

2013 HOUSE EDUCATION

HB 1266

2013 HOUSE STANDING COMMITTEE MINUTES

House Education Committee
Pioneer Room, State Capitol

HB 1266
January 22, 2013
17535

Conference Committee

Committee Clerk Signature



Minutes:

Ch. Nathe: We will open the hearing on HB 1266.

Sen. Ole Larsen: Sponsor of the bill. Explained the reason for bringing it forward. The bill has to do with installing a full day of instruction, K for 5.5 hrs, Elementary for 6.5 hrs, and for high school students for 7 hrs. or the duration of what the district 2013-2014 instruction day was to increase it. I have been teaching for 18 years prior to this year. As the years go on, I have noticed that districts add classes. The latest class added was the problem with democracy. Then they added an Economics class that was added and I hear more talk about increasing another credit for World History. Our school district had a requirement of driver's education, 4 years of PhyEd classes. At the high school level, when I first started teaching, I would have Juniors (11th grade students) able to take a two hour career and technical class from me and then they could take another career and technical class or take other enriching classes, not required that they could partake in the school. As the requirements started increasing, that Junior would then be locked out of taking more than just exploratory classes or additional career and technical classes. For instance, in my field of study, we had an automotive technology 1 which would take the full year, 2 hour block. Then during their Senior year they would take the automotive 2 program, a 2 hour block throughout the school year. When you have a required class of driver's education or Problems with Democracy, that student as a Junior, has to elect to take those and it shortens up his time. I've noticed that with our career and technical classes, that we are not getting as many students taking the automotive 1 and automotive 2. We used to have students that would take automotive 1 and automotive 2 and they would still have time in their schedule to take welding, auto body, computer repair, business classes which I feel, and the instructors of career and technical instructors feel the same way, that these classes make the person more well-rounded, ready for business and employable when they get out of high school. If we're talking about students' reading levels and the World History and other classes, if we increase that school day, that instructional day, maybe those students can utilize that time better. I found, in high school, that if a student is required to take 19 credits, that is what they are taking. They can take more; even today we have students who graduate with more than the 20 requisite credits. But a lot of students aren't taking any additional credits unless they are needed. My work schedule used to be from 7:45 am to 4:45 pm. I figured that was how long all educators worked. Then I had an 8:00 am to 3:15 pm for a few years; then an 8:05 am to 3:30 pm. I am not aware of shorter workdays. I thought that was the work day.

Ch. Nathe: I see on line 22, subsection d, a school district may increase the minimum number of hours required under this subsection. So this bill would not make them do this, they would have the option to do it.

Sen. Ole Larsen: Correct. We find our school district is different from other school districts as far as requirements in the number of credits needed to graduate. It's not putting a stranglehold on them that they are going to increase their work day.

Rep. Heller: Do any other states or schools have a longer day than what we're used to here.

Sen. Ole Larsen: That's very interesting. There is a wide range of when students are educated. There are three month systems, etc. In Wyoming, students go to school four days, M-Th, and they have it tacked on to the end of their school day; I believe their school day is still done at 3:30 pm. So they have Fridays off; they have long weekends all year long and still fit that into that 180 days.

Ch. Nathe: If we went to a longer school day, do you have any information on costs to the school.

Sen. Ole Larsen: I do not have a fiscal note on that.

Ch. Nathe: Being in the system, do you have an idea of what it would cost; longer hours, more people. I can imagine that there will be some costs to the schools for going longer in the day.

Sen. Ole Larsen: I know that in my contract, when I was teaching, I had to contract for an additional hour or time. I believe that was like \$5500 per career and technical instructors that took that full 6th period day.

Rep. Rust: I think line 22, when it says that "a school district may increase the minimum number of hours required" means that it can go above say the 7 hours that you're asking for secondary. It does not mean that you don't have to go to secondary to the 7 hours, because the 7 hours is required on line 11. I'm wondering, this bill basically says that "those hours shall be 5.5 for Kindergarten, 6.5 for Elementary and 7 for secondary. That's the lowest number you can have for those students and then line 22 says that you can go above those. Is that correct.

Sen. Ole Larsen: I don't believe so, I don't see the "shall".

Rep. Rust: On line 11 says "are required".

Sen. Ole Larsen: I am not aware of that. I had assumed that if shall or may were in there, that would be differentiated.

Ch. Nathe: I think that this bill would raise the minimum and they would have the opportunity to go above that.

Rep. Rust: I believe that is how it is written. That's the way I see it. The next question is have you considered the following: currently we have elementary and high school kids who get on the bus at 6:50 am and get off the bus after 5:00 pm. We are now going to add to that? When you increase the length of the school day, you are going to get them there earlier or leave later or a little bit of both. It will increase the time period that they have to ride the bus, makes for a long day for kindergarten students and first graders. When our buses come in, we have to have bus drivers go to the back of the bus and wake them up because they are sleeping in the seat either on the way to school or on the way home. That

is a factor that will enter into this bill. You are going to be increasing that day by "x" amount. Have you considered that when you wrote the bill.

