



Research Report

**ALLOCATING TIME WITHIN THE
SCHOOL YEAR CALENDAR
A REVIEW OF THE LITERATURE**

**Sally Erling
Project Co-ordinator**

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**Susan Manning, Senior Manager
and General Editor**

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Toronto District School Board
Organizational Development
1 Civic Centre Court, Lower Level
Etobicoke, ON M9C 2B3

Tel.: 416-394-4929
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ALLOCATING TIME WITHIN THE SCHOOL YEAR CALENDAR

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Overview

Given that nationally and internationally there are wide variations in the number of instructional days, the length of a normal school day, curriculum expectations, and the allocation of staff and resources; it is difficult to make conclusive comparisons about the impact of time on student performance indicators. No clear relationship between total school time or in-class hours and student performance emerged from the literature.

There was a greater focus on making the distinction between total allocated time, instructional time or time-on-task, and actual academic learning time and how they relate to achievement. The time that students spend engaged in focused learning activities is clearly considered the most valuable in terms of their academic performance and many reports advocated increased attention to strategies that enhance the quality of this time rather than simply adding more student school days.

School Year Calendar Policies

The Ontario Ministry of Education regulation for school year calendars is a minimum of 194 days and 5 instructional hours per day. The regulation states that:

The regular school year is the period between September 1 and June 30. The school year shall include a minimum of 194 school days of which two days must be designated as professional activity days that must be devoted to professional development activities related to specific provincial education priorities as outlined in Regulation 304. Boards may also designate up to four extra days as professional activity days. The remaining school days shall be instructional days. A board may designate up to 10 instructional days as examination days.

Although the five-hour instructional day and 194 or 195 total school days is relatively standard across the country, there is some variation across the provinces in the actual number of “student days” or “instructional days” depending on the maximum allowable days for non-teaching functions such as professional activity, parent reporting, administration and/or examination days. Typically the minimal number of student instruction days is in the 185 to 187 range for the K-8 level, and up to 10 days less at the secondary level after the allotment for examination days is accounted for. Within provinces, some flexibility is allowed at the local level to meet specific needs.

A few provinces and/or some individual boards within them (Saskatchewan and Alberta for example) allow a school year of up to 200 days. When translated into the number of instructional hours per year for elementary and secondary school students, Ontario students may in fact be receiving fewer hours of instruction than students in these jurisdictions. As an illustration, Alberta legislation requires that students receive 950 hours of instruction per year in elementary schools and 1000 hours per year in secondary schools. By comparison, Ontario students could receive 940 hours of instruction per year in elementary schools (e.g. at 188 five-hour days) and possibly less than 900 hours in secondary schools.

As in Canada, there are varying policies throughout United States regarding the minimum number of instructional days and how professional development days are counted within that total. Like Ontario, 35 states do not count PD time as instructional time. Some states exceed the minimum number of instructional days to provide PD days while others allow PD to occur within their minimum 180 days (Prendergast, 2007). Dramatic variations in the length of a normal school day across US districts have also been reported (Tyre, 2007).

Internationally, as reported in the August 1997 Education Improvement Commission (EIC) report “The Road Ahead”, twenty countries were surveyed about the number of school days. Canada was tenth with an average of 188 school days. In comparison, China was the highest with 251 days and Portugal the lowest with 172. Ontario's 300-minute instructional day placed us eighth of twenty jurisdictions with France maintaining the longest at 370 minutes and Brazil the shortest at 223 minutes.

More recent international data provided by 35 participants of the TIMSS assessment revealed that the average number of instructional days is 187, ranging from 162 in Iceland to 231 in Japan. (Prendergast, 2007)

Unfortunately, comprehensive and comparable data within and across countries is not necessarily readily available and/or easily interpretable. While there are several sources that cite some international education statistics and compare indicators on educational and school performance across nations, the list and characteristics of the countries that may be included varies depending on the indicator and the information source e.g. Organisation for Economic Co-operation and Development countries (OECD), G8 countries, etc. It becomes difficult to make definitive conclusions or judgements when lists of countries are not constant or inclusive (e.g. Canadian statistics were not included on several sites).

