

Is it Time to Change Indiana's School-Year Calendar?

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UPCOMING POLICY BRIEFS AND REPORTS . . .

- ✓ *Indiana's Mathematics and Science Performance: Do We Measure Up?*
- ✓ *What is the Complexity Index?*
- ✓ *Outcomes of the School Choice and Supplemental Services Provisions of NCLB*

In 2006, the Indiana General Assembly considered Senate Bill (SB) 194 to allow school corporations to use three full student instructional days for professional development and parent-teacher conferences. Proponents of the legislation suggested that the allocation of time for professional development in full-day increments would better prepare teachers to improve student achievement in the classroom. Opponents of the legislation argued that such a measure would erode valuable instructional time at a time when greater academic expectations are being placed on all students. Although it did not pass, the bill is likely to be reintroduced during the 2007 legislative session.

Indiana statute presently requires that a minimum of 180 instructional days be conducted in all public schools. An instructional day consists of at least five hours of instructional time (not counting lunch or recess) for Grades 1-6 and at least six hours for Grades 7-12 (Rund, 2005a). This translates to a minimum of 900 hours for Grades 1-6 and 1,080 hours for Grades 7-12 per school year. Administrative law established by the Indiana State Board of Education (SBOE) also states that if school corporations build excess instructional time (the equivalent of two days) into their calendar, they can dismiss students for four partial days to conduct parent-teacher conferences (Rund, 2005b). Furthermore, if schools provide more than 105 percent of the minimum instructional time required, they can apply to the Indiana Department of Education (IDOE) to release students for up to six partial days to conduct professional development activities.¹ These com-

bined ten partial days are usually dispersed evenly throughout the school year. However, it is important to note that school corporations are not permitted by the state to dismiss students for full days to conduct either parent-teacher conferences or professional development activities. Thus, the integrity of the 180-day school calendar is maintained.

SB 194, if it had passed, would have provided local school corporations with the choice between dismissing students for three full days or six partial days within the 180-day calendar to conduct professional development activities. Furthermore, one-half day of the three full days or two of the six partial days could be used for parent-teacher conferences. The three full days or six partial days would count as instructional days.² Thus, the proposed law would have decreased instructional time for students by the equivalent of three days, since school corporations would no longer be required to build in excess instructional time above the 180-day requirement. SB 194 also proposed to repeal the provisions in the Indiana Administrative Code that allow four partial days for parent-teacher conferences.

This policy brief compares Indiana's current instructional time requirements and those proposed by SB 194 with the instructional time requirements of other states as well as other countries, and compares states' policies on student dismissal for professional development activities. Additionally, research is highlighted that examines the effects of the amount of instructional time and professional development on student achievement.

INSTRUCTIONAL TIME: NATIONAL COMPARISON

Indiana is one of 29 states (plus the District of Columbia) with a minimum instructional school calendar of 180 days. Ten states require less than 180 instructional days, with North Dakota requiring the least number of days (173). Two states, Ohio and Kansas, require more than 180 instructional days, the minimum for these states being 182 and 186 days respectively. Eight states do not require a minimum number of days, and instead choose to mandate only a required number of instructional hours (Tomlinson, 2004). If these eight states each required instructional days to be six hours at the secondary level (as is the requirement in Indiana), New Mexico, Colorado, and Nebraska would each have an equivalent of 180 days. Conversely, Delaware, Idaho, Oregon, and South Dakota would require fewer than 180 days, with the state requiring the fewest number of days being South Dakota (160.5). Only Michigan would exceed 180 days if daily instructional hour requirements were equivalent to Indiana's requirements. It requires a minimum of 1,098 hours, which translates to 183 days by Indiana's definition. Minnesota is the only state that does not require a minimum of either instructional days or instructional hours, leaving the decision entirely up to its individual school districts. Table 1 gives a detailed account of the instructional time requirements of all 50 states and the District of Columbia. A map is provided in Figure 1 which summarizes these requirements.