Sen. Ole Larsen: No, I haven't. I figured a child is up from 8, 9, or 10:00 in the evening anyway.

Ch. Nathe: Wouldn't this bill have a domino effect as far as pushing up against extracurricular activities; making everything a little later. If the school day is longer, they would have to schedule events at a later time.

Sen. Ole Larsen: That could be true. My idea of educating and getting more information to the students in their academics, kind of trumped the sports end of it.

Rep. J. Kelsh: On line 19, it says, "7" hours for high school. On line 20, it says "1 hour more than the duration of the district's 2013-2014 high school instructional days. Now if they were now 7 hours, does that mean that they would have to go to 8 hours, is that what the bill says.

Sen. Ole Larsen: I believe it is the 7 hours or whichever is greater if they are already teaching 6 hours, it would be 7; if they are already teaching 7, it would stay the same.

Rep. B. Koppelman: If they create a longer school day, I think of when I took high school and I was taking as much as I could, particularly for my junior and senior year, and didn't have a lot of time for study halls. I knew a lot of people, though, who just wanted to take the minimum and 2-3 study halls during their senior year. Under a longer school day, dealing with extracurriculars like sports, would this be prohibitive of allowing a last period study hall like we used to have, where if you didn't have any classes, you could schedule that and get out earlier. So let's say that everybody that was in football might take a last period study hall. That was my main question.

Sen. Ole Larsen: I did not take above and beyond what was required. My daughter, on the other hand, has met all the credit requirements and yet she still has to go to requireds at Surrey and she is taking a full-class load at the college. I just think that the more people can get that academic part instead of trying to get back and take that part-time job or not do anything, or do the sports activity in the 5th or 6th period, that it would be a better idea.

Rep. B. Koppelman: Do you think the requirements that we have in ND schools, I know we have added at least 1 science credit, and probably at least 1 math credit, do you think that has led to no time for tech ed. and other things.

Sen. Ole Larsen: Absolutely. I am seeing these required classes that they are to take, and so they can't take any extra classes, at the high school level, and that's what I am speaking of, that I have the experience on. It's pushing them out for these classes that will really prepare them for work. The four required PE classes, we could go round and round on what is better, to rebuild an engine or how to run away from the car that is trying to run you down.

Rep. Rohr: Was this brought forth based on constituents or parents in your district.

Sen. Ole Larsen: This was brought on by when you have the Open House and you are looking at the student's schedule and talking with the parents, and they are seeing that their schedule will not allow them to broaden their experience. A lot of times with auto mechanics, knowing computers and business practices, knowing auto body, welding, those are key to employ young people. It gives them a jump start. When they have to take requireds, driver's ed., for example, that student I'll have as a junior or a senior, taking a

required drivers ed. class; his timeframe only allows that one 2-hour block class. That is where this is coming from. We hear that students aren't getting enough of the curriculum. They aren't getting enough of the academics. The only way you can do that is to keep them in the seat longer and I don't believe that giving them the homework to do that hour after school is effective.

Rep. Hunskor: Have you checked into how much this would increase the length of the school day at Minot Public School, if this bill were to pass or any other schools. Do you have an idea what the increase in time would be.

Sen. Ole Larsen: I always assumed that everybody just worked from 8:00 am to 3:30 pm. I guess at Minot High School it would be 8-3:30 pm. I know that they offer classes that are at the college that can be taken at the same time. But they are still being instructed during that day.

Rep. J. Kelsh: I believe it was in 2009 session, we passed a bill that allowed the administration, the parents in conjunction with the child, to go a little different course, than all the requireds, the 4 Englishes, the 4 maths, etc. and go into more of a career type path. One of the things that happened afterwards was that some of the superintendents in my area thought that wasn't right. They said that they need those, even if they aren't going to go into business, but they need a little understanding of business math, how to read properly, how to make out a bill if they're going to be an auto mechanic. They thought it was more important to get that in high school because most kids at this point, right out of high school, aren't really ready to go out into the job market. This bill is kind of contrary to that philosophy.

Rep. Schatz: With our declining test scores and world rankings, are there any studies that have been conducted that would show that an increase in the hour in the day would help those scores or make us more productive.

Sen. Ole Larsen: I am sure there are, but I don't have them with me now.

Rep. Wall: Can school districts, in negotiated agreements, lengthen the school day now.

Sen. Ole Larsen: I'm not aware of that. I am sure that through negotiations they can do just about whatever they want that they can get passed.

Rep. Wall: Why the need for this bill.

Sen. Ole Larsen: Currently, I don't think that is happening. I know that as I work with students, as soon as they can meet their requirement, they are down washing their cars or working, or doing something other than expanding the academics.

