recently stated that American students don't spend enough time in school, putting them at a disadvantage with other students from around the world. The President called for a longer school day and year, including shorter summer vacations and added weekend and night classes to accommodate working students (Adler, 2009; Associated Press, 2009; Brickzin, 2009).

The merits of extending the school year have been debated for many years. The seminal 1983 report on American education from the National Commission on Excellence in Education, *A Nation At Risk*, called for an end to the traditional 6.5 hour, 180 day school year. The report recommended increasing the number of hours in the school day to seven and increasing the number of school days in the year to between 200 and 220. In the 26 years since the report was issued, however, its recommendation has not been widely adopted in U.S. public schools, in large part because of the high cost associated with extending time (Chalkboard Project, 2008; Aronson et al., 1999).

Even today, most states, including Florida, set the minimum number of school days at 180, although a few states require 175-179 days. But in their search for new ways to raise student achievement, educational leaders around the country have begun to consider proposals for extending the school day and year (Associated Press, 2009; Silva, 2007).

This report focuses on research conducted on extended school years. A previous Information Capsule, *Extended School Days* (available at <http://drs.dadeschools.net>), addressed research on extending the school day.

Mixed Results from Schools Using the Extended Year

Studies have produced mixed results on the benefits of extended school years. Some studies have reported that extended school years lead to significant gains in students' levels of achievement (Schulte, 2009; O'Brien, 2006; Studt & Davis, 2001; Frazier & Morrison, 1998; Washington, 1998), while others have found that longer school years have no significant impact on students' performance (Van Beek, 2009; Axelrad-Lentz, 1996; Adelman et al., 1996; Worthen & Zsiray, 1994; Pittman et al., 1986). In fact, Miami-Dade County Public Schools' School Improvement Zone, which included longer school days and years, was found to have little impact on students' academic achievement (Urdegar, 2009).

There are three major problems associated with the research on extended school years. First, most schools have not extended the school year in isolation, but as part of a larger reform effort. It is therefore difficult to separate the effects of extending the school year on student achievement from the effects of other school wide changes (Silva, 2007). Secondly, some studies have grouped extended year schools together with year-round schools. Extended year schools lengthen the mandatory number of instructional days (usually to more than 200). Year-round schools, on the other hand, rearrange the traditional school calendar without changing the number of instructional days. Year-round schooling is often implemented to relieve school overcrowding (Schulte, 2009). Finally, most studies have used correlational data to arrive at their conclusions. Studies that have found a positive correlation between the length of the school year and student achievement gains do not demonstrate that the higher levels of performance were actually caused by the additional time in school (O'Brien, 2006).

In summary, studies conducted on the academic benefits of extended school years have produced inconclusive results and most researchers recommend that more studies are needed before extended school year initiatives are implemented on a widespread basis (Schulte, 2009; Chalkboard Project, 2008; Silva, 2007).

Research Has Produced Three Consistent Findings

Although rigorous empirical data demonstrating that extended school years would universally produce higher levels of student achievement is lacking, research has consistently reached the following three conclusions: quality of time is more important than quantity of time; low income and low ability students benefit most from extended school years; and no relationship has been found between scores on international tests of academic achievement and the amount of time students spend in school.

Quality of Time is More Important Than Quantity of Time

Experts agree that it is not the quantity but the quality of educational time that is the critical determinant of how much students learn. Only when time is used effectively will adding more of it result in improved academic outcomes. Studies have consistently found that in schools where time is well utilized, extending the length of the school year leads to increased student achievement. However, when time is not already well utilized, increasing the number of days students attend school does not produce substantial gains in student achievement (Schulte, 2009; Van Beek, 2009; Chalkboard Project, 2008; Silva, 2007; Metzker, 2003; California Legislative Analyst's Office, 2001; Aronson et al., 1999; Chaika, 1999).

Research has documented the loss of instructional time that routinely occurs during the school day. Scheduled uses of non-academic time include roll call, testing, lunch, recess, passing between classes, announcements over the public address system, and assemblies. Poor classroom management and student inattention or absence further reduce available instructional time (Adler, 2009; Chalkboard Project, 2008; Aronson et al., 1999).

Several studies have concluded that between 30 and 40 percent of time in school is not used for instructional purposes (Schmoker, 2009; Smith, 1998). A review of national research conducted by Portland Public Schools (2007) found a wide variation in the proportion of time actually used for instruction, ranging from a low of 21 percent to a high of 69 percent.