Likewise, there is a lack of consistent definitions or descriptions of the indicators as reported by different countries. Caution must be taken when making inter-country comparisons about performance indicators – because neither the amount of instructional time nor quality of education nor curriculum expectations are necessarily the same in each country.

For example, “Instructional Time” as reported on the TIMSS assessments is intended to mean the cumulative number of intended instructional hours for children between the ages 7 -14. Within that broader description there may be wide variations among countries in the proportion of compulsory hours that are devoted to reading, writing, math and/or science. Similarly “Teaching Hours” referred to the contact hours per year in lower secondary public institutions, but the regulations and definitions surrounding working time and teaching time vary. In some countries, teaching time is specified simply as the number of lessons per week.

To further confound meaningful comparisons across other countries, it is evident that different countries make significantly different choices when it comes to allocating resources for school instruction in terms of time as well as other areas such as staffing and class size. Comparing

OECD countries with compulsory schooling in primary and lower secondary education, for example, the following disparities were noted:

“There are 30 or more students per class in Japan, Korea, Mexico and the partner countries Brazil, Chile and Israel, but 20 or fewer in Denmark, Iceland, Luxembourg, Switzerland and partner country the Russian Federation.

The number of teaching hours per year in public schools varies from over 1 000 in Mexico and the United States to 534 in Japan. There are also considerable variations in how teaching time is distributed throughout the year, with, for example, teachers in Iceland working more hours in the year over a 36-week school year than teachers in Denmark where the school year lasts 42 weeks.” (OECD, 2006).

Nevertheless, specific findings from the TIMSS study did not reveal any clear pattern between the number of in-class hours and student performance in math and science. In another study comparing US and Asian systems, it was found that factors other than time (e.g. quality of teaching and curriculum, parental and cultural influences) were more likely to account for differences in performance (Aronson et al.).

Generally the literature concludes that time, although a critical factor, exhibits little direct impact on student performance when considered alone. Simply adding time will not produce large achievement gains.

Defining Time

One public perception that emerged from the Education Improvement Commission (EIC) report is that time is underutilized in public education. Rather than holding on a common belief that adding more time will improve student achievement, it is important to differentiate between the allocated time (i.e. time that students are required to be in attendance), and the time that is spent in class with staff on curriculum-oriented learning. The amount, the distribution and the use of time for focused learning should all be considered.

Other references variously defined time as “allocated time” or the total time per school day/ year; “engaged time” or time-on-task; and “academic learning time” when actual learning takes place. More important than total allocated time is enhanced teaching-learning time (Metzker, 2004).

An overview of studies on the relationship between time and learning in industrialized nations (Aronson, Zimmerman & Carlos), explored the limitations of existing research and defined the terms used in research, such as allocated time, engaged time, and academic-learning time. They concluded that:

- there is little or no relationship between allocated time and student achievement,
- there is some relationship between engaged time and achievement,
- there is a larger relationship between academic-learning time and achievement,
- there is no consistent relationship between the amount of time allocated for instruction and the amount of time students spend engaged in learning activities.

There has been a tendency for researchers to look at the total amount of school time, because quantity is easier to identify and measure. They concluded however that allocated time alone is not a helpful measure because it does not consider how time is being used or the quality of instructional activities, and suggested that their findings should encourage educators to focus instead on the time that matters.

Challenges

Ineffective site-management and classroom-management practices are factors that can further reduce actual leaning time. Metzker reports that teachers, on average, spend 23% of their time on non-instructional activities and suggests that in schools where time is not being used well, it is unlikely the addition of extra days to the school year calendar will lead to higher student achievement.

A recurrent concern emerging from the EIC consultations as well was the number and length of “interruptions” which diminished instructional time. At that time there was some public support

for extending the school year to compensate for the time/ days lost due to weather, field trips, assessments, exams, etc. Thus it would be important for educators to review what other activities and/or board and ministry mandates are infringing on instructional time.