INSTRUCTIONAL TIME: INTERNATIONAL COMPARISON

Based on data collected by the Third International Mathematics and Science Study (TIMSS) during the 1994-95 school year and analyzed by Shen (2001), the average number of instructional days during that year ranged from 162 in Iceland to 231 in Japan. Of the 39 countries participating in TIMSS, instructional time data was available for

35 countries. Of these, 25 had more than 180 instructional days per year (based on the individual countries' national averages), nine had less, and two had an average of 180. The international average was 187 days (Shen, 2001). Table 2 shows instructional day averages and standard deviations for the 35 countries.

It should be noted that the TIMSS data reflect the number of instructional days reported by individual principals, while Indiana's 180 days reflect the statewide minimum requirement. Schools can choose to exceed the minimum, and can also apply for a waiver from the penalty for not meeting the requirement in the event of extraordinary circumstances, such as an excessive number of school closings due to inclement weather. For these reasons, it is important to take into account how many instructional days Indiana schools actually conduct. Out of 2,166 accredited schools in the 2004-05 school year, the vast majority of schools held exactly 180 instructional days (84 percent). One percent held 179 instructional days, and 15 percent of schools exceeded the 180-day minimum. The highest number of instructional days conducted was 260 (these schools were Indiana Department of Correction juvenile correctional facilities operating on a year-round schedule) (IDOE, 2006).

EFFECTS OF INSTRUCTIONAL TIME ON STUDENT ACHIEVEMENT

There is a lack of literature addressing the relationship between school year length and K-12 student achievement based on controlled studies using an experimental design (Aronson, Zimmerman, & Carlos, 1998). Furthermore, the literature is complicated by varying definitions of instructional time, including length of school year and length of school day, both of which are allocated time (Aronson et al., 1998; Coates, 2003). Allocated time includes both instructional time and non-instructional time. Instructional time may be classified as either engaged time or academic learning time; the former refers to the time in which students are participating in educational activities, and the latter

refers to the time when learning actually occurs, based on the effective use of engaged time (Aronson et al., 1998).

A few studies indicate that there is a positive relationship between instructional time and student academic achievement. In a study of 25 Grade 2 classes and 21 Grade 8 classes, Brown and Saks (1986) found that the amount of time given to teaching reading and mathematics positively related to test scores. However, the relationship between time and increased test scores was influenced by several additional factors, including grade level, subject matter, and for mathematics, the teachers themselves. The researchers also found that the lower initial knowledge a student brought into class, the more important time was to achieving higher scores. That is, students with lower initial test scores benefited more from additional instruction time than did students who started with higher test scores (Brown & Saks, 1986).

Coates (2003) used data collected over a three-year period (1994-97) from Grade 3 students in Illinois public schools to demonstrate that an increased amount of instructional time in mathematics and English translated to higher scores on reading and mathematics tests. He identified other interesting patterns, such as increased instructional time in social studies translating into improved reading and writing scores, but lower mathematics scores. In addition, Coates found that more instructional time in science did not produce significant effects on scores in any subjects. The data also indicated that the positive effect of increased instructional time was diminished by an increase in class size. Thus, increasing instructional time without addressing class size may provide little benefit to students.

In a study of Grade 8 students in 39 countries, Shen (2001) found a moderate positive association between total school days per year and mathematics and science scores, such that students in countries with longer school years also had higher achievement rates in these areas of study. However Aronson et al. (1998), in a paper partially sponsored by the United States Department of Education

(U.S. ED), Office of Educational Research and Improvement, reviewed a number of studies which addressed the relationship of time to academic achievement. The authors noted that more allocated time, which includes the length of a school year, does not necessarily lead to higher student achievement because the utility of allocated time is dependent on how much of it is used for actual instruction.