Researchers have distinguished between three types of in-school time (O'Brien, 2006; Aronson et al., 1999; Cotton, 1989):

- allocated time, or the total number of days and hours students are required to attend school;
- engaged time, or the time when students are actually engaged in learning activities; and
- academic learning time, or the portion of engaged time that students spend working on tasks at an appropriate level of difficulty and experiencing high levels of success.

Aronson, Zimmerman, and Carlos' (1999) review of the research concluded there is little or no relationship between allocated time and student achievement; a weak relationship between engaged time and achievement; and a strong, positive relationship between academic learning time and achievement. This lack of a relationship has been a long standing finding given Cotton's (1989) research review which also found no significant relationship between allocated time and student achievement.

Silva (2007) stated:

“Any extended time proposal must focus on providing the right kind of time, i.e., instructional time and academic learning time, rather than just adding hours in general. The research shows that the correlation between time and student achievement gets stronger with more engaged time. Students who are given more allocated school time have outcomes only slightly better than students who receive less. But the correlation between time and achievement increases when students are given more instructional time, and it is even greater when students' academic learning time increases.”

Low Income and Low Ability Students Benefit Most from Extended School Years

Students from low socioeconomic backgrounds and students at lower ability levels appear to benefit most from extended learning time in any form. Research suggests that extended school years have a greater effect on lower ability students, compared to their higher ability peers, because they often don't have enough time to engage fully in their assignments and learn material thoroughly during the regular school year. Low income students also benefit more from extended school years since they are less likely than more affluent students to have access to educational resources outside of school (Chalkboard Project, 2008; Silva, 2007; Cotton, 1989).

Research indicates that all students, but especially students from low income backgrounds, experience a phenomenon referred to as summer slide, or the decline of academic skills over the long summer break. Studies have found that the math skills of students from all income backgrounds tend to decline over summer vacations. However, while the reading skills of middle and upper class children improve slightly over the summer, the reading skills of children from low income and limited English backgrounds actually decrease. Furthermore, the effects of summer learning loss appear to be cumulative, leading to increasingly large gaps between more affluent students and their lower income peers (Chalkboard Project, 2008; Silva, 2007; Metzker, 2002; California Legislative Analyst's Office, 2001; Frazier & Morrison, 1998; Cotton, 1989). Schulte (2009) stated: “What most bolsters the argument for extending the school year is a body of literature that includes 39 incontrovertible studies on summer learning loss, or summer slide.”

The disproportionately negative impact of summer vacation on lower income students' academic skills has been attributed to the fact that advantaged students have greater access to summer learning and enrichment opportunities than less advantaged students, such as summer camps and classes, cultural

outings, and a wider range of books and other reading materials. Higher income children in effect continue their education throughout the summer by engaging in informal learning experiences (Chalkboard Project, 2008; Silva, 2007).

No Relationship Has Been Found Between Scores on International Tests of Academic Achievement and the Amount of Time Students Spend in School

Proponents of extended school year programs recommend that the U.S. school year be lengthened to 220 to 240 days to compete with students in Japan, China, and parts of Europe. They contend that more time in school will lead to higher scores on international tests of academic achievement and provide a competitive global advantage (Chalkboard Project, 2008; Evans & Bechtel, 1997). However, research shows there is no consistent relationship between in-school time and a nation's average international achievement test score. Some countries that outperform the U.S. have shorter school years and conversely, some countries that receive lower test scores have longer school years (Van Beek, 2009; Stoops, 2007; Chaika, 1999).

Baker and colleagues (2004) compared instructional time and student performance on international assessments, including the Programme for International Student Assessment (PISA), the Trends in International Mathematics and Science Study (TIMSS), and the International Study of Civic Education. They found no significant correlation between instructional time in reading, math, science, and civics and test scores on international assessments in those subjects. In other words, more hours in school did not necessarily result in higher test scores.

Results from the PISA can be used to further illustrate this point. The PISA is administered to 15-year old students in approximately 40 countries around the world. As can be seen in Tables 1 and 2, no consistent relationship has been found between countries' in-school instructional time in math and their average PISA math scores. Table 1 shows that students in the five top performing countries didn't necessarily receive more in-school math instruction than students in 27th ranked U.S. schools. Over the course of the school year, schools in Hong Kong/China and South Korea provided more instructional hours in math than U.S. schools; however, students in Finland, The Netherlands, and Liechtenstein received less in-school math instruction than U.S. students (Stoops, 2007).