Rep. Wall: The students that I taught, took full schedules, plus many were dual credit classes. Many took courses at the college. I understand the conundrum that current technical education courses have probably suffered because of what we have added through legislation that they must teach. I don't know what the answer is, but in my district, I started work for over 20 years at 7:20 am. We had an expanded day, but it wasn't for the whole school. We had probably about 4 classes that started very early in the morning, mine being one. That was one way of making it work.

Rep. Schatz: Thank you. Further testimony in support of HB 1266. Testimony in opposition to HB 1266.

LeAnn Nelson, ND Education Association: Opposed to HB 1266. I handed out a research handout (see attached), on page 2 under basic findings, you will see a list of three points. The first point, there is little or no relationship between allocated time and student achievement. That's kind of what this bill is doing, it's saying to add more time into the day; point two, there is some relationship between engaged time and achievement and if you go back to page 1 it starts explaining what engaged time is. When students are actively engaged in some activity in the curriculum. There might be some students that already know the material so they're not actually learning at that time, because they already know it. There are some students who don't know, haven't gotten to the point where those activities are helping them because they don't understand the previous information, but they are engaged in learning activities, so there's some relationship between engagement and achievement. They are learning something. Point three, there is a larger relationship between academic learning time and achievement, which means, at the precise time that the activity is going on, the students are doing for their learning, both advanced students, they are learning additional because it's not above them and the lower students it's at their level of learning as well. So they are engaged in learning additional information too. The relationship between then time, in essence, is at the precise time that they are learning. So we should be looking at is are we effectively using the time that we have now. Instead of adding on time, how could we use the time more effectively with the students in our classroom. According to the research, just adding on time doesn't help, it's what you are doing with that time. Then it goes on to do further research on the cost and it mentions that more states and more districts have not gone to extended time because it adds immense cost on to the district, on to the budget. So this information about costs, what else could be happening in the classroom that might interrupt learning, classroom management. Teachers in the classroom may have to stop to deal with some management issues, so that interrupts time. So how, in professional development, can we develop some strategies that can help teachers in classroom management that will alleviate those problems that adds that additional time in the classroom. Also, diverse learners; there are a lot of diverse learners in the classroom. How can we help the teachers in our classroom reach all of the diverse learners in that classroom. That would help with time. Two top reasons that new teachers leave the profession within the first five years, classroom management and teaching to diverse learners. If we can help those teachers with these issues, then the time that they have, already have, will help those students learn academically without adding on extra time.

Rep. Schatz: Thank you. Testimony in opposition to HB 1266.

Doug Johnson, Executive Director, ND Council of Education Leader: We are in opposition to HB 1266. I do believe that the committee has touched on most of the questions and concerns that we had about this bill. The questions asked were pertinent. The one thing that I believe is that this is going to have a significant fiscal impact on the school districts. When you look at the structure of the bill, it's going to be adding a hour of time for the elementary schools and half-hour/hour for the secondary schools. There will have to be additional classes taught. Teachers are under contract for the hours that the elementary level teachers have contact with students in a number of periods in the day that they teach; the same goes for the middle school and high school teachers & students. The contracts would have to be renegotiated to teach more for the same amount of money, or we're going to have to add additional staff to pick up that cost. In regard to the question of time that it would take to ride the bus, etc. I've been out of the business for 10 years, so I don't know what the secondary level schedules are at this time, but I do have 3 grandchildren that we get to school every morning and their elementary school level starts at 8:20 am and finishes at 3:05 pm. For that to work in Bismarck, they would have to start school at 8:00 am and not leave the school until 3:45 pm. There would be an element of time, they'd have to get there

early enough so they can get ready for school; they would probably have to arrive at school at 7:30 am. My 2nd grade granddaughter loves getting to school early enough so she can socialize with her peers. Then they probably wouldn't be exiting the school on a bus or for parents until 3:45 pm or a little later than that. So it would extend the time considerably for them, the time to get up and go to school and then from school back home. Finally, Rep. Rust was right in his interpretation on subsection b, line 22. The way we interpret that would be that the schools are locked into the 7 hours. They can increase it beyond that, but that is our interpretation as well.

Rep. Hunsakor: Under current law, with proper negotiation, could a school district not do what the bill is talking about.

Doug Johnson: If I understand your question correctly, if they were not able to negotiate their contract to change that, would they be locked in to meet the obligations in this bill, and I would say that they would have to meet the obligations of the bill. The only other option they would have would be to hire staff.

Rep. Hunsakor: Under current law, putting this bill aside, could schools with proper negotiation do the same thing that's in this bill.

Doug Johnson: I believe they could. Most of them are going to be there for a period of time. The contracts for teachers and administrators state a specific time that they start, which is usually 30 minutes before the school starts and a half hour after the students leave. It depends on the individual district and how the contracts are written. They could do that. I do believe that if you look at the Bismarck Public Schools' program, they already have their students in more time contact than is required by law at the elementary and secondary levels.