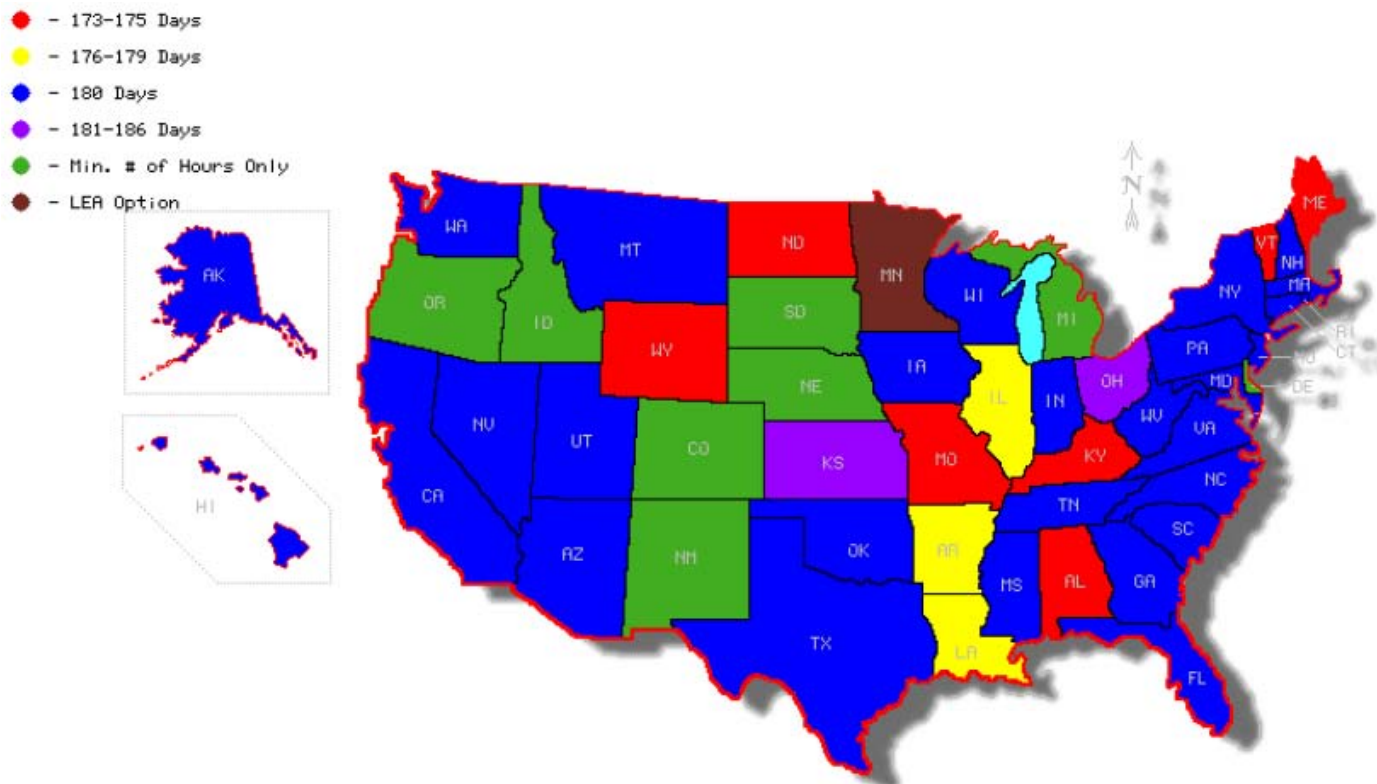
PROFESSIONAL DEVELOPMENT REQUIREMENTS

Table 1 illustrates that 35 states have some form of policy regarding required professional development days, while the remaining 15 states (plus the District of Columbia) allow each school district to choose how they will fulfill professional development requirements.