Table 1. 2003 PISA Math Scores and Instructional Time:
Highest Performing Countries and the United States

Rank	Country	2003 PISA Math Average Scale Score	Hours of Math Instruction Per Week	Hours of Math Instruction Per Year
1	Hong Kong/China	550	5.0	177
2	Finland	544	3.0	114
3	South Korea	542	6.2	221
4	The Netherlands	538	2.9	110
5	Liechtenstein	536	3.8	148
27	United States	483	4.7	169

Source: Stoops, 2007.

Similarly, the five lowest performing countries didn't always spend the least amount of time on in-school math instruction. Yearly instructional time in Tunisia, Thailand, Brazil, and Mexico (163, 179, 187, and 194 hours per year, respectively) was actually above the average for all countries tested (149 hours per

year). As can be seen in Table 2, students from Uruguay and Tunisia received less yearly math instruction than U.S. students, while students from Thailand, Mexico, and Brazil received more yearly math instruction than U.S. students, although students from each of the five countries received lower PISA math scores than U.S. students (Stoops, 2007).

Table 2. 2003 PISA Math Scores and Instructional Time:
Lowest Performing Countries and the United States

Rank	Country	2003 PISA Math Average Scale Score	Hours of Math Instruction Per Week	Hours of Math Instruction Per Year
27	United States	483	4.7	169
35	Uruguay	422	3.3	112
36	Thailand	417	4.5	179
37	Mexico	385	8.1	194
38	Tunisia	359	5.1	163
39	Brazil	356	4.6	187

Source: Stoops, 2007.

Researchers have provided two possible explanations for the lack of relationship between time spent in school and achievement test scores. First, while many Asian and European countries have longer school years, their students may not be receiving significantly more instructional time than U.S. students. The extra class time in other countries is often used for sports practices, festivals, field trips, and club and extracurricular activities, not for additional instructional time (Adelman et al., 1996; Rasperry, 1992; Bussard, n.d.). Secondly, different cultures have different teaching practices, curricula, and student and parent attitudes toward school and achievement that may explain a significant portion of test score differences. For example, Japan has national curriculum standards and a higher regard for the profession of teaching than many other countries (Silva, 2007; Rasperry, 1992).

Concerns About Extended School Years

Lengthening the school year is not just a matter of adding time. It involves a comprehensive redesign of the educational program, additional training for all school personnel, and a significant increase in recurring funding for additional staff and resources (Stoops, 2007). Neal (2008) noted: “Not everybody agrees that extending the school day and/or year is the best way - or even a good way - to improve education.”

Many researchers claim that small increases in the time allocated to schooling rarely produce significant gains in student achievement. They maintain that large additions to the school calendar (at least 20 to 30 days) are required in order to effect even small increases in student performance (Glass, 2002; Cooper, 2001; Levin & Tsang, 1987). Most researchers agree that the cost of adding 20 to 30 days to the school calendar would be prohibitive. They contend that other reforms aimed at increasing student achievement, such as early childhood intervention programs, better recruitment and training of teachers, and higher standards for classroom materials, would be more cost effective (Chalkboard Project, 2008; Aronson et al., 1999; Evans & Bechtel, 1997; Cotton, 1989). Van Beek (2009) concluded that forcing districts to extend their school years would be “fiscally irresponsible.”

Extending the school year is generally more expensive than extending the school day. Keeping a school open for an extra hour or two generates fewer new costs for transportation, building maintenance, and utilities. Additional staff costs are also lower when hours, rather than whole days, are added (Chalkboard

Project, 2008; Silva, 2007). In 2004, Massachusetts' *Expanding Learning Time Initiative* added 300 hours (or the equivalent of approximately two and one-half months of extra instruction) to the schedule in 10 schools. Today, the initiative is being implemented in 22 schools, with plans to expand to every middle school in Boston. Schools were given the option of longer days or longer years. Most have chosen to add time to the school day instead of days to the school year (Pennington, 2007).