Rep. Rust: Don't schools, especially at the secondary level, have a longer day than is probably written in the law now. I know that we keep adding courses to the curriculum. When you add those courses to the curriculum, you take away opportunities for other classes. There isn't anything that gets added without something being taken away. It's just that simple. Schools at the secondary level have gone to "early bird" classes. These are classes that start 1 hour or 50 minutes prior to what the school day starts and in some cases, they have some after school classes that are there after the school day ends. A lot of schools in the rural areas are kind of forced to do that. Unfortunately, sometimes that means that those kids have to drive in; in some cases, the parents say that the child is involved in sports and has to drive anyway so it doesn't make any difference. I think if you looked at the number of hours in the secondary day, that our school day really doesn't conform to that, but rather because of those early bird and late afterschool classes, that it is considerably longer than what it may be in the law.

Doug Johnson: I agree with you totally. Really the bill, the way it is structured in my opinion, it's adding an extra day. The kids already in the secondary level have a 7 period day. They can elect to stay in the school for the 7 periods and take the extra courses, but they don't have to. They are only required to be there for the 6 periods. Most schools at the secondary level will run what is called a 7 period day (7 hours of available coursework). Students elect to take those courses, additional or not, or study hall.

Rep. Rust: There are a number of them that have 9 periods. Many of the smaller schools have an 8 period day plus an early bird and so that makes 9 periods. There are problems with that because most schools have a negotiated agreement that specifies the number of class periods that someone will teach and/or study halls. In a number of schools in my area,

the Tioga school is one of them, we didn't allow them to have a study hall. They had to be in class 7 or 8 hours/day.

Doug Johnson: My school here in Bismarck, when I was a principal at Simle Middle School, we ran an 8 period day. I had early bird keyboarding and we had no study halls as well. There was a lot of availability for the students to take the classes. We knew that we had students that wanted to take the many electives that were available. They wanted to be in choir, in band, would like to take a career and tech ed. class at the professional level at that time, and they could do that by taking an early bird keyboarding.

Rep. Schatz: So you forced them into taking a class for 8 hours, every hour; there wasn't a study hall.

Doug Johnson: We made them take a class; they didn't have a choice. With a parent's request and under special circumstances, we encouraged them not to do it, but if they did do that, we allowed them to do that. I don't know if that practice is still continued, but that's what we instituted when I was principal.

Rep. Schatz: I know that we've had a four day week in ND, and I know this for a fact, because my wife taught it at Lefor back in the '80s. I've never seen any studies, and I don't know if they still do that now or not, is there any experimental 4 day week with longer hours. It's been done here, but I don't know what the outcomes were, as far as student achievements, but it would be interested to look at the results.

Doug Johnson: If you would like to learn more about that, you can talk with Gary Wills, Superintendent in Beach. They made a proposal about 3 years ago to do just that, and it was denied. They did a fairly extensive study to put that in place.

Rep. Schatz: I know the one at Lefor was the best kept secret in ND because nobody knew about it, but she got up early and I know this because I had to change a lot of diapers in the morning. That was my job before I went to school. It was an interesting situation. She was kind of the administrator, there were two or three teachers there. It was a small rural setting, but it worked. I wish she was here to actually explain how that worked. It was an interesting situation. Thank you.

Ch. Nathe: Further testimony in opposition. We will close the hearing on HB 1266.

Ch. Nathe: We will take up HB 1266. What are the committee's thoughts.

Rep. Rust: I am opposed to this bill for a couple of reasons. In particular, I think adding to the length of the school day isn't a good one. We have kids getting on the bus at 6:50 am. It makes for a really long day. You can't run a bus for Kindergarten and a different one for Senior High, even though one ends after 5.5 hours and the other one ends at 7 hours. You have to run them in the same bus. I'm also wondering about the implications it has on your negotiated agreement. Many schools have one where you are assigned to teach five classes and a study hall; six classes. If you lengthen school days, and add to that, it will add cost, there isn't any doubt in my mind about that. I move a Do Not Pass.

Rep. J. Kelsh: Second the motion.

Ch. Nathe: My concerns also are for the length of the day for the children and the cost. I had brought that thought up to Sen. Larsen, but he didn't know the costs. I don't support the bill either.

Rep. B. Koppelman: I think they made some good points on some of the things we've done at the state level to require more sciences and more math, more, more, more without providing for a longer school day to accommodate that. I think as we look toward things like STEM education and some of the things that this committee recently has been fairly supportive of. I think maybe we need to reevaluate it at some point whether we have to have that many sciences required or whether or not the scientific method and process used in other subjects, to where there's no longer individual classes needed as much, maybe making more time for some of this.

Ch. Nathe: That's the subject of another bill; a longer school year, year round school?

Rep. B. Koppelman: No, not so much for year round school, but just to provide more time within the school day for this by integrating classes like science and math into the rest of the curriculum.