Thirty-seven states (plus the District of Columbia) do not count any professional development time as instructional time. For example, Kentucky has a minimum of 175 days of student instruction, with an additional four days of professional development required.³ Similarly, Indiana's current policy does not allow professional development time to count towards the minimum of 180 instructional days. However, whereas many states set a minimum school term length that exceeds the minimum number of instructional days in order to provide professional development days, Indiana's policy requires schools to be in excess of the minimum number of instructional hours by five percent before they can apply for professional development days. Furthermore, there is currently no provision in Indiana code for this policy.

Thirteen states (Alaska, Colorado, Hawaii, Idaho, Iowa, Michigan, Mississippi, Nevada, New York, Ohio, Oklahoma, Oregon, and West Virginia) have some type of policy that allows a certain amount of professional development time to count towards the minimum amount of instructional time. For example, Oklahoma's policy⁴ states that up to five of the 180 minimum instructional days may be used for professional development. Mississippi's policy⁵ states that districts may dismiss students early on two days after they have completed 60 percent of the school day, in order to conduct professional development activities for the remainder of each of the days. In Iowa, there is not a specified amount of professional development time that must be built into the school calendar, but if schools do decide to dismiss students early in order to conduct professional development activities, the day counts towards the minimum 180 instructional days. In Utah, a pilot program was initi-

Figure 1. Instructional Days for 2006-06 School Year by State



ated in 2004 to reduce the number of instructional hours by up to 22 per year in order to conduct professional development time.⁶ The program will

determine if the reduced hours affect academic achievement and will report the findings in July of 2008. If a policy similar to the one proposed by SB 194 is

enacted, Indiana will join these states in reducing the amount of time spent on direct student instruction.

TABLE 1. State Instructional Time and Professional Development Requirements

State	Length of School Year		Professional Development Requirements (time is in addition to minimum length of school year except where indicated in blue)
	Days (grades)	Hours (grades)	
Alabama	175		5 days*
Alaska	180		Up to 10 days
Arizona	180		Local Education Agency (LEA) option*
Arkansas	178	1,068	10 days
California	180		LEA option
Colorado		990 (elementary) 1,080 (secondary)	Up to 24 hours
Connecticut	180	900	18 hours
Delaware		1,060 (1-11) 1,032 (12)	LEA option
District of Columbia	180		LEA option
Florida	180		LEA option
Georgia	180		10 days
Hawaii	180**		5 days
Idaho		810 (1-3), 900 (4-8), 990 (9-12)	Up to 22 hours (1-12)
Illinois	176		Up to 4 days
Indiana	180	900 (1-6) 1,080 (7-12)	Schools may apply to the IDOE for 6 partial days if they exceed 105% of required instructional time
Iowa	180	990	LEA option
Kansas	186 (1-11) 181 (12)	1,116 (1-11) 1,086 (12)	LEA option
Kentucky	175	1,050	4 days
Louisiana	177	1,062	Up to 5 days
Maine	175 (1-11) 170 (12)		Up to 5 days
Maryland	180	1,080	LEA option
Massachusetts	180	900 (elementary) 990 (secondary)	LEA option
Michigan		1,098	Up to 51 hours
Minnesota	LEA Option		The difference between the number of adopted instructional days and 240 days, if LEA chooses extended calendar option
Mississippi	180		Two 40% days
Missouri	174	1,044	LEA option

* Indicates that the information could not be verified with the State Education Agency.

** Hawaii does not have a minimum instructional time requirement, although the teachers' contract calls for a 190-day work year, 10 days of which must be without students. A review of several schools' calendars, all of which can be found on the Hawaii Department of Education's website, showed that many did not have 180 days of instruction. <http://165.248.6.166/data/calendars0506.asp>

Sources: Education Commission of the States, ECS Information Clearinghouse, 2004; various state agencies.

TABLE 1. State Instructional Time and Professional Development Requirements (cont.)