Studies have estimated that increasing the school year by 10 percent (18 days) raises base costs by six to seven percent per student (Van Beek, 2009; Chalkboard Project, 2008; Silva, 2007). Odden (cited in Glass, 2002) calculated that extending the school year from 180 to 200 days (an 11 percent increase) would cost the nation more than \$20 billion annually in 1980 dollars. Extrapolation of these figures placed the national cost at \$40 billion annually in 2000 dollars (Glass, 2002). Fonda (2007) calculated it would cost the state of Florida \$113,462,000 for each additional day of school over and above the mandated 180 days.

Most extended year cost calculations are based largely on increased teacher salaries. Other costs must also be considered, such as additional usage of electricity, telephone, and other utilities; transportation; supplementary curricular materials; and bus driver, cafeteria worker, maintenance worker, and administrator salaries (Schulte, 2009; Silva, 2007).

Critics also argue that extended school years have a negative impact on a variety of industries that are dependent on the traditional school year, including the hotel and tourism industries and summer camp operators. States and districts that rely on summer tourism for revenues oppose shorter summers and resort and restaurant owners are concerned there will be fewer high school students to hire for their businesses (Brickzin, 2009; Corbin, 2009; Silva, 2007; Cooper, 2001).

Some experts are concerned that extended school years will lead to higher rates of absenteeism. When Edison Schools first opened, they designed their schools with longer school days (one to two hours more each day) and longer school years (two additional weeks at the start of school and two additional weeks into the summer). However, Edison encountered increased student absenteeism during the additional weeks of school, negating the effect of the longer year. Most Edison schools now rely on an extended day schedule to provide additional learning time (Stonehill et al., 2009; Gill et al., 2005).

Another concern regarding extended school years is that they will result in increased dropout rates. Educators worry that working students will not reduce their hours of employment in response to increased academic demands. Some high school students don't have a choice - they must work full-time during the summer to earn money for college tuition or to supplement the family income (Long Beach Unified School District, 2000; Hossler et al., 1998; Raspberry, 1992).

Another issue of contention with extended school years is that students will have fewer opportunities for experiential learning. Shortened summers offer less time for family vacations, recreation, organized sports activities, camp, or remedial summer school. Furthermore, teachers have less discretionary time to pursue higher education or recertification courses (Long Beach Unified School District, 2000; Raspberry, 1992).

Guidelines for Increasing the Effectiveness of Extended School Year Initiatives

The success of extended year programs, like so many other educational reforms, depends greatly on the local conditions under which they are implemented. Extended time initiatives may succeed in some districts, but fail in others. Therefore, the best extended time reforms are not national or universal programs, although they do share some common characteristics (Silva, 2007).

Researchers and educators who have extended their school years have found that these initiatives most often produce increases in students' academic achievement when districts adhere to the following guidelines:

- Districts should allow enough time for a careful planning and development phase before fully implementing extended year initiatives (Adelman et al., 1996). Districts must address questions such as (Chalkboard Project, 2008):
 - Which students will receive the extended learning time?
 - How will the program be structured, staffed, and financed?
 - How will support for the program be generated and maintained among all stakeholders?
- Research indicates that adding a few days (five or 10) to the school calendar has little impact on student achievement. In order to improve student performance, the school year must be lengthened by at least 20 or 30 days (Glass, 2002; Cooper, 2001). Studt and Davis (2001) cautioned, however, that there might be a breakpoint after which the added days don't result in any additional learning, although no research exists to confirm this claim or determine the exact time at which schools would reach a point of diminishing returns.
- Plans for using the extra time to enhance instruction must be fully developed and clearly articulated to staff, students, and parents. The extended time curriculum should be closely linked to the regular academic program and offer a carefully selected variety of age-appropriate academic and enrichment programs (Chalkboard Project, 2008; Metzker, 2002; Studt & Davis, 2001; Long Beach Unified School District, 2000).
- Districts should set up pilot programs so they can gradually implement extended year initiatives. Pilot programs help staff and administrators learn from their successes and mistakes on a small scale and ensure that resources are not consumed on inappropriate or ineffective practices on a larger scale. Since low income students demonstrate positive effects in some studies, districts may wish to start with their lowest performing schools (Chalkboard Project, 2008; Long Beach Unified School District, 2000). Districts might also consider beginning extended year programs in elementary schools, since two studies found that extended learning time had a positive impact on the achievement gains of elementary students, but little effect on older students' achievement gains (Smith et al., 2005; Green, 1998).
- Extended school years are most successful when they are part of a broader school improvement plan (Axelrad-Lentz, 1996). Farbman and Kaplan's (2005) study of eight successful extended time schools found that the extra time was an essential part of schools' success, but other factors were also important, including strong leaders, highly qualified teachers, high student expectations, careful monitoring of performance, and a safe, supportive school environment. Similarly, David and colleagues (2006) evaluated Knowledge Is Power Program (KIPP) charter schools in low income California communities. Students at the KIPP schools spent at least 50 percent more time in school than their peers attending regular public schools and showed strong academic gains. The evaluation credited KIPP's longer hours for its success, but also attributed students' performance gains to other factors, including a strong culture of academic achievement, rigorous classes, and strict discipline.