Rep. Mock: I was just going to point out that there is nothing really stopping the school board itself from deciding that they want to go to a 6, 6.5 or even a 7 hour day at the local level. This is a minimum for K, Elementary, High School for local control. If in order for them to accommodate the requirements imposed by DPI and us, to meet the standards and to give a great education to the kids. That's up to the school board. When you think about the smaller schools where one teacher has 4 or 5 sections of different classes and then they had the one planning period where they have to set the curriculum for 4 or 5 different courses, extending that just gives them more responsibilities with less pay per hour that they teach. I feel for them. I think that's between them and the school board to negotiate, to try and find a way that they can best meet their educational needs for that community. I am going to support the motion. I think this is a good discussion. I think it's a discussion that's best left to the school boards.

Rep. Rust: I think it would be more beneficial actually to add to the length of the school calendar than it would be to add to the length of the school day. But even in front of that probably is if somehow or another we could get to the time on task, and the times that are lost for educational purposes. As a school administrator, you divide up duties with different people. In the spring of the year, I almost wanted to start screaming, because when you look at the number of days that students were gone and the number of days that the teachers were gone; the teacher or coach, takes a kid someplace: five kids go but a teacher goes and 150 other kids don't get that instruction. How do you keep that from happening. We really need to look at time on task and the number of times that we either have students or teachers outside of the building and education goes downhill.

Rep. Rohr: Then is that a responsibility of the local school board to do that.

Rep. Rust: It's probably a combination. There have been school boards who have done that. It is also difficult when you have regional type activities that are scheduled where you really have no choice. It's not something that can be totally done by a board.

Ch. Nathe: Further discussion. Clerk will take the roll on HB 1266 for a Do Not Pass.

13 YES 0 NO 0 ABSENT

DO NOT PASS

CARRIER: Rep. J. Kelsh

Date: 1/22/2013

Roll Call Vote #: 1

2013 HOUSE STANDING COMMITTEE
ROLL CALL VOTES

BILL/RESOLUTION NO. 1266

House EDUCATION Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken: Do Pass Amended Rerefer to Appropriations
 Do Not Pass Adopt Amendment

Motion Made By Rep. Rust Seconded By Rep. Kelsh

Representatives	Yes	No	Representatives	Yes	No
Chairman Mike Nathe	✓		Rep. Bob Hunsakor	✓	
Rep. Mike Schatz	✓		Rep. Jerry Kelsh	✓	
Rep. Joe Heilman	✓		Rep. Corey Mock	✓	
Rep. Brenda Heller	✓				
Rep. Dennis Johnson	✓				
Rep. Ben Koppelman	✓				
Rep. Lisa Meier	✓				
Rep. Karen Rohr	✓				
Rep. David Rust	✓				
Rep. John Wall	✓				

TOTAL (YES) 13 (NO) 0 (ABSENT) 0

FLOOR ASSIGNMENT Rep. Kelsh

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

HB 1266: Education Committee (Rep. Nathe, Chairman) recommends **DO NOT PASS** (13 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). HB 1266 was placed on the Eleventh order on the calendar.

2013 TESTIMONY

HB 1266

Improving Student Achievement by Extending School: Is It Just a Matter of Time?

by Julie Aronson, Joy Zimmerman and Lisa Carlos
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The Research

The research literature on the relationship of time to learning spans the course of at least three decades, most of it falling into the following categories:

- empirical, data-based research and reviews or syntheses of existing research;
- policy reports, which often combine education theory with empirical research; and
- anecdotal, experientially-based periodical publications, usually explaining one school's experience implementing a certain time-related policy.

While much of the theoretical and anecdotal literature is compelling, in order to provide policy makers with a solid basis on which to evaluate the efficacy of extending education time, this review focuses primarily on the empirical evidence about the relationship between time and achievement.

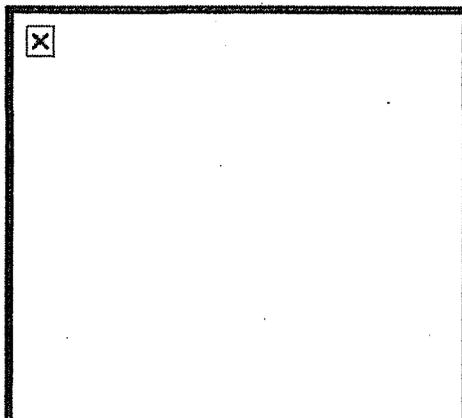
Limitations of Existing Research

Despite the considerable number of research studies and reviews of research, the body of empirical literature is limited in some respects. While many studies have examined the relationship between school time and student learning, most have relied heavily on correlational data. There has yet to be a controlled study, employing an experimental design, that directly measures the impact of significantly extending the school year on student achievement outcomes. (6) Without this, estimates of how great an impact a given increase in time would have remain somewhat speculative. In addition, there have not been any longitudinal studies of the impact of increasing education time on student achievement. This has led one researcher to speculate that, while increasing education time appears to lead to only modest achievement gains in the short run, the cumulative impact of increased time might be considerable. (7)

Defining the Terms

Any examination of the research on the relationship between time and learning is complicated by the variety of ways in which researchers talk about time. While some studies define it somewhat generically, (e.g., "the school day"), others make distinctions between different subsets of time depending on how it is used by schools, teachers and students. If one is to compare findings among studies, understanding the definitional distinctions is critical.