State	Length of School Year		Professional Development Requirements (time is in addition to minimum length of school year except where indicated in blue)
	Days (grades)	Hours (grades)	
Montana	180	720 (1-3) 1,080 (4-12)	3-7 days
Nebraska		1,032 (1-8) 1,080 (9-12)	10 hours*
Nevada	180		Up to 5 days
New Hampshire	180		Up to 10 days
New Jersey	180		LEA option
New Mexico		990 (1-6) 1,080 (7-12)	Up to 3 days
New York	180		Up to 4 days
North Carolina	180	1,000	5 days for lowest performing schools, otherwise, LEA option
North Dakota	173		2 days*
Ohio	182		Up to 2 days*
Oklahoma	180	1,080	Up to 5 days
Oregon		810 (1-3), 900 (4-8), 990 (9-12)	Up to 30 hours
Pennsylvania	180	900 (1-6) 990 (7-10)	Up to 5 days*
Rhode Island	180		LEA option*
South Carolina	180		9-15 days
South Dakota		962.5 (4-12)	LEA option
Tennessee	180		Up to 13 days if length of school day is 7 hours
Texas	180		7 days
Utah	180	810 (1) 990 (2-12)	Current pilot program: Up to 22 hours
Vermont	175		5 days
Virginia	180	990 (1-12)	LEA option
Washington	180	1,000 (1-12)	LEA option*
West Virginia	180		5 partial days, 2-5 days
Wisconsin	180	1,050 (1-6) 1,137 (7-12)	LEA option
Wyoming	175		Up to 5 days

* Indicates that the information could not be verified with the State Education Agency.

** Hawaii does not have a minimum instructional time requirement, although the teachers' contract calls for a 190-day work year, 10 days of which must be without students. A review of several schools' calendars, all of which can be found on the Hawaii Department of Education's website, showed that many did not have 180 days of instruction. <http://165.248.6.166/data/calendars0506.asp>

Sources: Education Commission of the States, ECS Information Clearinghouse, 2004; various state agencies.

EFFECTS OF PROFESSIONAL DEVELOPMENT ON STUDENT ACHIEVEMENT

The body of research accumulated over the past few decades supports the idea that the skills and knowledge teachers

bring to the classroom are directly related to student success. Indeed, the perceived importance of this issue led to a federal mandate as part of the No Child Left Behind Act of 2001 requiring all teachers of core subjects to be highly qualified by the end of the 2005-06 school year.⁷ Professional development

is the most obvious way to raise in-service teachers' awareness of the newest and most effective teaching methods and bring their skills and knowledge up-to-date (National Conference of State Legislatures, 2006).

TABLE 2. International Comparison of Instructional Days in a Year (1994-1995)

	Average Instructional Days/Year	Standard Deviation
Iceland	162	9.0
Ireland	168	4.0
Cyprus	172	15.3
Hong Kong	173	25.8
Romania	174	12.2
France	174	14.0
Latvia	176	10.7
United States	178	4.1
Slovenia	179	14.0
Spain	180	18.8
Portugal	180	19.8
Sweden	181	17.4
Belgium (French)	182	--
Belgium (Flemish)	182	--
Hungary	183	7.9
Colombia	183	30.1
Norway	185	--
Lithuania	185	22.6
Canada	186	5.1
New Zealand	189	7.3
England	190	5.9
Russia Federation	190	24.3
Scotland	191	5.8
Germany	195	17.1
Slovak Republic	195	17.4
Netherlands	196	12.2
Australia	197	7.1
Thailand	198	9.9
Czech Republic	198	17.1
Austria	200	--
Denmark	200	--
Singapore	200	--
Iran	205	29.3
Israel	206	20.0
South Korea	208	24.1
Japan	231	5.4
Greece	--	--
Kuwait	--	--
Switzerland	--	--

Source: Shen, C. (2001). Social values associated with cross-national differences in mathematics and science achievement: A cross-national analysis. *Assessment in Education*, 8(2), 193-223.

Note: The standard deviations are an indication of how widely dispersed each school's number of instructional days are from the country's average. For instance, the U.S. had a standard deviation of 4.1, so all U.S. schools' instructional days in 1994-95 were close to the average of 178. However, Colombia had a standard deviation of 30.1, so many Colombian schools' instructional days were much more or less than the average of 183.