The high cost of extending allocated time however is another important reason why more districts have not substantially increased the length of the school day or year. Given that there is little empirical evidence to support a direct link between time in school and student achievement, the potential financial impact may not be justified given the relatively small achievement gains that would be realized. There would be significant additional expenditures incurred for routine operating costs to cover teacher salaries, materials and supplies, building maintenance and utilities, as well as challenges in re-scheduling for use of facilities and transportation etc. Considering this, making better use of the existing time may be a more viable option than adding more days.

Making Time for Professional Development

Different scenarios for providing professional development time either within or outside of the regular school year were discussed throughout the literature. The importance of ongoing professional development for teachers and other staff and for student learning and achievement was strongly supported throughout the EIC consultations in 1997, and maintaining at least two of the existing professional days within the instructional school year for teacher-parent interviews was encouraged by parents.

Those consultations in Ontario revealed general support for accommodating some PD during an extended school year (e.g. perhaps at the end of August) and for increasing the focus on effective PD that is based on best practices such as school-based improvement teams, whole-school participation, developing ongoing partnerships, etc. as opposed to one-shot workshops. In that report, EIC recommendations regarding professional development time included:

- Limit professional activity days to 5 days during the student school year
- Designate at least 3 PD days for teachers the week prior to school opening

Possible options being recommended in Indiana for consideration in a more recent review of their school year calendar and the time spent on professional development (Prendergast, 2007) included:

- Maintaining the minimum instructional calendar and ensuring that the vast majority of allocated time is used for engaged academic learning
- Increasing the number of days in school year calendar and ear-marking those excess days for teacher professional development, with some flexibility for full day or half day sessions
- Extending the minimum instructional hours per school day to make up for planning and/or PD time

Increasing Learning Time

Given that actual time-on-learning appears to be a more important determinant of student success in school, consideration should be devoted first to strategies that increase the overall *quality* of instructional time for all students. For students who may be struggling to meet standards or for priority program areas that have been targeted for significant improvement by a school district, there could be an additional benefit to extending the *quantity* of instructional time, but only if it is used effectively and productively.

Beyond simply increasing the number of instructional days in the school year calendar, some of the strategies that various school districts have implemented and/or considered for maximizing the actual learning opportunities for students include the following:

- designate a minimum allocation of instructional times for specific subject areas (e.g. math is 20% of instructional time and literacy 40%) and set guidelines for other curriculum areas
- schedule daily minimum “blocks” of time (60 minutes) for literacy
- explore year-round options for some compulsory credits in semestered schools (esp. math, English, French)
- scheduling that ensures a minimum number of hours for instruction (e.g. 110 hours per credit)

- more productive use of classroom time in December and June
- lengthen days/ schedules in order to offer more remediation and enrichment opportunities
- extended learning schedules or summer learning programs specifically for students with academic deficiencies or disadvantages
- extended services for students at risk of academic failure
- add extra time (45 minutes) for a 10th period for students who need help
- implement effective classroom management strategies and minimize interruptions
- ensure age appropriate curriculum and instructional strategies that engage students
- increase student engagement in structured learning activities outside of school
- later morning start times to address adolescents' physiological needs
- redistribution of instructional and vacation days throughout the calendar year into trimesters or year round schooling

Conclusion

Time is certainly one of the many factors for possible school reform that school districts consider in order to meet high educational standards and the needs of their own students, and various combinations of rearranging, modifying, and/or extending school days or years have been explored. While it is apparent that time is a significant component in the effective delivery of education, clearly how schools use that time and time-on-task is of much greater significance than the actual amount of time scheduled during the school day, week or year. In this review, there was little research evidence to support the notion that simply increasing time alone would have any direct impact on student achievement. A general consensus was that it is of little value to add days to the calendar without a concrete plan for using the time to enhance instruction. In the end, “quality is the key to making time matter”.

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