Education time as researchers view it is perhaps best understood as a vertical continuum of sorts. Picture an inverted pyramid. At the top is time most broadly described, most easily measured, most abundant and most easily mandated: the number of hours in a school day and days in a school year. At the bottom is time most narrowly focused, most difficult to measure, most elusive and most difficult for policy makers to influence: those moments when learning is actually taking place.



Allocated time. At the top of the continuum is the most generic type of education time, allocated time, which refers to the total number of days or hours students are required to attend school. Moving down the continuum, allocated time can then be broken into *instructional time* and *non-instructional time*. The former is time spent in class, whether for core academic subjects like math, science and language arts or for non-academic electives, such as driver's education. Non-instructional time, by contrast, is that portion of the day devoted to lunch and recess, to passing between classes, to school assemblies and to other non-classroom activities.

Engaged time. Next on the continuum — a subset of instructional time — is engaged time, during which students are participating in learning activities. While any 50-minute class period (so called

instructional time) may nominally be devoted to a particular subject, such as history, in reality, some portion of the period is almost always consumed by activities having little or nothing to do with learning, such as roll call, disciplinary issues and interruptions by announcements coming over the public address system. Thus, in trying to understand the relationship of time to learning, researchers narrow their focus yet again, this time honing in on that portion of the period when students are both in class and participating in instructional activities. Engaged time is also referred to in the literature as "time-on-task."

Academic learning time. Finally, at the bottom of the continuum is that time when learning actually occurs. Simply because a student is engaged in instructional activities does not necessarily mean he or she is learning. For example, an advanced student who is asked to spend 30 minutes going over material he has already fully mastered, will not be learning because there is nothing for him to learn. Similarly, a student who is involved in an instructional activity that covers advanced material for which she is not yet prepared is also unlikely to learn. With this in mind, researchers have focused in on academic learning time as that precise period when an instructional activity is perfectly aligned with a student's readiness and learning occurs.

The Basic Findings

The majority of studies dealing with the relationship of education time to student achievement look at allocated time, while other studies focus on engaged time or academic learning time. In some cases, the time variable being studied is not clearly specified. This inconsistency can make it difficult or misleading to compare studies. It also helps explain why, looking at the entire body of research on time and learning, there appear to be mixed findings about the degree to which time influences student learning.(8) However, despite this variability, the literature reveals a fairly consistent pattern:

- 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. (9)

In short, time *does* matter. How much or little it matters, however, depends greatly on the degree to which it is devoted to appropriate instruction. Remembering the inverted pyramid, any addition to allocated education time will only improve achievement to the extent it is used for instructional time, which must then be used for engaged time, which, in turn, must be used effectively enough to create academic learning time.

Focusing in on the Time that Matters

By and large, most researchers and policy makers interested in the relationship of time to learning have focused on allocated time. Researchers' propensity to look primarily or exclusively at the total amount of school time persists, in part, because quantity is easier to identify and measure than is *quality*; (10) measuring engaged time and academic learning time, by comparison, requires systematic and, to some extent, subjective judgments about how time is used. Allocated time is also the crudest and least helpful measure in trying to assess how time relates to learning precisely because it fails to consider *how* schools, teachers and students are using time and the quality of instructional activities.

A review of the research literature on how time is divided up during the school day shows that a large portion of potential learning time is typically eaten up by non-instructional activities, which have little relationship to student learning. (11) This leaves a relatively small portion of the school day for instructional time, in general. By extension, even less time remains, then, for instructional time in academic subjects — time that is essential to student achievement. (12)

Within the classroom, potential learning time is often further eroded by such factors as inefficient classroom management, disciplinary activities, ineffective instructional techniques, inappropriate curriculum and student inattention or absence. Based on such factors, classrooms vary greatly with respect to the proportion of time that could be considered engaged time. But, in most cases, at the end of the school day — or year — the amount of engaged time ends up having been but a small subset of the overall time originally allocated for learning. For example, one study found that students were engaged in learning activities only 28 to 56 percent of the total time spent in school in a given year. (13) Another calculated that only 38 percent of a typical school day was devoted to "engaged time" in the schools it studied. (14) Studies have shown that the proportion of allocated school time in which students are engaged in learning activities varies by state, by district *and* by classroom. (15)

Research studies show no consistent relationship between the amount of time allocated for instruction and the

amount of time students spend engaged in learning activities. (16) In other words, the length of a particular school day or year says nothing about how much time is devoted to learning activities. This means that increasing the amount of allocated time would not produce a *predictable* increase in students' engaged time. (17) In fact, increasing the length of the school day or year might not lead to any increase at all in the amount of time students are engaged in learning. Therefore, policies aimed at increasing the length of the school year could potentially have little impact on student learning.