In general, reviews of the research have concluded that schools with successful extended year initiatives exhibit the following characteristics (Chalkboard Project, 2008; Silva, 2007):

- strong leadership;
- committed and well-trained teachers;
- a safe and supportive teaching and learning environment;
- use of evidence-based and data-driven practices;
- support for reform from parents, school partners, and the community; and
- a focus on core academic and enrichment activities that are aligned with other school goals and reforms.

- The extra time should be used to implement proven practices. Time should be devoted to specific interventions backed by a strong evidence base, such as integrating technology into the classroom, giving students individualized attention, and providing instruction in longer blocks of time (Silva, 2007; Miles, 2000).
- Changing the school calendar will undoubtedly generate controversy so districts should involve the entire community (parents, teachers, students, and even private schools) in the decision. It is also helpful if early notification of calendar changes is provided to parents, staff, and students (Chalkboard Project, 2008; Long Beach Unified School District, 2000).
- A strong staff development program is needed so the extra time is used appropriately (Center for Public Education, 2006; Long Beach Unified School District, 2000; Axelrad-Lentz, 1996).
- There is a concern that teachers, as well as principals and other school leaders, will burn out from working the extra days. Although many staff support extended time for additional money, others view the expanded work schedule as a significant burden. Consideration of staffs' opinions prior to implementation of a new schedule is therefore critical (Silva, 2007; Metzker, 2002).
- Conducting evaluations and using the results to continually shape reforms helps to ensure the success of extended year programs. Data should be collected on a regular basis to determine if the extra time is being used effectively; what, if any, modifications need to be made; stakeholder perceptions of the schedule change; and the program's impact on students' levels of academic achievement (Chalkboard Project, 2008; Silva, 2007).
- Most experts agree that extending the school year should be voluntary and decided on a district-by-district or school-by-school basis. Studies have found that extended year programs are most successful when the experience is not perceived as punitive (Adler, 2009; Chalkboard Project, 2008).

Summary

Extended school years are being considered by districts around the country as educators search for new ways to raise student achievement. The addition of time to the school calendar is also supported by President Barack Obama, who recently stated that American students don't spend enough time in school. This report focused on research conducted on extended school years, while a previous Information Capsule, *Extended School Days* (available at <http://drs.dadeschools.net>), addressed research on extended school days.

Studies conducted on the academic benefits of extending the school year have produced inconclusive results, but researchers have reached agreement on three key points: quality of time is more important than quantity of time; low income and low ability students benefit most from extended school years; and no relationship has been found between scores on international tests of academic achievement and the amount of time students spend in school.

Most concerns about extended school years center around their high cost. For example, one calculation estimated it would cost the state of Florida over \$113 million for each additional day of school over and above the mandated 180 days. Critics also claim that extended school years have a negative impact on industries that are dependent on the traditional school year, such as hotels and summer camp operators; lead to higher dropout and absenteeism rates; and take time away from students' opportunities for informal, experiential learning.

Experts have concluded that the success of extended year programs depends to a large extent on the local conditions under which they are implemented. Therefore, the best extended time reforms are not

national or universal programs, although they do share some common characteristics. Successful initiatives lengthen the school year by at least 20 to 30 days; clearly articulate how the extra time will be used; begin with a pilot program; implement extended year programs as one component of a comprehensive school improvement plan; involve all stakeholders in the decision to extend the school year; and provide a strong staff development program to ensure that the added time is used productively.

All reports distributed by Research Services can be accessed at <http://drs.dadeschools.net>.

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