Darling-Hammond (1999) cites a number of studies that look at the relationship between teacher education (including in-service professional development) and student academic achievement. Generally, the research indicates that knowledge of how to teach may be just as

important as teacher content knowledge, especially since many teachers have content knowledge that exceeds the level of the curriculum they are teaching. Specifically, teachers are most effective in fostering student achievement when they receive adequate training through educa-

tion courses which train them in how best to present content and interact with students. Furthermore, Darling-Hammond (1999) states, "Substantial evidence from prior reform efforts indicates that changes in course taking, curriculum content, testing, or textbooks make little difference if teachers do not know how to use these tools well and how to diagnose their students' learning needs" (p. 39).

Guskey (1999) points out that there are five levels of professional development evaluation. In ascending order, they are: participants' reactions, participants' learning, organization support and change, participants' use of new knowledge and skills, and student learning outcomes. Positive results on the lower levels are necessary but not sufficient for positive results at higher levels. In other words, in order for professional development to positively impact student learning, it must first positively impact participants' use of new knowledge and skills. However, it cannot be assumed that since teachers are implementing new skills learned in professional development, student achievement is improving. Guskey (1999) notes that most research on the effectiveness of professional development tends to focus on participant reactions and learning. This is most likely because evaluating the direct impact of professional development on student learning is made complicated by other factors that influence learning such as practitioner characteristics, learner characteristics, program factors, and professional development system factors.

Thus, despite the obvious need for professional development that increases teachers' content knowledge and instructional knowledge, there is a lack of research examining whether current professional development delivery systems actually directly impact student achievement. Without such research, we cannot begin to determine whether using instructional time for professional development is warranted.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Indiana's 180-day minimum instructional calendar is the same as that of 28 other states and the District of Columbia, and is comparable to requirements in three other states. During the 1994-95 school year, 25 out of 35 countries spent more than 180 days in school. There is some evidence indicating that the amount of time spent in engaged academic learning in school correlates positively with academic achievement, particularly in reading, math and science, and especially for low-performing students.

Recommendation

Maintain the 180-day minimum instructional calendar. Policymakers should oppose any proposal that would reduce the amount of instructional time public schools are required to provide to students. In addition, educators and administrators at the state and local levels should examine their use of time to ensure that the vast majority of allocated time is used for engaged academic learning.

Conclusion

Professional development for teachers is critical to the success of their students. Although Indiana does require public school teachers to complete professional development activities, these activities presently do not inhibit the fulfillment of the 180-day calendar. Indiana's policy is comparable to policies in 38 other states and the District of Columbia, which also do not allow professional development time to be counted as instructional time. A policy such as the one proposed by SB 194, which would allow three full-days of professional development activities to be counted towards the 180-day minimum, would effectively reduce the amount of time Indiana's public school students receive instruction while facing greater academic demands.

Recommendation

Increase the number of days in the school calendar and earmark the additional days for teacher professional development.

Consider a policy that requires schools to build a certain amount of days into the school term to be used for professional development in excess of instructional days. This could give schools flexibility in deciding whether to use full or half days, or a mixture of the two, for professional development. Twenty-four states have a policy similar to this model.

Due to the expense of a student-less day for teacher professional development, projected at \$20 million per day, an alternative strategy could be considered to extend the minimum instructional hours per school day. The additional time would be designated to provide regular and ongoing opportunities for teacher planning, collaboration, and professional development.

Conclusion

The literature review brings to light the sparse amount of empirical research on the topics of instructional time and professional development in relation to academic achievement. In order to truly determine if and to what extent allocated instructional time and allocated professional development time effect academic achievement, more research is needed.

Recommendation

Conduct research using controlled experimental designs that examine the relationship between amount of instructional time or amount of professional development time and academic achievement.

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