Taking into account both the variability of allocated time to engaged time and researchers' tendency to focus on allocated time, it's little surprise that research findings about the degree to which allocated time influences learning are mixed: some studies find no consistent relationship between allocated time and student achievement and others find a small positive relationship. (18) But most studies conclude that allocated time, while necessary for producing learning outcomes, by itself doesn't suffice.

The Costs of Adding Time

Despite the fact that increasing allocated time offers no guarantee of improved student learning, policy makers are still drawn to increasing time as a lever for reform. As evidenced by Oregon's experience, however, the costs alone can be daunting. In fact, the high cost of extending allocated time has been a primary reason that more states and districts have not substantially increased the length of their school day or year. (19)

Cost estimates for increasing allocated time in school vary widely. According to one estimate, lengthening the school year would cost states between \$2.3 and \$121.4 million for each additional day, depending on the state, or an estimated \$1.1 billion nationally. (20) It would cost the state of California approximately \$50 million annually for each district to add a single instructional day, according to another recent estimate. (21) What's more, increasing allocated time to the extent called for in *A Nation at Risk* — from about 180 days to 210 or more days — would by most estimates cost in the tens of billions of dollars nationally. (22) One relatively recent estimate, prepared for the National Education Commission on Time and Learning, predicted that increasing the school year nationally to 200 days would cost between \$34.4 and \$41.9 billion annually. (23)

Pointing to the small achievement gains that could be expected from adding even substantial amounts of time to the school calendar, many researchers have concluded that the cost could not be justified, and that other education reforms would likely provide more impact. (24) Unfortunately, there has been little comparative research on the cost effectiveness of various school reform efforts. One study, by the Institute for Research on Educational Finance and Governance, examined the relative merits of four variables — time, peer tutoring, class size reduction and computer-assisted instruction. It found that increasing time was the least cost-effective of the four interventions in terms of math performance and the next to least effective for reading performance. (25)

Maximizing Existing Time: Key Factors

Given the weak link between allocated time and student learning, and given the expense of adding time, how should we begin rethinking education time? The body of research evidence suggests that before simply adding more of it, schools and districts should, instead, make better use of existing time. (26) And since the majority of studies find that increasing students' time-on-task leads, at best, to modest increases in achievement, (27) schools must, minimally, find ways to increase the proportion of time students are involved in instructional activities. (28) From a school site policy perspective, this means ensuring, first, that adequate allocated time is devoted to instruction in those core academic subjects in which we seek improved student performance. Further, school administrators must find ways to minimize activities that reduce the potential for engaged time in any class, such as the public address system announcements that can greatly interrupt learning time.

But even creating more engaged time, as important as it is, does nothing to advance achievement unless the instructional activities lead to real learning. Here the quality of teaching is key. One research review reveals that when coupled with good teaching methods — particularly, timely and specific feedback, attention to what a student already knows and the active participation of the teacher — time has a significant impact on achievement. (29) Another review concludes that the "combination of additional time with effective teaching strategies and curricula designed to engage students is a powerful tool for enhancing academic performance." (30) In this instance, engaging students means choosing the instructional strategies and curriculum that will enhance a student's motivation to learn.

Tailoring engaged time to the needs of individual students is essential if *all* students are to learn more. The research suggests that the higher the quality of instruction, *especially* as it accommodates students' differing

education backgrounds, abilities and learning styles, the greater the academic achievement. (31)

Thus, as many studies point out, unless you can somehow ensure that any added school time would be devoted to instruction, with students engaged in well-designed and appropriate learning activities, providing more time per se cannot be expected to have a major affect on student achievement. (32)

So what factors help ensure that classroom time becomes true learning time? The research literature points to three key quality factors that, in conjunction with time, contribute to improved student learning. Two of them — classroom management and appropriateness of instruction — fall largely to teachers. The third — student motivation — lies partly in the lap of the student, partly in the lap of his or her teachers and partly in the lap of the broader community.

Classroom management. Site level policy makers could reschedule the school day to include more instructional time, but how teachers use that time once the classroom door closes is difficult to regulate. As described earlier, research has documented great variation in the amount of allocated time devoted to instructional activities. Of course, some non-learning activities that occur in the classroom are beyond the control of any teacher, such as interruptions by p.a. announcements, fire drills, or the need to take roll, for example. However, studies show that much of the variation is due to teachers' behaviors, including their relative skills in classroom management. Several studies found that poor classroom management resulted in teacher and students losing considerable amounts of instructional time to student disruptions, waiting, long breaks between activities, student tardiness and various management and discipline activities. (33) One of the studies found that more than half of elementary school class time was occupied by non-learning activities, such as waiting, general management activities and other non-instructional activities. (34) By one estimate, 70 percent of teachers need to improve their classroom management skills. (35) According to one research review, even though research is inconclusive about the most effective and practical ways to increase time, most researchers concur that improving teachers' time management techniques would be a good place to start. (36)

Appropriateness of Instruction and Curriculum. There is consistent research evidence that, in order to enhance student learning, instruction must be provided at a level of difficulty appropriate to the individual student. In other words, the subject matter provided must be matched to the readiness of students to learn it. When this is the case, time matters most. Based on a review of the research literature, one report concluded that the amount of time students spend engaged in learning activities that are appropriately challenging has a powerful and consistent effect on the amount of learning that occurs. (37) Various studies have shown that appropriate instruction consists of learning activities that are geared to the learners' abilities and background, such that students are both challenged and able to experience success. As noted earlier, instructional practices that promote student achievement include timely and specific feedback, attention to prior learning and active participation of the teacher. (38)

It is also critical that instructional practices be geared to student learning differences, including differences in how quickly students learn and how much time they require to learn. (39) Research has demonstrated that it is a waste of time to have students repeatedly go over materials they have already mastered and, equally so, to present materials to students that they are not prepared to learn. (40) In fact, as several researchers warn, such practices can be detrimental to students, reducing their motivation to apply themselves to academic learning and leading, eventually, to frequent absences or even to dropping out of school all together. (41)

For teachers to plan and deliver appropriate instruction requires that they have the ability to see the content — whether mathematics, science or anything else — through the eyes of their students and to know what instructional experiences and subject matter can be used to capitalize on a student's thinking. If they are to do so, teachers must start with a deep understanding of the content they teach. The advent of standards-based education makes this all the more essential: if student achievement is to rise to the high standards being set for what we expect students to know and be able to do, the curriculum must reflect the higher standards and teachers must be able to teach to the higher standards.

Student Motivation. Students themselves play an important role in determining the extent to which the time they spend in school will be truly educational. If existing or additional time is to be put to good use, students must be motivated to learn. As one researcher suggests, students make their own decisions about how they will allocate their time and effort to learning tasks, (42) and students who are highly motivated to learn will do so. According to one study, when students are highly interested in a learning activity, they will learn more in a given period of time than when they are less engaged. (43) In addition, increasing student motivation has been demonstrated to lead to better student attendance, thus increasing the amount of time students spend in school, (44) and, therefore, their potential to benefit from appropriate instruction.

Motivation may derive extrinsically from rewards (or punishments) such as grades, promotion, jobs and opportunities. Traditionally, schools, communities, teachers and parents have relied heavily on such extrinsic rewards to motivate students to apply themselves to learning tasks. But, some researchers have suggested that traditional extrinsic rewards may be less of a motivation for students than they once were. (45) After all, for example, graduating from high school, in and of itself, no longer ensures students of being able to go on to college or to get a good job.

Motivation can also be intrinsic, with a student finding the process of education rewarding in itself. A teacher can seed motivation by involving students in exciting, challenging and relevant instructional activities. Conversely, a teacher may squelch a student's motivation through poor instructional practices, such as repetitive seat work, lessons that lack real-world relevance for students and frequent testing.

There is some research evidence that intrinsic motivation may be more powerful than extrinsic motivation when it comes to academic performance. For example, several studies have shown that students are motivated by working in cooperative groups or teams, rather than competing as individuals, and that teamwork increases both achievement and motivation. (46) Another study demonstrated that regardless of how well they perform, students were more motivated by the idea of improving their personal performance than by performing better than their classmates. (47)

So if Time isn't the Issue, Why are We Behind?

As mentioned earlier, one reason policy makers and the general public are drawn to the idea of an extended school year is the perception that some of our international counterparts outperform us because they spend more time in school. As with the relationship between time and student performance, the explanation for why U.S. students lag behind their international counterparts appears to be more complex than merely a difference in how much time they spend in school.

At the middle school level, findings from the Third International Mathematics and Science Study (TIMSS) reveals no clear pattern in the relationship between the number of in-class hours teachers reported spending on instruction in math and science and student performance in those subjects. (48) The same is true at the fourth grade level: in four of the seven nations that outperform the U.S. in mathematics, students spend less time in class per week than do U.S. students and also less than the international average. (49) The TIMSS research also suggests that instead of adding time, greater attention should be paid to curriculum, specifically, to the depth and breadth of subject matter covered. (50)

Another study — a review of the literature comparing U.S. and Asian education systems — found, as did the TIMSS study, that factors other than time appeared to account for differences in student performance. (51) This study, like much of the research already cited, concluded that it was not the quantity of time that mattered, but how the time was spent. It found that what seems to account most for differences in achievement are factors such as the quality of teaching and curriculum and the role of parents. There also appear to be important cultural differences with respect to the value placed on education. Specifically, many Asian cultures place a higher priority on education. Academic learning is considered a primary responsibility for students, who consequently spend less time playing sports, working, doing household chores and engaging in leisure activities, such as watching television. Instead, Japan, for example, students spend large amounts of time outside of school doing homework and receiving tutoring, which increases the amount of learning time.